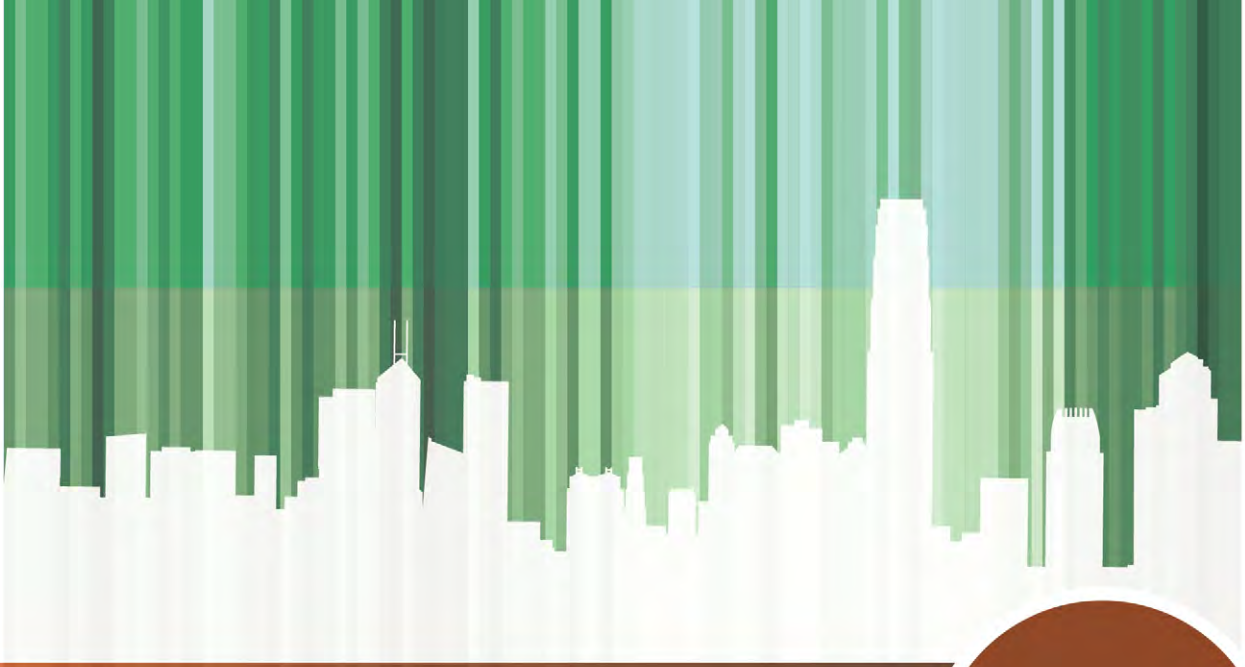


Engagement Discussion

Pack Three:
Case Studies

STRENGTHENING CLIMATE GOVERNANCE: FROM TARGETS TO DELIVERY IN HONG KONG

April 2026

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 | OUR HONG KONG FOUNDATION 香港基金

Pack Three: Case Studies

The four case studies in this project are not intended to present uniform governance conditions. Rather, they are selected to illustrate how climate governance challenges vary across sectors with different structural characteristics. While some domains, such as building retrofits and aspects of biodiversity, are primarily territorially bounded and more directly shaped by local policy, others, such as shipping and finance, are embedded in wider systems where key drivers lie beyond Hong Kong's direct regulatory control. In these latter cases, governance depends more heavily on alignment with national systems, international rules, and cross-boundary coordination. Differences in emphasis across the case studies therefore reflect these structural distinctions, rather than inconsistency in analytical approach.

The four case studies are:

1	Retrofitting exisiting buildings as a core climate governance challenge in Hong Kong
2	Biodiversity governance as a core climate governance challenge in Hong Kong
3	Shipping and port decarbonisation: governing a global industry and a port city
4	Green finance: governing capital for climate transition in an international financial centre

CASE STUDY 1

RETROFITTING EXISTING BUILDINGS AS A CORE CLIMATE GOVERNANCE CHALLENGE IN HONG KONG

I. INTRODUCTION

Existing buildings matter for climate policy

In the Chief Executive's 2025 Policy Address, the HKSAR Government signalled a clear intention to "drive the market to accelerate carbon reduction in existing buildings."[1] This statement reflects growing recognition that existing buildings must play a central role in Hong Kong's decarbonisation pathway, and that achieving meaningful emissions reductions will require more than incremental improvements or voluntary action. It also places renewed attention on how existing buildings are governed, financed, regulated, and managed as part of Hong Kong's broader climate transition.

Across advanced and emerging economies alike, existing buildings sit at the heart of the climate challenge. Buildings are long-lived assets, and in most cities most of the 2050 building stock already exists today. As a result, climate strategies that focus primarily on new construction, however stringent their standards, are fundamentally insufficient to deliver deep decarbonisation within required timeframes. Buildings are also not merely technical systems. They are:

- People's primary assets and stores of value
- Sites of daily life, work, and care, shaping well-being, health, and productivity
- Capital-intensive and spatially fixed, making wholesale demolition and replacement economically, socially, and environmentally constrained

For these reasons, retrofitting existing buildings (i.e. to reduce energy demand, improve performance, and enhance resilience) has become a central pillar of climate policy in many jurisdictions. It is also one of the most complex policy domains, cutting across energy, housing, finance, regulation, and social behaviour. Hong Kong exemplifies this challenge in an extreme form. The city's dense, high-rise, and ageing building stock consumes most of the electricity consumed in Hong Kong (~90%) and accounts for a dominant share of local carbon emissions (~50%). At the same time, physical constraints, ownership fragmentation, and high opportunity costs limit the feasibility of large-scale redevelopment. Retrofitting is therefore not optional: it is structurally necessary.

II. PURPOSE AND SCOPE OF THIS CASE STUDY

This case study examines Hong Kong's approach to retrofitting existing buildings through the lens of good climate governance, using the Five-Pillar Model set out in the Engagement Document Pack One *Good Climate Governance: Principles and Practices for Effective Action* (Chapter 3).

The analysis in this case study is anchored mainly in the *Energy Efficiency Retrofitting Existing Buildings for Carbon Neutrality in Hong Kong: Policy Recommendations and Guidelines for Overcoming the Challenges* (CEPU Report), commissioned by the Chief Executive's Policy Unit under its Public Policy Research Funding Scheme.[2] The CEPU report is thorough and recent. This case study uses it as a diagnostic lens to assess how Hong Kong governs a complex, cross-cutting climate policy area. While the CEPU report does not frame its analysis explicitly in governance terms, its identification of regulatory and institutional challenges directly engages with core questions of policy integration, coordination, and enforcement that sit at the heart of climate governance.[3]

This case study is structured as follows:

1. Assessment against the Five Pillars of Good Climate Governance, namely:
   - Pillar 1: Long-term vision, targets, and strategic direction
   - Pillar 2: High-level political leadership and whole-of-government coordination
   - Pillar 3: Integration across all policy sectors ("mainstreaming")
   - Pillar 4: Transparency, monitoring, reporting (TMR) and independent review (IR)
   - Pillar 5: Stakeholder and public engagement

2. Comparative insights drawn mainly from the United Kingdom, the Chinese Mainland, and Singapore, with additional insights drawn from the United States.

The objective of this case study is to examine policy intention, governance logic, and implementation pathways, and to situate Hong Kong's approach within this wider landscape.

III. ENTERING AN ERA OF BUILDING RETROFIT

Hong Kong is entering a new phase in the life cycle of its built environment. A large proportion of the city's building stock is now more than 30 years old, an age at which major repair, upgrading, and refurbishment become unavoidable. According to government records, as of end-2021 there were over 27,000 private buildings aged 30 years or above, including more than 10,300 buildings aged 30-39 years, over 7,500 aged 40-49 years, and more than 5,600 aged 50-59 years, with the remainder even older.[4] The number of private buildings aged 50 years or above has increased steadily over the past decade and continues to rise annually. This demographic shift marks a transition from a development-led city to one increasingly defined by the retrofitting and renewal of existing assets.

The implications of this transition extend well beyond routine maintenance. Buildings over 30 years old typically require major intervention to address structural integrity, fire and electrical safety, building services, accessibility, energy performance, and climate resilience. Public discussion of ageing buildings in Hong Kong has understandably tended to focus on safety, reflecting the statutory responsibilities of development and buildings authorities. Recent commentaries have tended to emphasise the risks associated with old buildings and the need for inspections and remedial works.[5] While these concerns are important, they also illustrate how ageing buildings are often approached through single-issue policy lenses, rather than as integrated challenges encompassing safety, decarbonisation, energy saving, and occupant well-being.

At the same time, the ageing of Hong Kong's building stock has important economic and competitiveness implications, especially for commercial buildings. Market analysis indicates that a significant share of Hong Kong's Grade A office stock is over 30 years old, and that ageing, inefficient buildings face increasing risks of value erosion. More importantly, recent studies highlight that building quality, energy performance, indoor environmental quality, and sustainability credentials are becoming increasingly important to both tenants and employers. Companies seeking to attract and retain talent are placing greater emphasis on healthier, more efficient, and higher-quality workplaces, while tenants are showing stronger preferences for buildings that meet modern environmental and performance expectations.[6] In this context, retrofitting commercial buildings is not only an environmental or technical issue, but also a factor shaping business location decisions, workforce well-being, and long-term asset value.

Taken together, these trends indicate that Hong Kong is entering an era in which building retrofit must be understood as a multi-purpose, city-wide transition,

rather than a series of isolated technical interventions. Retrofitting offers opportunities to reduce carbon emissions, improve safety and resilience, enhance health and well-being, maintain asset values, and support economic competitiveness. However, it is also capital-intensive and institutionally complex, cutting across residential, commercial, and public buildings, and involving energy systems, building regulation, finance, urban renewal, property management, and labour considerations.

These multiple objectives cannot be realised through fragmented or siloed policies. Instead, they point to the need for coherent, well-coordinated public policy that aligns climate, safety, economic, and social goals across different building types. This case study therefore examines existing building retrofits through the lens of good climate governance, using the Five-Pillar Model to assess how policy intent, leadership, integration, transparency, and stakeholder engagement can support Hong Kong's transition into this new era of city-wide renewal.

IV. LONG-TERM VISION, TARGETS, AND STRATEGIC DIRECTION – PILLAR 1

1. Hong Kong's formal targets: clarity at the macro level

Ostensibly, Hong Kong performs reasonably well under Pillar 1. The HKSAR Government has articulated an economy-wide objective to achieve carbon neutrality before 2050. There is a dedicated energy saving and green buildings strategy under the *Climate Action Plan 2050* published in 2021 (CAP2050). There are also specific long-term targets to reduce electricity consumption by 30%-40% in commercial buildings and 20%-30% in residential buildings by 2050.[7]

These targets explicitly acknowledge that existing buildings are a core consideration, given that roughly 80% of the buildings that will exist in 2050 are already standing. Hong Kong has a stated long-term direction and recognises the scale of the challenge.

2. A supply-led decarbonisation pathway

The CEPU report makes clear that the dominant strategic pathway remains focussed on supply. The HKSAR Government's primary decarbonisation levers for the buildings sector are:

- Decarbonising electricity supply, notably through importing more zero-carbon energy from the Chinese Mainland (on an even bigger scale from the mid-2030s since ~25% of Hong Kong's electricity already comes from nuclear energy imported from the Daya Bay Nuclear Power Station in Guangdong Province); and

- Treating energy saving and retrofitting as supportive, rather than foundational measures.

The CEPU report notes that while policy attention has focused "more on the supply side, or the fuel mix," there are significant contributions that demand-side energy reduction can make.[8] The report further warns that relying on zero-carbon electricity without first reducing demand in Hong Kong would impose extraordinarily high system costs and financial burdens on the public.[9]

From a Pillar 1 perspective, this reveals a misalignment between long-term targets and the chosen decarbonisation pathway. While the *destination* (lower emissions, lower energy use) is clear and correct, the route prioritises supply decarbonisation over systematic demand reduction.

3. Common challenges faced by existing buildings

The CEPU report situates Hong Kong's experience within a broad international literature on retrofitting existing buildings. Drawing on studies from Europe, North America, and Asia, the literature review identifies three recurring, system-level challenges that appear consistently across jurisdictions:

- Financial barriers are the most cited constraint. Retrofitting typically requires large upfront capital investment, while returns are realised gradually over long payback periods. Uncertainty over energy savings, performance risks, and future tenancy further weakens investment incentives, particularly in the absence of tailored financing mechanisms.

- Split incentives and fragmented ownership structures undermine action. Those who pay for retrofits (owners) are often not the same actors who benefit from lower operating costs (tenants or occupiers). This misalignment of costs and benefits is a structural feature of existing building stock worldwide and cannot be resolved through technical measures alone. Besides, for multi-owned properties with strata titles, it is difficult for the multiple owners to reach consensus when a decision has to be made on major upgrades or replacements.

- Technical and operational complexity poses a major obstacle. Retrofitting must be undertaken in occupied buildings, often with limited plant space, ageing systems, and site-specific constraints. These challenges are magnified in dense urban environments, where disruption, safety, and system integration risks are high.

Together, these three challenges – finance, incentives, and technical complexity – form the core global barriers to scaling up energy efficiency retrofits, regardless of jurisdiction.[10]

4. Acute challenges in Hong Kong

The CEPU report also helps explain why the HKSAR Government has likely gravitated towards a supply-led decarbonisation approach. While the challenges above are common internationally, they are particularly pronounced in Hong Kong's urban and governance context. Specifically, the report highlights that in Hong Kong:

- Capital investment needs are substantial, while retrofit financing is difficult to mobilise where risks are perceived to be high and returns uncertain.

- It is hard to motivate owners, as ownership is highly fragmented, especially in residential buildings and older commercial, industrial or mixed-use buildings with multiple owners. These owners also lack the technical knowhow on retrofitting and related financial matters.

- Benefits accrue unevenly between owners, tenants, and building operators, reinforcing split-incentive problems.

- Technical constraints are acute in a dense, high-rise city with limited space for plant replacement and system upgrades.[11]

In governance terms, these features make demand-side intervention administratively fragmented, politically sensitive, and institutionally demanding. Retrofitting requires coordination across thousands of private actors, multiple government departments, and diverse professional groups, with limited direct levers available to the authorities.

5. Supply-led decarbonisation is insufficient

Against this backdrop, a supply-led strategy could be said to be pragmatic because it allows governments to act through a relatively small number of institutional actors, deliver emissions reductions without direct intervention in privately owned assets, and avoid politically and administratively complex coordination across owners, tenants, and sectors.

However, as the CEPU report implicitly demonstrates, it is structurally insufficient. Supply-side decarbonisation can reduce emissions intensity, but it does not address absolute energy demand, nor does it resolve the long-term performance, resilience, and liveability challenges embedded in the ageing existing building stock.

As a result, retrofitting existing buildings remains unavoidable. The policy question is therefore not whether to engage with demand-side retrofits, but how to govern them effectively. The CEPU report's identification of institutional and regulatory barriers (see Appendix) helps explain why demand-side intervention has been comparatively limited, despite its acknowledged importance.

6. Retrofitting must become a core policy focus

The CEPU report makes clear that retrofitting cannot be avoided. Beyond energy savings, existing buildings are:

- Economic assets, central to household wealth and financial stability
- Physical structures with long remaining lifespans, limiting the role of redevelopment
- Key determinants of safety, comfort, health, and productivity, particularly under conditions of rising temperatures and climate extremes

In Hong Kong's sub-tropical, high-density, high-rise context, these factors are amplified. Extreme heat, high relative humidity, heavy usage, limited space for equipment redundancies and ageing building systems make inaction increasingly costly, not only in carbon terms, but in social and economic terms as well.[12]

The conclusion that follows from Pillar 1 is therefore clear: Retrofitting existing buildings should not be treated as a secondary or supportive measure within Hong Kong's climate strategy. It must become a central policy focus, with a clearer demand-side pathway that complements supply-side decarbonisation and aligns long-term targets with credible implementation.

7. Framing policy intention

International experience shows that other governments confront similar structural challenges in retrofitting existing buildings. What differs is not the nature of the problem, but how governments frame retrofitting within their climate strategies: whether as a regulatory obligation, a government-led modernisation task, a coordinated national efficiency programme, or a decentralised market response.

The key is to distinguish between policy intention, policy effort, and policy outcomes. Across the United Kingdom, the Chinese Mainland, Singapore, and the United States, retrofitting is not treated as merely supportive of decarbonisation, but as necessary and unavoidable. Chart 1 below provides a comparison.

United Kingdom

- Retrofitting is embedded in building regulations and energy performance rules.
- Policy intent is that existing buildings must improve over time.
- Retrofit is framed as a regulatory obligation, not just an efficiency opportunity.

Chinese Mainland

- Retrofitting is part of national planning and administrative targets.
- Policy intent is that existing stock must be upgraded to meet national objectives.
- Energy efficiency in existing buildings is treated as a governance and modernisation task.

Singapore

- Retrofitting is a core plank of the Green Buildings Masterplans.
- Policy intent is systematic upgrading of existing buildings, supported by incentives and mandates, which will happen under the Mandatory Energy Improvement (MEI) regime, launched in September 2024.
- Clear recognition that existing buildings dominate the stock.

United States

- Federal system, but in many cities and states:
  - Benchmarking and disclosure laws explicitly target existing buildings.
  - Retrofit is framed as a performance and compliance issue, not optional.
- Policy intent is strong, if uneven.

Hong Kong

- Retrofitting is acknowledged as important, but emissions reduction in buildings is primarily expected to come from cleaner electricity.
- Retrofit is positioned as supportive, not foundational. Outcome depends on voluntary actions of the building owners.

CHART 1: Comparative Policy Foci and Intentions on Retrofitting Existing Buildings

Jurisdiction	Primary Policy Focus	Core Policy Intention	Governance Signal
United Kingdom	Legally anchored regulatory standards with independent oversight	Treat retrofit as a mandatory, lifecycle obligation embedded in building regulation	Retrofitting is part of "normal" compliance; energy performance improves whenever buildings are altered
Chinese Mainland	Mandatory standards embedded in state planning	Use binding regulations and standards to drive energy efficiency as part of national development and administrative modernisation	Retrofitting is treated as a coordinated state task aligned with planning and performance management
Singapore	Coordinated mandates supported by incentives	Drive systematic energy savings in existing stock through clear government direction and industry support	Retrofitting is a managed national efficiency programme
United States	Performance disclosure and local action	Use transparency and market pressure to induce incremental improvements	Retrofitting is shaped by data, disclosure, and decentralised leadership
Hong Kong	Supply-side decarbonisation of electricity	Achieve emissions reduction primarily through cleaner power, with efficiency as a supporting measure	Retrofitting is important but not yet treated as a central governance priority

Note: The table reflects policy framing and governance intent rather than policy outcomes.

V. HIGH-LEVEL POLITICAL LEADERSHIP AND WHOLE-OF-GOVERNMENT COORDINATION – PILLAR 2

1. Purpose of Pillar 2

As discussed earlier, Hong Kong is entering an era in which large-scale retrofitting of existing buildings is unavoidable. This transition is no longer driven solely by safety or maintenance considerations, but increasingly by climate mitigation, resilience, asset value, competitiveness, and occupant well-being. These multiple objectives now attach simultaneously to the same physical assets.

Under the Five-Pillar Model, Pillar 2 focuses on whether this transition is supported by clear policy ownership and effective whole-of-government coordination, particularly where responsibilities and policy levers are distributed across multiple bureaux, departments, and public bodies. This pillar does not assume centralisation or institutional restructuring. Rather, it asks whether existing governance arrangements are sufficient to manage cross-cutting challenges in a coherent and sustained manner.
It is necessary to step outside the CEPU report for this pillar. While the report provides a comprehensive

diagnosis of the technical, financial, behavioural, and institutional challenges associated with retrofitting existing buildings in Hong Kong, together with a wide range of useful policy recommendations, high-level policy leadership and whole-of-government coordination fall outside the scope of the study. This absence should be understood as a function of mandate rather than a limitation of analysis. Questions of policy ownership, inter-bureau coordination, and resolution of policy trade-offs typically sit beyond the remit of commissioned technical studies. From a climate governance perspective, however, these questions become increasingly important as retrofit ambition moves from diagnosis to large-scale implementation.

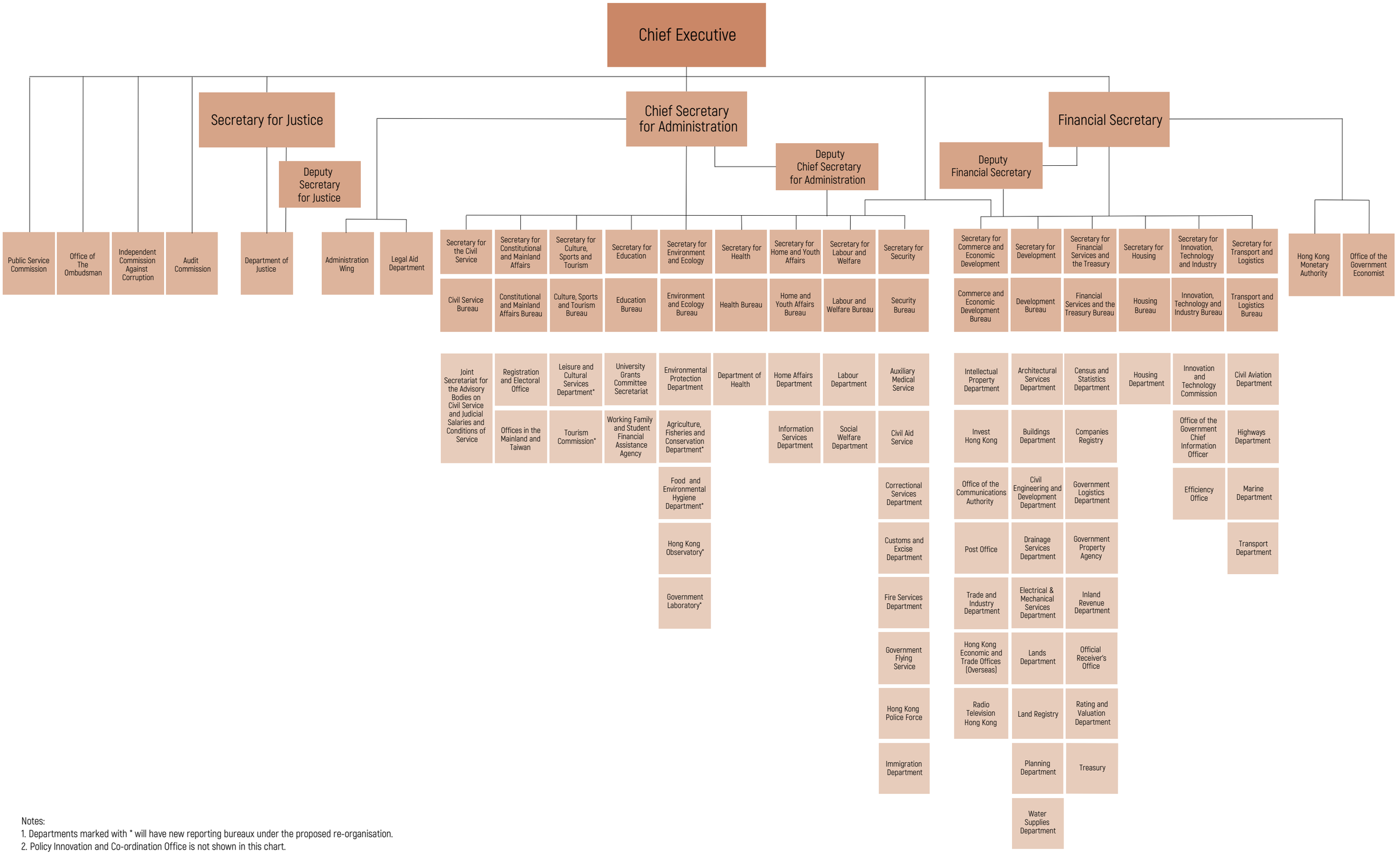
2. HKSAR Government organisation

The post-2022 Government Secretariat reorganisation provides important context for understanding the governance of existing building retrofit policy in Hong Kong.

The establishment of the Environment and Ecology Bureau (EEB) in 2022 consolidated responsibility for climate change, energy (both supply and demand), environmental protection, biodiversity, waste management, and public sanitation within a single policy bureau. The government organisation chart (Figure 1 below) further shows that climate and energy policy fall under the oversight of the Chief Secretary, whose portfolio traditionally encompasses policy domains that are more community- and service-oriented, while economic and financial policy domains are overseen by the Financial Secretary. This institutional positioning is longstanding, but it carries important governance implications.

Prior to the 2022 reorganisation, strategic climate policy leadership sat with the former Environment Bureau, which published Hong Kong's major climate strategies, including the *Hong Kong Climate Change Report 2015*[13] and *Hong Kong's Climate Action Plan 2030+* (CAP2030+)[14]. During this period, climate mitigation, energy policy, and demand-side energy efficiency in buildings were framed as part of the Environment Bureau's policy portfolio. CAP2050, published in 2021 under the subsequent administration, continues this pattern in practice, with climate strategy articulated through the environment portfolio and coordinated by the Office of Climate Change and Carbon Neutrality (OCCN). At the same time, responsibility for building regulation, safety, and adaptation-related infrastructure rested with the Development Bureau (DEVB). This functional division between strategic climate policy leadership and built-environment implementation is understandable, but it also illustrates how climate objectives can become institutionally dispersed.

FIGURE 1: Bureaux under the Chief Secretary and Financial Secretary Clusters



Notes:
1. Departments marked with * will have new reporting bureaux under the proposed re-organisation.
2. Policy Innovation and Co-ordination Office is not shown in this chart.

3. Institutional landscape for existing building retrofits

The post-2022 government organisation helps to explain why retrofitting existing buildings is inherently a whole-of-government challenge. While climate and energy supply and demand policies are now consolidated under EEB, many of the policy levers that shape retrofit outcomes sit outside its direct authority.

Notably, the institutional fragmentation identified in the CEPU report mirrors the distributed policy responsibilities observed at the bureau and departmental level (see Appendix).

A: Policy bureaux

Key bureaux with material roles are:

- **Environment and Ecology Bureau (EEB)**
  Responsible for climate mitigation policy, including both energy supply-side measures and demand-side energy saving and efficiency. Responsibilities relating to biodiversity, which underpin climate adaptation and resilience, also sit within EEB's policy remit.

- **Development Bureau (DEVB)**
  During the C.Y. Leung administration (2012-2017), the Environment Bureau was the overall climate policy lead with DEVB responsible for delivering on providing adaptive infrastructure. DEVB was responsible for building regulation, building safety, alterations and additions, and urban renewal, while the Secretary for the Environment oversaw an internal committee on green buildings, which included energy savings in buildings.

- **Financial Services and the Treasury Bureau (FSTB)**
  Responsible for fiscal policy, public expenditure, taxation, green finance policy, and conditions affecting private investment and risk-sharing.

- **Housing Bureau (HB)**
  Responsible for public housing policy and oversees the Housing Authority, which plans, builds, manages, and upgrades Hong Kong's public rental and subsidised-sale housing stock. This includes decisions relating to new public housing development as well as the maintenance, refurbishment, and retrofitting of existing estates. Given the scale of the public housing portfolio, policies and standards adopted within this portfolio have a significant influence on energy performance, carbon emissions, resilience, and living conditions in both new and existing government-built housing.

- **Home and Youth Affairs Bureau (HYAB)**
  Responsible for building management, owners' corporations, and community-level engagement, which are critical to retrofit decision-making in multi-owned buildings.

Each bureau addresses a legitimate dimension of the retrofit agenda, yet none has a mandate to lead or coordinate the policy area as a whole. While this division of responsibilities reflects longstanding administrative logic, it also means that climate mitigation, adaptation, resilience, and retrofit-related decisions are spread across multiple bureaux, with no single locus for integrating objectives across policy domains.

B: Departments and public bodies

At the operational level, responsibility is similarly distributed among key departments:

- **Electrical and Mechanical Services Department (EMSD)**
  EMSD is administratively housed under DEVB, reflecting its longstanding role in regulating and supporting building services systems within the built environment. Policy responsibility for energy and energy efficiency, however, has long rested with EEB and its predecessor bureaux responsible for environmental and energy policy. As a result, EMSD's work on building energy efficiency standards, audits, benchmarking, and energy-saving programmes is carried out under the policy direction of EEB, while its organisational and personnel management remains within DEVB. This institutional arrangement illustrates the cross-cutting nature of retrofit policy and

highlights the importance of effective coordination across bureaux when implementing building decarbonisation measures.

- **Buildings Department (BD)**
  Housed under DEVB, BD is responsible for building approvals, codes of practice, and compliance with the Buildings Ordinance.

- **Environmental Protection Department (EPD)**
  Housed under EEB, EPD is responsible for emissions reporting, environmental performance, and alignment with climate objectives.

- **Housing Department / Housing Authority (HD / HA)**
  The HD / HA is responsible for the management and upgrading of public rental and subsidised-sale housing, operating under a distinct governance and funding framework.

- **Urban Renewal Authority (URA)**
  The URA is responsible for strategic decisions on rehabilitation, upgrading, and redevelopment in older districts.

- **Hong Kong Housing Society (HKHS)**
  HKHS is a government-related public body with a mandate to support housing provision and urban regeneration, including businesses related to social and elderly wellness.

These bodies operate under different statutory mandates, funding arrangements, and accountability structures, yet collectively shape retrofit outcomes across residential, commercial, and public buildings.

4. Why high-level coordination is essential

As Section III demonstrates, ageing buildings are now simultaneously safety risks, carbon assets, economic assets, and determinants of social well-being, making retrofitting a multi-objective policy challenge rather than a sectoral one. Addressing these multiple dimensions through fragmented or single-issue policy approaches inevitably limits overall outcomes.

From a governance perspective, existing building retrofits therefore represent not a sectoral policy problem, but a coordination challenge across environmental, economic, regulatory, financial, and social domains. Key policy levers are structurally distributed across multiple bureaux and departments. Without effective high-level coordination:

- Policy signals risk becoming fragmented or inconsistent,
- Regulatory, financial, and technical measures may not reinforce one another,
- Administrative complexity for building owners and practitioners may increase, and
- Retrofit outcomes may depend disproportionately on voluntary uptake, despite the systemic importance of the sector.

5. A governance approach as an enabling pathway

The purpose of Pillar 2 is not to propose institutional restructuring or to reassign statutory responsibilities. Rather, it highlights how a governance-based approach can help government navigate complexity more effectively using existing structures.

By making leadership and coordination issues explicit, the Five-Pillar Model suggests that the HKSAR Government consider:

- Clarifying policy ownership across bureaux, departments and statutory bodies
- Creating coherence between climate, safety, economic, and social objectives
- Aligning regulatory, financial, and technical instruments
- Using policy tools already identified in the CEPU report

In this sense, Pillar 2 is intended to be supportive and forward-looking, providing a conceptual lens that may assist government in coordinating policy more effectively as Hong Kong enters an era of large-scale building retrofit.

CASE STUDY 1A

Precedent for Cross-Bureaux Coordination on Green Buildings in Hong Kong

Hong Kong has prior experience with high-level internal coordination on green buildings and energy saving in buildings. During the 2012-2017 administration, the HKSAR Government established an Inter-departmental Steering Committee on the Promotion of Green Building in January 2013, chaired by the then Secretary for the Environment, Wong Kam-sing.

The choice of chair reflected both professional expertise and governance intent. Before joining the government, Wong was a practising green architect and vice-chairman of the Hong Kong Green Building Council (HKGBC). The HKGBC itself was established during the previous administration, when green building concepts were beginning to gain traction in Hong Kong, at a time when Carrie Lam was serving as Secretary for Development. This earlier experience contributed to an institutional understanding within government that green building, including energy saving efforts, required focused attention beyond conventional building control.

The decision for the Secretary for the Environment to chair the Inter-departmental Steering Committee on the Promotion of Green Building represented a deliberate governance choice to place leadership for green buildings and energy saving at a level capable of coordinating across bureaux and departments, when the bulk of implementation departments were under the responsibility of DEVB, such as EMSD and BD. This arrangement continued into the subsequent administration, with Wong remaining in office until 2022. During this period, green building featured more prominently in government initiatives, including the promotion of greener government buildings, energy audits, and higher environmental performance standards.

This decade-long arrangement reflects an institutional recognition within government that advancing green building and energy-saving objectives required high-level coordination across bureaux and departments.

VI. INTEGRATION ACROSS ALL POLICY SECTORS ("MAINSTREAMING") – PILLAR 3

1. Purpose of Pillar 3

Under the Five-Pillar Model, Pillar 3 examines whether climate objectives are integrated into the core regulatory, administrative, and policy systems of government. In the context of building retrofits, this involves assessing whether energy saving and decarbonisation objectives are embedded into building regulation, performance benchmarks, public sector asset management, and related administrative processes.

The CEPU report does not explicitly frame its analysis in terms of policy integration or mainstreaming. Instead, it uses operational language such as "alignment", "coordination", "standardisation", "benchmarking", and "embedding into law". Pillar 3 is concerned with how retrofit priorities are built into government systems and decision-making processes, rather than how performance is measured, disclosed, or independently reviewed, which are addressed under Pillar 4.

Among the seven challenges the CEPU report categorises, two of the categories – regulatory and institutional challenges – most directly relate to the question of policy integration, as they concern whether retrofit objectives are embedded within statutory requirements, administrative workflows, and normal expectations of building ownership (see Appendix).

2. Regulatory and administrative embedding of retrofit objectives

A central theme in the CEPU report is the need to move beyond voluntary or advisory approaches and to embed energy efficiency / environmental upgrade and saving requirements within regulatory frameworks for buildings. The report highlights the limitations of existing audit-based regimes where follow-up action is not mandatory and recommends that audit outcomes be linked more clearly to required improvements, enforcement mechanisms, and regulatory consequences.

Another idea worth exploring is whether to mandate that building owners set aside a part of the management fees paid as reserve fund for future energy efficiency / environmental upgrading works. Should this become mandatory, it would help those multi-owned properties to overcome the financial barrier to kick-start expensive retrofit works.
From a Pillar 3 perspective, these recommendations reflect a call to integrate climate and energy objectives directly into building regulation and compliance processes, rather than treating retrofit as an optional enhancement. By proposing that guidelines and practices be implemented through statutory and administrative regulatory mechanisms, the CEPU report is effectively advocating for mainstreaming energy saving into the normal expectations of building ownership and management.

3. Performance benchmarking and system-wide comparability

The CEPU report places strong emphasis on the development of performance benchmarks to classify buildings according to energy performance. It proposes the use of standardised benchmarks to identify underperforming buildings, prioritise interventions, and guide improvement pathways.

In governance terms, benchmarking is a classic mainstreaming tool. It creates a common performance language across government, regulators, and market actors, enabling climate objectives to be applied consistently across building types and ownership structures. When embedded within administrative systems, benchmarking allows retrofit priorities to be aligned with regulatory oversight, incentive design, and resource allocation, rather than being addressed on an ad hoc basis.

4. Integration into government administrative systems and workflows

The CEPU report also calls for the creation of standardised assessment platforms and clearer administrative pathways linking audits, technical assessments, retrofit planning, and financial support. These proposals focus on how government systems themselves operate, including the role of EMSD in technical assessment and the need for clearer procedural coordination across departments.

From a Pillar 3 standpoint, these measures seek to integrate retrofit objectives into routine government workflows, reducing fragmentation between policy intent, technical assessment, and implementation. Rather than creating new programmes, the emphasis is on improving how existing systems interact, which is a hallmark of effective mainstreaming.

5. Government leadership through public sector buildings

Another area highlighted in the CEPU report is the role of government as a building owner and operator. The report recommends greater transparency and disclosure of energy audits and performance in government buildings, positioning the public sector as a demonstrator of best practice.

This recommendation clearly aligns with Pillar 3, as it concerns the integration of climate objectives into public sector asset management. When government applies retrofit standards to its own building stock, it reinforces consistency across the regulatory system and signals that climate objectives are part of normal operational practice, not merely requirements imposed on private actors. The emphasis here is on internal practice and institutional alignment, rather than public disclosure or performance reporting, which are examined under Pillar 4.

6. Integration within government: the role of high-level coordination mechanisms

While many of the CEPU report's recommendations implicitly support the integration of retrofit objectives into regulatory and administrative systems, the report does not address how integration is to be achieved within government itself. From a climate governance perspective, mainstreaming is not only a matter of embedding requirements into rules or procedures; it also requires deliberation, shared understanding, and coordination within the bureaucracy.

This integrative function logically sits at the centre of government. The Steering Committee on Climate Change and Carbon Neutrality (SCCCN), chaired by the Chief Secretary, provides an institutional platform capable of aligning climate objectives across bureaux and departments. From a Pillar 3 perspective, such a body has a potential role in ensuring that retrofitting buildings is treated as a cross-cutting policy priority, rather than as a series of parallel sectoral initiatives.

Effective mainstreaming may therefore require mechanisms such as:

- Structured cross-bureau discussion of retrofit priorities and trade-offs
- Joint assessment of buildings and districts by relevant departments (e.g. energy, housing, building regulation, management), rather than sequential or siloed reviews
- Targeted internal training or guidance to ensure that civil servants across policy domains understand how retrofit objectives relate to their respective mandates

These measures are internal to government and distinct from public engagement or reporting requirements. They are concerned with how climate priorities are integrated into everyday policy reasoning and administrative practice, rather than how outcomes are disclosed or evaluated. Seen in this light, Pillar 3 highlights an area where Hong Kong's climate governance could be further strengthened: while technical tools and regulatory instruments are increasingly available, the institutional processes needed to mainstream retrofit objectives across the bureaucracy remain underdeveloped.

VII. TRANSPARENCY, MONITORING, REPORTING (TMR) AND INDEPENDENT REVIEW (IR) – PILLAR 4

1. Purpose of Pillar 4

Under the Five-Pillar Model, Pillar 4 focuses on whether climate objectives are supported by robust systems for transparency, monitoring, reporting (TMR), and independent review (IR). While Pillar 3 is concerned with embedding climate priorities into government systems and decision-making processes, Pillar 4 addresses a different but complementary function: ensuring that policies and actions are visible, measurable, trackable, and subject to feedback and correction over time.

In the context of retrofitting buildings, this pillar asks whether Hong Kong has the institutional capacity to understand how buildings are performing, whether progress toward energy saving and decarbonisation objectives can be assessed, and whether information generated through audits and assessments is used to inform policy refinement.

Among the five pillars, the CEPU report is most explicit and detailed in relation to Pillar 4. A substantial portion of the report is devoted to identifying weaknesses in existing audit and reporting arrangements and to proposing mechanisms to improve data quality, transparency, and accountability across the building stock.

The CEPU report highlights that, while Hong Kong has accumulated a large volume of energy audit data over time, information remains fragmented, inconsistently disclosed, and weakly linked to follow-up actions. Its analysis notes that audit findings are often treated as informational rather than as inputs into a continuous performance management cycle. However, the report does not treat data as an isolated issue: instead, it repeatedly identifies weaknesses in

information availability, comparability, and follow-up as cross-cutting constraints that undermine effective monitoring and review.

2. Strengthening audit regimes and follow-up mechanisms

A central Pillar 4 theme in the CEPU report is the need to strengthen the role of energy audits as monitoring tools. The report recommends:

- Shortening audit cycles for underperforming buildings,
- Improving the quality and comparability of audit data, and
- Linking audit outcomes more clearly to required improvement actions.

From a governance perspective, these recommendations are not about integration into policy systems (Pillar 3), but about ensuring that information generated through audits is credible, timely, and capable of supporting oversight and corrective actions. Strong audit regimes form the backbone of effective monitoring and are a prerequisite for meaningful reporting and review.

3. Benchmarking, classification, and performance visibility

The CEPU report places particular emphasis on the development of standardised benchmarking frameworks to classify buildings according to energy performance. It proposes the use of benchmarks to identify low-performing buildings, prioritise interventions, and track improvement over time.

Under Pillar 4, benchmarking serves a transparency and accountability function. By establishing common performance reference points, benchmarking allows policymakers, regulators, and building owners to see how individual buildings perform relative to peers and minimum expectations. It also enables aggregation of performance information at the portfolio or city level, supporting more informed policy evaluation.

Importantly, the CEPU report frames benchmarking not as a punitive tool, but as a mechanism to improve visibility and guide actions – an approach consistent with international best practice in climate governance.

4. Data platforms and reporting systems

The CEPU report further recommends the development of centralised or standardised data platforms to consolidate audit results, technical assessments, and retrofit information. These platforms are intended to reduce fragmentation, improve data accessibility, and support more systematic analysis of building performance trends.

From a Pillar 4 perspective, such platforms are critical to:

- Enable consistent reporting across building types
- Support longitudinal tracking of performance improvements
- Allow policymakers to assess whether aggregate outcomes align with energy saving and decarbonisation objectives

These recommendations reinforce the idea that transparency is not merely about disclosure, but about institutionalising data flows that support ongoing monitoring and review.

5. Public sector disclosure and leadership by example

The CEPU report also highlights the importance of greater transparency in government buildings, including more detailed disclosure of energy audit results and performance outcomes. While government leadership is discussed elsewhere in relation to integration (Pillar 3), the transparency dimension belongs squarely under Pillar 4.

Disclosure of public sector building performance strengthens credibility, provides learning opportunities, and creates reference points for the private sector. It also enables external scrutiny and models a culture of accountability within government itself.

6. Independent review and feedback loops

Although the CEPU report does not propose a standalone independent review body, its emphasis on standardisation, benchmarking, and transparent reporting implicitly supports independent analysis and evaluation by third parties, including researchers, professional bodies, and auditors.

From a governance standpoint, Pillar 4 is concerned not only with generating data, but with ensuring that information feeds back into policy learning. Transparent reporting and comparable metrics create the conditions under which policies can be assessed, adjusted, and improved over time, even where formal external oversight mechanisms are limited.

7. From review to action

Subsequent developments indicate that the CEPU report has already played a constructive role in strengthening Hong Kong's TMR framework for building energy performance. Notably, the Buildings Energy Efficiency (Amendment) Ordinance 2025 was passed by the Legislative Council in June 2025. The amendments significantly strengthen the existing monitoring and reporting regime by, among other measures, shortening the statutory energy audit interval for regulated buildings from 10 years to five years, expanding the scope of buildings required to conduct audits, and requiring greater disclosure of technical data in energy audit reports. These changes directly reflect issues highlighted in the CEPU report, which identified long audit cycles and limited data transparency as constraints on effective monitoring and follow-up action.

The HKSAR Government has committed to regular reviews of statutory energy efficiency standards, enhanced benchmarking tools, and expanded data collection on actual electricity consumption in buildings. Taken together, these measures reinforce the institutional foundations for monitoring and reporting. Pillar 4 mechanisms are not static but are being progressively strengthened through statutory and administrative means.

Looking ahead, the CEPU report had suggested that audit cycles could ultimately be shortened further, from five years to three years, particularly for underperforming buildings. From a governance perspective, this points to a logical next step under Pillar 4. During the next term of government (2027-2032), a structured review of the five-year audit regime could be undertaken, with a view to assessing the feasibility and value of moving toward a three-year audit cycle for selected building categories. Such a review could be accompanied by an independent assessment, for example through the commissioning of a further CEPU-type study mid-way through the next term of government. In practical terms, this would allow the government to evaluate the effectiveness of the amended regime, incorporate lessons learned, and, if appropriate, complete further regulatory refinements before 2032. This approach would align TMR and IR within a coherent policy cycle, consistent with good climate governance practice.

VIII. STAKEHOLDER AND PUBLIC ENGAGEMENT – PILLAR 5

1. Purpose of Pillar 5

Under the Five-Pillar Model, Pillar 5 focuses on whether non-government stakeholders and the public are meaningfully engaged, informed, and enabled to act. Pillar 5 examines the social and institutional conditions for implementation beyond government.

In the context of building retrofits, this pillar is particularly important. Most of Hong Kong's building stock is privately owned, often multi-owned, and managed through owners' corporations or property management companies. Even where regulatory and monitoring frameworks are strengthened, retrofit outcomes ultimately depend on the willingness and capacity of building owners, managers, professionals, and occupants to participate.

The CEPU report devotes substantial attention to stakeholder and public engagement, reflecting an understanding that technical and regulatory measures alone are insufficient to deliver large-scale retrofit

outcomes. Unlike its treatment of regulatory and monitoring issues, the CEPU report's language in this area is explicitly oriented toward education, capacity-building, awareness, and behavioural change, rather than institutional integration.

From a governance perspective, these recommendations align closely with Pillar 5.

2. Professional capacity and skills development

A recurring theme in the CEPU report is the need to strengthen professional capacity across the retrofit value chain. The report identifies gaps in technical knowledge and practical experience among facility managers, building professionals, and service providers, particularly in relation to energy saving retrofitting of older, high-rise buildings.

The CEPU report recommends:

- Targeted training programmes for facility managers and property management companies
- Closer collaboration with professional institutes and universities
- The development of practical guidance tailored to Hong Kong's dense urban environment

Besides technical knowledge, it is worth strengthening the practitioners' knowledge on financial matters such as available subsidies to implement retrofits, as well as alternative financing models that help to minimise initial capital investments.

These measures are not about changing regulatory frameworks, but about building the human and institutional capacity needed to translate policy intent into action, which is central to Pillar 5.

3. Building owners, owners' corporations, and collective decision-making

The CEPU report places particular emphasis on the challenges faced by building owners and owners' corporations in multi-owned buildings. It highlights issues such as limited technical understanding of retrofit options; concerns over cost, disruption, and payback periods; and difficulties in reaching collective decisions among owners. As such, the CEPU report calls for enhanced guidance, clearer communication of benefits, and practical support mechanisms to help owners navigate retrofit decisions. These recommendations recognise that engagement is not simply about information provision, but about reducing cognitive, organisational, and perceived risk barriers faced by private actors.

4. Public awareness and behavioural change

Beyond organised stakeholders, the CEPU report also addresses the role of broader public awareness and occupant behaviour. The report argues that greater understanding of energy use, comfort, and building performance can support retrofit uptake and reinforce the effectiveness of technical measures. It is also beneficial to let the public understand that retrofit works are not necessarily capital-intensive as alternative financing models are available and future financial returns would help to offset the costs.

From a governance standpoint, these proposals fall squarely under Pillar 5. They are concerned with legitimacy and social acceptance, helping to normalise retrofit as a routine and desirable aspect of building ownership and occupation, rather than an exceptional or burdensome intervention.

5. Financial instruments

While financial instruments are discussed elsewhere in the CEPU report, many of the proposed incentives function primarily as engagement and enablement tools rather than as elements of regulatory integration. Subsidies, concessional loans, and support schemes are intended to lower entry barriers, particularly for smaller building owners and older buildings with limited financial capacity.

Besides incentives, alternative financing models such as energy performance contracting, energy-as-a-service, and build-own-operate-transfer models are also useful in lowing entry barriers as they can minimise capital investments by the building owners.

In governance terms, such measures support Pillar 5 by:

- Encouraging participation among reluctant or resource-constrained actors
- Signalling government commitment to shared responsibility
- Complementing regulatory and monitoring frameworks without replacing them

Overall, the CEPU report makes clear that stakeholder and public engagement is not a peripheral issue in the retrofitting of existing buildings, but a central condition for implementation. Given Hong Kong's predominantly private and multi-owned building stock, retrofit outcomes depend heavily on the capacity of owners, owners' corporations, property managers, professionals, and service providers to make informed, collective decisions. While financial instruments, technical guidance, and regulatory signals can shape behaviour, they cannot substitute for effective engagement and institutional capacity at the building and community level. From a climate governance perspective, Pillar 5 highlights that successful retrofitting requires not only policies and mandates, but governance arrangements that enable coordination, trust, and sustained participation among non-government actors.

IX. GOVERNANCE CONSIDERATIONS FOR THE SCCCN FROM CASE STUDY

In the Chief Executive's 2025 Policy Address, the HKSAR Government signalled a clear intention to "drive the market to accelerate carbon reduction in existing buildings." This statement reflects growing recognition that existing buildings must play a central role in Hong Kong's decarbonisation pathway, and that market dynamics alone are unlikely to deliver the required pace and scale of change without effective governance arrangements.

This case study has examined the challenge of retrofitting existing buildings in Hong Kong through the lens of climate governance, drawing primarily on the findings of the government-commissioned CEPU report and situating them within the Five-Pillar Model of good climate governance. The analysis shows that Hong Kong has clear long-term objectives for the buildings sector, that technical solutions are well understood, and that stakeholders broadly recognise the importance of action. At the same time, it highlights persistent gaps between ambition and implementation arising from the interaction of financial, regulatory, institutional, data-related, and stakeholder-capacity constraints.

Notably, two of the seven challenge categories identified in the CEPU report – regulatory challenges and institutional challenges – directly concern governance capacity rather than technical feasibility or market readiness. Seen in this light, retrofitting existing buildings emerges not as a narrow technical or market problem, but as a system-level governance challenge. Against this backdrop, the following considerations are offered for the SCCCN, given its system-wide coordination role.

- **Strategic alignment and policy signalling**
  The case study suggests a need to consider how the Chief Executive's stated intent to "drive the market" is reflected across Hong Kong's long-term decarbonisation pathway. While supply-side decarbonisation of electricity remains essential, the structural characteristics of Hong Kong's building stock indicate that demand-side retrofitting is unavoidable. Clear and consistent strategic signalling is therefore important to ensure that retrofitting is treated not only as a supportive measure, but as a core component of the decarbonisation pathway for the buildings sector, aligned with long-term targets and milestones.

- **Whole-of-government coordination**
  The case study highlights that retrofitting existing buildings is inherently a cross-cutting policy challenge. Responsibilities relevant to retrofit outcomes span climate and energy policy, building regulation, housing, finance, and community engagement, and are distributed across multiple bureaux, departments, and public bodies. The SCCCN is uniquely positioned to provide a forum for clarifying policy ownership, aligning objectives,

and addressing cross-cutting issues, without altering existing statutory responsibilities. Making coordination explicit would help ensure that regulatory, financial, and technical measures reinforce one another rather than operating in parallel.

- **Mainstreaming retrofit objectives into government systems**
  The analysis points to the importance of mainstreaming retrofit objectives into regulatory and administrative systems. The CEPU report's identification of regulatory and institutional challenges suggests that further progress may depend on embedding retrofit considerations into statutory requirements, approval processes, asset management practices, and routine administrative workflows. From a governance perspective, the SCCCN may wish to consider how existing policy instruments interact across bureaux and whether structured internal deliberation could support more consistent integration of retrofit objectives into government systems.

- **Transparency, monitoring, and policy learning**
  Strengthened transparency, monitoring, and reporting arrangements create opportunities for policy learning and refinement. The Buildings Energy Efficiency (Amendment) Ordinance 2025 has enhanced the statutory framework for building energy audits and reporting. As these measures are implemented, there may be value in considering how periodic review and independent assessment could be used to evaluate whether strengthened monitoring arrangements are delivering systemic change, and to inform future adjustments in a structured and timely manner. Such an approach would align retrofit policy with coherent review cycles, consistent with good climate governance practice.

- **Stakeholder engagement and market enablement**
  The case study underscores that the success of any effort to "drive the market" will ultimately depend on the capacity of non-government actors to respond. Given Hong Kong's predominantly private and multi-owned building stock, retrofit outcomes rely heavily on the ability of owners, owners' corporations, property managers, and professionals to make informed and collective decisions. While engagement, capacity-building, financial instruments, and incentive programmes are already in place across different policy domains, there may be value in considering how these efforts are coordinated and supported as part of an integrated governance approach.

- **Governance oversight and accountability**
  As retrofitting existing buildings becomes a central and long-term component of Hong Kong's climate transition, the question of sustained oversight becomes increasingly important. Given the cross-cutting nature, complexity, and duration of the retrofit challenge, the SCCCN may wish to consider whether appointing an appropriate individual to oversee this policy area could strengthen accountability and continuity. Such a role could focus on tracking progress across policy domains, facilitating coordination among bureaux and departments, and reporting regularly to the SCCCN on implementation challenges and emerging issues. This would not alter existing responsibilities, but could help ensure that retrofit policy receives sustained, high-level attention as Hong Kong enters an era of large-scale renewal of its existing building stock.

Closing observation

Taken together, these considerations suggest that the challenge of retrofitting existing buildings is not primarily one of technology or awareness, but of governance. The Chief Executive's 2025 Policy Address provides a clear statement of intent to accelerate market-led action. The analysis in this case study indicates that realising this ambition will depend on how effectively vision, policy instruments, institutional processes, and stakeholder engagement are aligned. In this context, the SCCCN's coordinating role positions it to play a critical enabling function in translating policy intent into sustained, system-wide outcomes.

ENDNOTES

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APPENDIX

SUMMARY OF CHALLENGES TO RETROFITTING EXISTING BUILDINGS IDENTIFIED IN THE CEPU REPORT (CHAPTER 4)

CEPU Challenge Category	Core Issues Identified in the CEPU Report	Governance Relevance
1. Financial challenges	High upfront capital costs, long payback periods, uncertain or insufficient returns on investment, and limited access to tailored financing mechanisms discourage retrofit investment by building owners. Financial institutions perceive retrofit projects as high-risk due to uncertainty over savings, performance, and ownership stability.	Highlights the need for policy-enabled risk-sharing mechanisms, alignment between regulatory frameworks and financial instruments, and credible long-term signals to mobilise private capital.
2. Technical challenges	Retrofitting must be undertaken in occupied buildings with ageing systems, limited plant space, and site-specific constraints. Retrofit solutions often require customisation, reducing economies of scale and increasing complexity, particularly in dense, high-rise environments.	Requires coordinated technical standards, streamlined approval and compliance processes, and integration across building, safety, and energy regulatory systems.
3. Regulatory challenges	Existing policies, legislation, and regulatory frameworks are insufficient to mandate or systematically drive retrofitting. Retrofit uptake relies heavily on voluntary participation and incentives, with limited regulatory requirements linking audits to compulsory follow-up action.	Represents a core governance gap: retrofit objectives are not yet fully embedded in statutory and administrative systems, limiting consistency, scale, and enforceability.
4. Institutional challenges	Responsibilities for retrofitting are fragmented across government departments, public bodies, utilities, building owners, and service providers. No single actor has oversight of the retrofit process as a whole, leading to coordination gaps and inefficiencies.	Points to whole-of-government coordination challenges and the absence of a clear integrative mechanism for aligning policy objectives, regulatory tools, and implementation pathways.
5. Social challenges	Building owners and occupants often lack awareness of retrofit benefits and available support. In multi-owned buildings, collective decision-making is difficult due to split incentives, divergent interests, and concerns over cost, disruption, and fairness.	Underscores the importance of stakeholder engagement, capacity-building, trust, and governance arrangements that support collective decision-making and sustained participation.
6. Environmental	Retrofit works can generate noise, dust, waste, and other forms of environmental nuisance, particularly in occupied buildings. These impacts may disrupt daily activities and lead to complaints or resistance from occupants and neighbours, discouraging retrofit implementation.	Highlights the need for governance arrangements that manage construction impacts, set clear standards for works in occupied buildings, and balance retrofit objectives with community acceptance.
7. Others	Lack of reliable, standardised, and accessible information on building energy performance; information asymmetry and uncertainty over retrofit outcomes; fragmented markets and service provision; and high transaction and administrative complexity relative to perceived benefits.	Highlights enabling governance constraints related to data availability, market coordination, and administrative processes that affect finance, regulation, and stakeholder decision-making.

Note: Among the seven challenge categories identified in Chapter 4 of the CEPU Report, "regulatory challenges" and "institutional challenges" directly engage questions of governance, while the remaining categories describe technical, financial, social, and enabling constraints that interact with governance arrangements.

DISCUSSION BRIEF

RETROFITTING EXISTING BUILDINGS AND CLIMATE GOVERNANCE CHOICES IN HONG KONG

This case study has examined the challenge of retrofitting Hong Kong's existing building stock through the lens of good climate governance, drawing primarily on the findings of the government-commissioned CEPU report and applying the Five-Pillar Model. The analysis shows that while the technical case for retrofitting is well established, and the scale of the challenge is widely acknowledged, the core obstacles to progress are governance-related rather than technological.

The discussion points below are intended to guide reflection and engagement by policymakers, advisory bodies, practitioners, and stakeholders who wish to engage more deeply with the case study. They are not recommendations, nor do they imply institutional restructuring. Rather, they highlight governance choices, tensions, and trade-offs that shape how retrofitting could evolve as a central component of Hong Kong's climate transition.

1. Retrofitting as infrastructure renewal, not a marginal energy policy

One foundational question is how retrofitting existing buildings is framed within Hong Kong's overall development and climate narrative. The case study suggests that retrofitting is often treated as a supporting measure to supply-side decarbonisation, rather than as a city-wide renewal task comparable in significance to transport, housing, or utilities infrastructure.

A key discussion point is whether reframing retrofitting as essential urban infrastructure renewal – addressing safety, resilience, comfort, asset value, and competitiveness alongside carbon reduction – could help align climate objectives with mainstream policy priorities. Such reframing does not require new legal mandates, but it does influence how urgency, sequencing, and responsibility are perceived across government and society.

2. What does it mean to "drive the market" in governance terms?

The Chief Executive's 2025 Policy Address signals an intention to "drive the market" to accelerate carbon reduction in existing buildings. The case study highlights that market actors broadly recognise the importance of retrofitting, yet structural barriers – finance, split incentives, coordination failures – prevent market-led action at scale.

This raises a governance question: what does "driving the market" mean in practice? Options range from stronger signalling and coordination, through regulatory embedding and transparency, to public sector leadership and risk-sharing. Clarifying this concept is important for aligning expectations among building owners, financiers, professionals, and regulators, and for avoiding over-reliance on voluntary uptake in a sector of systemic importance.

3. Coordination without reorganisation

The case study illustrates that responsibilities relevant to building retrofits are structurally distributed across multiple bureaux and departments, reflecting longstanding administrative logic. Rather than proposing institutional restructuring, the analysis highlights coordination as the central governance challenge.

A useful discussion focus is how coordination can be strengthened within existing structures. This includes questions such as:

- How policy ownership is articulated across bureaux;
- How regulatory, financial, and technical instruments reinforce one another; and
- How cross-cutting issues are surfaced and resolved at the centre of government.

The case invites reflection on whether current coordination mechanisms are sufficient for a long-term, system-wide retrofit transition, or whether clearer leadership signals and internal deliberation processes are needed.

4. Sequencing supply-side and demand-side decarbonisation

Hong Kong's buildings strategy has relied heavily on decarbonising electricity supply, with demand-side retrofitting positioned as supportive. The CEPU report makes clear that this sequencing has cost, resilience, and system-capacity implications.

A key discussion issue is not whether supply-side decarbonisation is necessary- it clearly is- but how *supply-side and demand-side pathways are balanced over time*. Engaging with this question helps clarify trade-offs between short-term feasibility, long-term system efficiency, and public cost, and highlights the importance of governance in shaping transition pathways rather than relying solely on technical optimisation.

5. Oversight, continuity, and long-term accountability

Retrofitting existing buildings is inherently a multi-decade endeavour, extending beyond electoral cycles and individual policy initiatives. The case study raises the question of how sustained attention, learning, and accountability can be maintained over time.

This invites discussion on governance arrangements for continuity rather than control: how progress is tracked across policy domains; how lessons from implementation are fed back into policy adjustment; and how responsibility for this long-term transition is made visible within government. Such reflection is particularly relevant given the scale, duration, and cross-sector nature of the retrofit challenge.

6. Engagement as a condition for implementation

Finally, the case study underscores that most retrofit decisions will ultimately be made outside government, by building owners, owners' corporations, property managers, professionals, and occupants. Engagement, capacity-building, and trust therefore become enabling conditions rather than supplementary activities.

A discussion focus here is how engagement efforts across different policy domains – technical guidance, financial support, regulatory processes, and community-level building management – interact with one another. The case invites readers to consider whether existing engagement mechanisms are sufficiently coordinated and sustained to support and guide non-governmental decision-making at building and district levels.

Conclusion

Taken together, these discussion points reinforce a central insight of the case study: *retrofitting existing buildings is not primarily a technical or awareness problem, but a governance challenge*. The CEPU report demonstrates that Hong Kong has the knowledge, professional capacity, and stakeholder interest to act. The open question is: How vision, coordination, integration, transparency, and engagement should be aligned to translate intent into durable, system-wide outcomes.

Readers are encouraged to use this case study as a starting point for further reflection, critique, and alternative perspectives. Different insights and ideas are not only expected but welcomed, as part of an ongoing conversation about how Hong Kong governs complex, long-horizon climate transitions within its existing institutional framework.

CASE STUDY 2

BIODIVERSITY GOVERNANCE AS A CORE CLIMATE GOVERNANCE CHALLENGE IN HONG KONG

I. INTRODUCTION

Biodiversity as a governance challenge

Biodiversity conservation has traditionally been treated as a specialised environmental concern, managed largely through protected areas, species protection, and regulatory controls and delegated to a single technical department unable to set policy. However, recent global and China's national developments increasingly frame biodiversity as a foundational pillar of sustainable development (and ecological civilization in China), closely linked to climate resilience, public health, economic stability, and long-term societal well-being.

In Hong Kong, this shift is particularly salient. Despite its reputation as a densely populated global financial centre, approximately 60% of Hong Kong's land area remains natural terrain, and its surrounding waters support an exceptionally high level of marine biodiversity. Hong Kong hosts over 3,300 species of vascular plants, more than 580 bird species, and around 6,000 marine species, despite accounting for less than 0.1% of China's marine area.[15] This unique juxtaposition of intense urbanisation and rich natural capital makes biodiversity governance both especially challenging and especially consequential.

At the same time, biodiversity loss and ecosystem degradation are accelerating globally, driven by land-use change, climate change, pollution, and unsustainable consumption. These pressures increasingly interact with urban development, infrastructure planning, and economic activity. As a result, biodiversity is no longer a matter of conservation policy alone, but a cross-cutting governance issue that tests a jurisdiction's ability to coordinate across sectors, align long-term objectives with short-term decision-making, and mobilise resources beyond the public sector. It is because of this cross-cutting that the CBD recommends a whole-of-society and whole-of-government approach.

A recent development illustrating this shift is the publication of the *Hong Kong Nature-based Solution Design Guidelines (A Framework for Practitioners)*, jointly developed by the Civil Engineering and Development Department (CEDD) and the Agriculture, Fisheries and Conservation Department (AFCD) and endorsed by the International Union for Conservation of Nature (IUCN).[16] The Guidelines aim to mainstream biodiversity considerations within infrastructure planning and public works delivery by integrating nature-based solutions into project design, implementation, and monitoring. This initiative signals growing recognition that biodiversity outcomes are increasingly shaped by decisions taken within infrastructure and development planning processes.

II. PURPOSE AND SCOPE OF THIS CASE STUDY

This case study examines Hong Kong's approach to biodiversity conservation and management through the lens of good governance, using the Five-Pillar Model adopted in *Good Climate Governance: Principles and Practices for Effective Action* (Chapter 3). While biodiversity is often treated as a distinct policy domain, its governance challenges – cross-sector coordination, long time horizons, competing land-use pressures, and stakeholder engagement – closely mirror those encountered in climate policy, making it a relevant and instructive case for governance analysis.

The analysis in this case study is anchored primarily in Hong Kong's Biodiversity Strategy and Action Plan (BSAP) process, including the First BSAP (2016-2021), the consultation for the second BSAP, and the resultant Second BSAP published on 31 December 2025. The Second BSAP represents the HKSAR Government's most comprehensive and formal policy framework for translating international and national biodiversity commitments into local objectives, targets, and actions. It is explicitly cross-cutting in nature, requiring coordination across multiple bureaux and departments, and engagement with a wide range of stakeholders. The BSAP's design, implementation arrangements, and review processes provide a rich basis for assessing how Hong Kong governs a complex and evolving policy area.

This case study uses BSAP as a diagnostic lens to examine governance strengths, gaps, and tensions in biodiversity policy. It explores how leadership is exercised, how coordination mechanisms function in practice, how biodiversity considerations are mainstreamed into wider policy processes, how transparency and review are handled, and how stakeholder engagement is structured. The transition from the First BSAP to the Second BSAP provides an opportunity to observe how governance arrangements respond to changing international and national frameworks, development pressures, and stakeholder expectations over time and amid increasing urgency brought by climate change.

This case study is structured as follows:

1. Assessment against the Five Pillars of Good Climate Governance, namely:
   - Pillar 1: Long-term vision, targets, and strategic direction
   - Pillar 2: High-level political leadership and whole-of-government coordination
   - Pillar 3: Integration across all policy sectors ("mainstreaming")
   - Pillar 4: Transparency, monitoring, reporting (TMR), and independent review (IR)
   - Pillar 5: Stakeholder and public engagement
2. Brief comparative insights from other jurisdictions.

The objective of this case study is not to evaluate policy outcomes, but to clarify governance intent, institutional design, and implementation pathways, and to situate Hong Kong's biodiversity governance approach within a broader analytical context.

III: THE FIRST BIODIVERSITY STRATEGY AND ACTION PLAN (2016-2021)

1. Origins and international context

Hong Kong's first BSAP was formally launched in December 2016, following an extensive preparatory process that began in 2013. During the C.Y. Leung administration (2012-2017), the Government established a senior-level, three-tier steering structure to guide the development of the BSAP. This structure brought together biodiversity experts and representatives from non-governmental organisations, professional bodies, universities, rural communities, and the private and public sectors, alongside relevant government bureaux and departments. Working over nearly two years, the advisory bodies identified priority issues across both terrestrial and marine biodiversity and developed a wide range of recommendations. These covered not only conservation and management challenges but also broader objectives such as raising public awareness, strengthening knowledge, and mainstreaming biodiversity (see Pillar 3 below). The HKSAR Government subsequently consolidated this work into a consultation document for public consultation.[17]

Although Hong Kong is not itself a party to the CBD, the CBD was extended to the Hong Kong Special Administration Region in 2011 as part of China's treaty obligations. This extension created both an international responsibility and a policy opportunity for Hong Kong to articulate a city-level biodiversity strategy aligned with national and global objectives, while remaining responsive to local ecological, social, and institutional circumstances.

2. Structure and strategic areas

The First BSAP articulated a clear vision and mission, emphasising the conservation, restoration, sustainable management, and wise use of biodiversity to maintain ecosystem services and deliver benefits for present and future generations. Importantly, the mission explicitly recognised the need to mainstream biodiversity values across government, and to raise awareness in all sectors of society. It identified specific actions, organised under specific strategic areas: *Nature Conservation, Mainstreaming Biodiversity, Capacity Building, and Community Involvement.* These actions were further differentiated by time horizon, reflecting an awareness of the differing implementation challenges associated with policy reform, institutional change, and on-the-ground conservation outcomes.

Governance responsibility for implementation was anchored in an Inter-departmental Working Group on BSAP (IWGB), bringing together relevant bureaux and departments. Progress was reported regularly to the Advisory Council on the Environment (ACE), the HKSAR Government's key advisory body on environmental and nature conservation, providing a degree of transparency and policy oversight.

3. Achievements and progress

By the HKSAR Government's own assessment, the First BSAP delivered substantial and tangible achievements across all four strategic areas. These included:

- The designation of four new Marine Parks and a new Country Park, expanding the protected area network for both terrestrial and marine ecosystems.
- Strengthening the legal framework against illegal wildlife trade, including the phasing out of the local ivory trade and increased penalties.
- Integration of biodiversity considerations into urban infrastructure, such as eco-friendly drainage channels, shorelines, and blue-green infrastructure.
- Establishment of the Hong Kong Biodiversity Information Hub as a centralised, open-access biodiversity data platform.
- Creation of the Countryside Conservation Office to coordinate rural conservation and revitalisation initiatives.
- Expanded public education and engagement through biodiversity festivals, school programmes, and NGO-supported activities.[18]

The achievements of the First BSAP demonstrated that having an overarching plan that required cross-bureau agreement and cooperation have enabled good outcomes. Hong Kong can deliver conservation outcomes when policy direction is clear, funding is available, and institutional responsibilities are defined.

IV. EMERGING GLOBAL AND NATIONAL DRIVERS FOR CHANGE

Since the launch of the First BSAP, the global biodiversity governance landscape has evolved significantly. In December 2022, under China's presidency, the 15th Conference of the Parties (COP15) to the CBD adopted the Kunming-Montreal Global Biodiversity Framework (KMGBF).[19] The framework sets two overarching goals: halting biodiversity loss by 2030 and achieving harmonious coexistence between humans and nature by 2050, supported by 23 action-oriented global targets.

A defining feature of the KMGBF is its emphasis on "whole-of-society implementation". While the role of governments remains central, the framework explicitly calls on businesses, financial institutions, communities, and individuals to play active roles, particularly in areas such as biodiversity risk disclosure, sustainable consumption, finance mobilisation, and nature-based solutions (NbS).[20]

In response, China released its National Biodiversity Conservation Strategy and Action Plan (2023-2030) in January 2024.[21] The national plan places strong emphasis on modernising biodiversity governance capacities, mainstreaming biodiversity into economic and planning systems.

The national BSAP identifies the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) region as one of the key strategic areas for enhanced biodiversity conservation and emphasises strengthening regional collaborative efforts to comprehensively improve the level of biodiversity conservation within the region.[22]

These developments materially changed the context in which Hong Kong's biodiversity policy operates. They raised expectations not only regarding conservation outcomes contributing to national ambitions and achievements, but also regarding governance sophistication, cross-sector coordination, and the mobilisation of public and private resources.

CASE STUDY 2A

China's Biodiversity Strategy and Action Plans – Deepening Intent

A comparison between China's first and second BSAPs showed how biodiversity governance deepened in ambition and scope.

China's first BSAP (2011-2030) established a comprehensive national framework for biodiversity conservation, anchored in strong central coordination, vertical implementation across levels of government, and integration with spatial planning and sectoral policies. It emphasised conservation targets, protected areas, ecosystem restoration, and capacity building. Participation by enterprises and the public was encouraged, primarily as a means of supporting implementation.

China's second BSAP (2023-2030) represents a qualitative deepening of intent. While retaining clear government leadership, it places greater emphasis on several interconnected dimensions:

- **Governance modernisation and bureaucratic alignment:** emphasis on strengthening and modernising biodiversity governance capacity, including clarifying responsibilities across ministries and levels of government, improving coordination mechanisms, aligning sectoral policies, and enhancing institutional effectiveness. Chapter IV highlights the need to integrate biodiversity objectives into the machinery of government, supported by clearer accountability, performance management, and inter-departmental coordination.
- **"Whole-of-society action" under government leadership:** expanded participation by enterprises, social organisations, and the public in conservation and restoration, within a hierarchical, government-led framework that mobilises participation without shared decision-making authority.
- **Science, data, and digital governance:** stronger focus on systematic biodiversity surveys, long-term monitoring, national data platforms, and digital tools to support assessment, early warning, and adaptive management, reflecting the importance of location-specific ecological knowledge.
- **Finance and value realisation:** clearer linkage between biodiversity and diversified funding sources, ecological compensation mechanisms, corporate responsibility, and ecosystem service valuation, enabling biodiversity outcomes to interface with financial and disclosure systems without ceding policy control.
- **Integration with climate and development:** closer alignment of biodiversity with climate change response, ecosystem resilience, nature-based solutions, carbon sinks, and development pathways, positioning biodiversity as foundational infrastructure for long-term sustainability.

Taken together, the evolution from China's first to second BSAP demonstrates that deepening ambition includes how a government-led system can expand participation, mobilise finance, and integrate biodiversity across policy domains while retaining clear executive authority.

V. THE SECOND BSAP: FROM CONSERVATION TO GOVERNANCE

1. Evolving policy framing and strategic priorities

Against this backdrop, the HKSAR Government launched a public consultation in 2025 on updating the BSAP for the coming decade.[23] The consultation document and the resultant Second BSAP[24] explicitly frames biodiversity as integral to human well-being, climate resilience, and sustainable development, and situate Hong Kong's efforts within both national and global biodiversity strategies.

The Second BSAP retains four strategic areas, updated to reflect evolving priorities:

- Nature Conservation
- Deepening Mainstreaming
- Capacity Building
- Collaborative Partnering

2. "Collaborative partnering"

In the consultation document and the relevant ACE briefing paper, "collaborative partnering" was framed primarily in relation to regional (GBA) and

international cooperation, rather than engagement with stakeholders within Hong Kong.[25] The Second BSAP adopts a broader framing of "collaborative partnering" before setting out specific cross-boundary, regional, and international initiatives, suggesting that the concept is intended to extend beyond formal inter-governmental cooperation. As such, the Second BSAP evolved from the first to be a plan for society, as was strongly encouraged by the conservation community. It states:

> "This strategic area aims to broaden and strengthen partnerships across regions, industries and communities to strengthen conservation of nature for the benefit of more people. As nature does not recognise administrative boundaries, successful conservation requires concerted efforts. We appeal to stakeholders from diverse backgrounds and jurisdictions for jointly supporting the shared nature through complementary initiatives".[26]

This framing broadens the scope of "collaborative partnering" conceptually and is consistent with a wider recognition of the role that locally based businesses, financiers, professional bodies, universities, communities, and non-governmental organisations can play in contributing to biodiversity outcomes. At the same time, the Second BSAP stops short of specifying the institutional form, depth, or decision-making interfaces of such partnerships, leaving open important questions about how collaboration with local stakeholders will be operationalised in practice.

3. Continuity and tension in governance architecture

The consultation document also acknowledges several structural challenges facing Hong Kong, including land constraints, climate risks, and public finance limitations. The document highlights the need for diversified funding sources, regional cooperation, and stronger integration of biodiversity considerations into planning and decision-making processes.

At the same time, the proposed governance architecture largely maintains continuity with the First BSAP, relying on the IWGB for coordination and the ACE for oversight. *This creates the key tension that forms the core analytical focus of this case study: whether existing governance arrangements are sufficient to deliver the expanded ambitions implied by the Second BSAP.*

CASE STUDY 2B

"Whole-of-Society Implementation", Ecological Civilization, and Governance Choices for Hong Kong

The concept of "whole-of-society implementation" features prominently in the KMGBF and is subsequently reflected in China's National Biodiversity Conservation Strategy and Action Plan (2023-2030). However, the interpretation and operationalisation of this concept vary significantly across governance systems.

In the global biodiversity discourse, "whole-of-society" is often associated with pluralistic governance models, in which non-state actors, such as businesses, civil society organisations, financial institutions, NGOs, and communities, play expanded roles in implementation, monitoring, and in some cases, even agenda-setting. While governments remain central, the concept is sometimes linked to co-production or co-governance arrangements in jurisdictions with more decentralised or participatory institutional or cultural traditions.

In contrast, China's use of "whole-of-society" must be understood within the context of China's broader governing culture, which is government-led. In this context, "whole-of-society" refers primarily to the mobilisation and alignment of all societal actors behind state-defined objectives, rather than the delegation of decision-making authority or shared governance. Social organisations, enterprises, financial institutions, and communities are expected to contribute actively to implementation, but within a framework where strategic direction, coordination, and accountability remain firmly with the state.

Hong Kong's biodiversity policy sits at the intersection of these two interpretations. The language of the Second BSAP reflects global and national developments by referencing "collaborative partnering" as a strategic area with the government-led structure, centred on the IWGB and advisory oversight through ACE.

This raises an important strategic choice for Hong Kong. While co-governance with stakeholders is not envisaged under the Second BSAP, there remains scope for the HKSAR Government to clarify how it wishes to work with Hong Kong stakeholders, such as ecology NGOs, professional bodies, philanthropic organisations, academic institutions, and the private sector in realising biodiversity outcomes. Options range from consultation and project-based collaboration, through structured delivery partnerships under government leadership, to more formalised roles in implementation and monitoring, while remaining consistent with Hong Kong's executive-led constitutional framework and governance culture.

Clarifying governance issues is not merely a semantic exercise. It has direct implications for policy coherence, stakeholder expectations, resource mobilisation, and the effectiveness of BSAP implementation over time.

VI. LONG-TERM VISION, TARGETS, AND STRATEGIC DIRECTION – PILLAR 1

As outlined above, Hong Kong's First BSAP articulated a clear long-term vision for biodiversity conservation and sustainable use, aligned with China's obligations under the CBD and global best practice. The strategy translated this vision into 67 specific actions, organised under four strategic areas, and differentiated by short, medium, and long-term time horizons. In doing so, the First BSAP provided a reasonably structured roadmap that combined policy intent with operational detail.

Importantly, the First BSAP demonstrated that Hong Kong was willing and able to set explicit objectives, timelines, and action items, rather than relying on aspirational statements alone. This clarity contributed to the delivery of tangible outcomes, including expanded protected areas, strengthened legal frameworks, improved data infrastructure, and increased public engagement.

The Second BSAP signals a continuation of this approach. It is organised around defined strategic areas, supported by concrete measures, and aligned with both the KMGBF and China's National

Biodiversity Conservation Strategy and Action Plan (2023–2030). The shift in emphasis toward *deepening mainstreaming and collaborative partnering* suggests that the Second BSAP places greater weight on implementation pathways and cross-sector participation, while retaining a structured, target-driven format.

From a Pillar 1 perspective, therefore, Hong Kong's biodiversity governance does not suffer from an absence of vision, objectives, or strategic intent. On the contrary, biodiversity policy in Hong Kong is characterised by well-articulated goals, alignment with national and international frameworks, and a growing recognition of biodiversity's role in climate resilience, sustainable development, and ecological civilization.

However, as with climate policy more broadly, the existence of a clear strategy and defined action items does not in itself guarantee effective delivery. The evolution from the First BSAP to the Second BSAP raises a familiar governance question: *whether the institutional arrangements, leadership structures, and coordination mechanisms are sufficient to translate increasingly ambitious objectives into consistent, system-wide outcomes*.

VII: HIGH-LEVEL POLITICAL LEADERSHIP AND WHOLE-OF-GOVERNMENT COORDINATION – PILLAR 2

The delivery of biodiversity outcomes in Hong Kong requires effective coordination across a wide range of policy domains, including land use planning, infrastructure development, marine management, agriculture and fisheries, climate adaptation, finance, education, and enforcement. By its nature, biodiversity governance is inherently cross-bureau and cross-departmental, extending well beyond the remit of any single policy bureau or line department.

1. Biodiversity is a whole-of-government challenge

Biodiversity governance in Hong Kong – indeed, anywhere – presents a whole-of-government challenge (this point is stressed in the China's National Biodiversity Conservation Strategy and Action Plan). While biodiversity policy leadership and conservation expertise are anchored within EEB and AFCD, many of the policy levers that shape biodiversity outcomes sit outside their direct authority. Decisions on land use, infrastructure development, transport infrastructure, public works, tourism, and fiscal priorities all exert material influence on habitats, ecological connectivity, and long-term ecosystem resilience.

2. Institutional landscape for biodiversity governance

As with other cross-cutting policy domains examined in the main climate governance report, biodiversity governance is characterised by distributed responsibilities across bureaux and departments, reflecting longstanding administrative logic rather than a single, integrated biodiversity governance framework. This institutional fragmentation is not unique to biodiversity, but it places demands on coordination, leadership, and policy integration, given the spatially embedded and cumulative nature of ecological impacts.

A. Policy bureaux

Key bureaux with material roles in shaping biodiversity outcomes include:

- **Environment and Ecology Bureau (EEB)**
  EEB provides overall policy leadership on biodiversity and nature conservation, including oversight of BSAP. Responsibilities for conservation policy, ecological protection, and alignment with international and national biodiversity commitments sit within EEB's remit. Through AFCD, EEB also oversees implementation of many biodiversity-related programmes and initiatives. The EEB also has the Environmental Protection Department (EPD) which is responsible for managing pollution and other environmental issues that have a direct bearing on biodiversity.

- **Development Bureau (DEVB)**
  DEVB plays a decisive role in shaping biodiversity outcomes through its responsibility for land

development, public works, infrastructure delivery, and planning-related functions. Decisions taken under DEVB – covering new development areas, reclamation, engineering works, and urban expansion – directly affect habitats, ecological connectivity, landscape structure, and climate adaptation. While biodiversity is not DEVB's primary mandate, its policy and project decisions are often the most consequential for biodiversity conservation in practice.

- **Transport and Logistics Bureau (TLB)**
  TLB influences biodiversity through transport infrastructure planning and delivery, including railways, highways, and associated facilities. Transport corridors can fragment habitats and alter ecological networks, while design choices can either exacerbate or mitigate environmental impacts. Coordination between transport planning and biodiversity objectives is therefore an important, though often indirect, element of biodiversity governance.

- **Culture, Sports and Tourism Bureau (CSTB)**
  CSTB influences biodiversity outcomes primarily through its policy oversight of tourism development, recreation, and cultural facilities, including the promotion of eco-tourism. While the management and protection of country parks and marine parks rest elsewhere (see below), CSTB-led tourism policies and visitor promotion strategies shape patterns of use, visitor flows, and demand for facilities in ecologically sensitive areas. Decisions relating to visitor management, supporting infrastructure, and recreational activities can therefore create both pressures on, and opportunities for, conservation outcomes, highlighting the need for coordination between tourism policy objectives and biodiversity management.

- **Financial Services and the Treasury Bureau (FSTB)**
  FSTB shapes biodiversity outcomes indirectly through fiscal policy, public expenditure decisions, funding mechanisms for public works, and the development of green and sustainable finance initiatives. While biodiversity is not a core policy area for FSTB, its decisions influence whether ecological enhancements are treated as discretionary add-ons or embedded components of infrastructure and development projects.

Each bureau addresses a legitimate dimension of biodiversity governance, yet no single bureau has a mandate to integrate biodiversity objectives across the full policy landscape. As a result, conservation priorities must be negotiated across multiple policy domains, reinforcing the importance of coordination mechanisms through BSAP.

- **Green and Sustainable Finance Cross-Agency Steering Group (CASG)**
  In addition to bureau-level responsibilities, biodiversity-related finance increasingly intersects with CASG, whose members are FSTB, EEB, Hong Kong Monetary Authority, Securities and Futures Commission, Insurance Authority, Hong Kong Exchanges and Clearing Limited, Mandatory Provident Fund Schemes Authority and Accounting and Financial Reporting Council, which together shape disclosure standards, risk management expectations, and market development for sustainable and green finance. While these coordination mechanisms were initially developed in the context of climate transition and climate risk, the growing interest in NbS and biodiversity-related risks and opportunities has expanded their relevance. As financial institutions increasingly engage with international sustainability and nature-related frameworks, CASG interface becomes an important channel through which biodiversity considerations are translated into financial practice, while policy direction and conservation priorities remain set by government.

B. Departments and public bodies

At the operational level, responsibility for biodiversity-relevant decisions is similarly distributed across a range of departments and public bodies, including:

- **Agriculture, Fisheries and Conservation Department (AFCD)**
  AFCD under EEB is the lead department for nature conservation, species protection, protected areas, ecological management, and agriculture and fisheries development. It plays a central role in implementing BSAP actions, including managing country parks and marine parks, promoting sustainable agriculture and fisheries, and providing ecological expertise across government.

- **Civil Engineering and Development Department (CEDD)**
  CEDD under DEVB is responsible for major engineering and development projects, including new development areas and coastal works. Its project design and implementation choices have significant implications for habitat loss, ecological mitigation, and opportunities for biodiversity enhancement.

- **Drainage Services Department (DSD)**
  DSD under DEVB works on flood management, drainage infrastructure, and river engineering, and increasingly incorporates ecological considerations, including river naturalisation and blue-green infrastructure. This illustrates how biodiversity can be embedded within functional infrastructure delivery when policy intent and technical guidance align.

- **Geotechnical Engineering Office (GEO)**
  GEO under DEVB influences slope safety and hillside management, which can affect terrestrial habitats, vegetation cover, and ecological stability, particularly in upland and peri-urban areas.

- **Northern Metropolis Office (NMO)**
  NMO, under DEVB, coordinates planning and implementation of the Northern Metropolis, a major strategic development programme with significant implications for wetlands, rural landscapes, and ecological connectivity. Biodiversity considerations within this context are closely linked to development sequencing, mitigation strategies, and long-term land-use planning.

- **Railway Development Office (RDO)**
  RDO under TLB oversees the planning and delivery of major railway projects. Rail alignments, depot locations, and construction methods have material biodiversity implications, particularly in environmentally sensitive areas.

- **Leisure and Cultural Services Department (LCSD)**
  LCSD under CSTB manages parks, open spaces, and recreational facilities that often serve as important urban and peri-urban ecological assets. Management practices adopted by LCSD can affect biodiversity outcomes at the neighbourhood and city scale.

These departments operate under different statutory mandates, professional cultures, and accountability structures, yet collectively determine biodiversity outcomes across Hong Kong's terrestrial, freshwater, and marine environments. The institutional landscape underscores a central governance challenge examined in this case study: *while biodiversity policy leadership is clearly identified under EEB/AFCD, effective conservation increasingly depends on how ecological considerations are embedded across development-led decision-making and public works delivery throughout the wider machinery of government. Although the Second BSAP repeatedly emphasises coordination and synergy, it does not introduce new cross-bureau mandates, escalation mechanisms, or accountability structures commensurate with biodiversity's expanded strategic role.*

3. BSAP coordination mechanisms

Under the First BSAP, responsibility for coordination was anchored in the IWGB, led by EEB and supported by AFCD. The IWGB brought together relevant bureaux and departments to oversee implementation and report progress to ACE. This arrangement provided a mainstreaming and functional platform for information sharing and coordination, and it supported the delivery of concrete conservation measures during the First BSAP period.

However, the governance model remained largely sector-anchored, with biodiversity policy institutionally located within the environmental portfolio. While this was appropriate for establishing the First BSAP and advancing conservation-focused actions, it also meant that responsibility for biodiversity outcomes continued to sit primarily with EEB and AFCD, rather than being treated as a shared obligation across the HKSAR Government as a whole.

The Second BSAP acknowledges that biodiversity intersects more directly with core development, infrastructure, and economic decisions, particularly in the context of climate change, land scarcity, and public finance constraints. It also highlights the need to deepen mainstreaming, strengthen collaboration, and mobilise resources beyond the public sector. These ambitions implicitly require a stronger form of whole-of-government coordination than that relied upon during the First BSAP period.

The existing governance architecture for the Second BSAP appears to retain substantial continuity with earlier arrangements, continuing to rely on the IWGB as the primary coordinating mechanism and on existing advisory structures for oversight. While continuity offers institutional stability, it raises a critical governance question: *whether a coordination mechanism led from within a single policy domain is sufficient to drive biodiversity considerations into high-level decision-making across the bureaucracy, particularly where trade-offs with housing supply, infrastructure investment, economic development, and fiscal priorities arise.*

This challenge is amplified by the increasingly strategic role that biodiversity plays in climate resilience and long-term urban sustainability. Decisions taken by bureaux responsible for development, transport, works, tourism, finance, and innovation can have profound and irreversible impacts on ecosystems, yet biodiversity considerations may not feature prominently at the point where such decisions are framed. Recent initiatives such as the *Nature-based Solutions Design Guidelines* jointly issued by the CEDD and AFCD, with endorsement from IUCN, signal an effort to integrate biodiversity considerations more directly into infrastructure planning and public works projects. With clearer senior-level leadership from the Chief Executive, Chief Secretary and Financial Secretary, together with stronger horizontal coordination across bureaux and departments, biodiversity could be embedded both as an upstream strategic consideration and as a downstream operational and long-term management responsibility, delivering significant environmental, financial and economic benefits for Hong Kong.

From a Pillar 2 perspective, the biodiversity case therefore exhibits a familiar pattern: *clear policy intent combined with diffuse delivery responsibility*. Coordination mechanisms exist, but they operate largely through consensus and cooperation rather than through strong mandates or shared accountability at the centre of government. This creates the risk that biodiversity objectives, while well-articulated in strategy documents, may be subordinated when competing policy priorities emerge.

The evolution from "community involvement" in the First BSAP to "collaborative partnering" in the Second BSAP further heightens the importance of strong internal coordination. Meaningful partnerships with non-government actors are difficult to sustain unless the HKSAR Government itself speaks with a coherent voice, provides clarity on priorities, and aligns incentives and expectations across departments. Without this internal alignment, external collaboration risks becoming fragmented or symbolic rather than outcome oriented.

In summary, while Hong Kong has established mechanisms for inter-departmental coordination on biodiversity, the expanded ambition of the Second BSAP raises questions about whether existing leadership and coordination arrangements are sufficiently empowered, visible, and authoritative to embed biodiversity considerations consistently across government. Addressing this issue is likely to be central to the effectiveness of the Second BSAP, particularly as biodiversity policy increasingly intersects with climate governance, finance, and long-term development planning.

CASE STUDY 2C

The Inter-departmental Working Group on the Biodiversity Strategy and Action Plan (IWGB)

The implementation of Hong Kong's First BSAP has been coordinated through the IWGB. According to official materials, the IWGB, chaired by the Secretary for Environment and Ecology, brought together relevant bureaux and departments to take forward BSAP actions under their respective purviews, and to facilitate coordination across government during the implementation period.

The IWGB played an important role in supporting delivery of the First BSAP. It provided a platform for inter-departmental information sharing, helped align conservation actions across terrestrial and marine domains, and supported reporting of implementation progress to ACE. This coordination mechanism contributed to a range of tangible outcomes, including the expansion of protected areas, strengthened species protection measures, and the establishment of supporting institutions such as the Hong Kong Biodiversity Information Hub and the Countryside Conservation Office.

At the same time, publicly available information on the IWGB focuses primarily on its coordinating function, rather than on its internal structure or decision-making authority. Details such as formal terms of reference, membership, meeting frequency, and escalation mechanisms are not routinely disclosed. The IWGB appears to operate as a consensus-based coordination platform rather than as a central decision-making body with authority to resolve cross-bureau trade-offs.

As biodiversity objectives increasingly intersect with land use planning, infrastructure development, climate adaptation, and financial policy, the experience of the IWGB illustrates both the value and the limitations of inter-departmental coordination mechanisms that are anchored within a single policy domain. The Second BSAP's expanded emphasis on mainstreaming and collaborative partnering raises the question of whether existing coordination arrangements require reinforcement, clarification, or elevation to ensure biodiversity considerations are consistently integrated into high-level government decision-making.

4. Leadership and coordination in practice: project-driven intensification

While coordination arrangements for biodiversity governance are generally sector-anchored and consensus-based, recent experience suggests that leadership and cross-bureau coordination become more pronounced when biodiversity objectives intersect directly with major development initiatives. ACE deliberations in 2024, particularly through the Nature Conservation Subcommittee, illustrate how biodiversity governance is elevated when it is embedded within high-profile programmes such as the Wetland Conservation Parks under the Northern Metropolis.[27]

In these cases, coordination extends beyond routine information sharing to involve closer engagement among policy bureaux responsible for conservation, planning, development, agriculture and fisheries, as well as more intensive advisory scrutiny. Biodiversity considerations are framed not only as conservation objectives but also as enabling conditions for development, including mitigation, compensation, and "no-net-loss" commitments.

This pattern highlights an important characteristic of leadership under the current governance model. Rather than operating through a standing, system-wide coordination mechanism, leadership on biodiversity tends to be activated episodically, in response to development pressures and politically salient projects. While this can generate focused attention and resources for specific initiatives, it also suggests that coordination is project-driven rather than institutionalised and may not extend consistently to broader biodiversity objectives outside high-priority development contexts.

From a Pillar 2 perspective, this raises a central question for the Second BSAP: *whether reliance on project-specific intensification of leadership is sufficient to deliver biodiversity outcomes at scale, or whether stronger, more durable coordination mechanisms are needed to embed biodiversity considerations systematically across government decision-making*.

VIII: INTEGRATION ACROSS ALL POLICY SECTORS ("MAINSTREAMING") – PILLAR 3

1. Understanding mainstreaming as a governance function

In governance and public policy analysis, mainstreaming refers to the integration of a policy objective into the internal systems, decision-making processes, and professional practices of government, beyond the remit of a single bureau or department. In the context of biodiversity, effective mainstreaming requires conservation considerations to influence upstream choices in planning, infrastructure, and public works, rather than being addressed only through project-level mitigation or stand-alone conservation initiatives. In Hong Kong, biodiversity mainstreaming could be understood as a cumulative and internal governance process, shaped by institutional learning and cross-departmental practice over time.

2. Mainstreaming through BSAP development (2013-2015)

An important but often under-recognised feature of the First BSAP was the extended preparatory phase between 2013 and 2015, during which AFCD and the then Environment Bureau convened a senior-level steering structure involving multiple bureaux and departments, alongside external experts. For government participants, this process functioned as a form of internal mainstreaming. Officials from different portfolios engaged in sustained deliberation on ecological priorities, trade-offs, and feasibility. This exposure helped normalise biodiversity as a legitimate consideration within non-environmental policy domains and contributed to shared understanding across the bureaucracy. This early mainstreaming effect laid the groundwork for subsequent implementation choices under the First BSAP, particularly in development-led portfolios.

3. Mainstreaming in implementation under the First BSAP

During the implementation of the First BSAP, mainstreaming manifested most clearly in public works and infrastructure projects, particularly those led by DEVB and its departments. Progress was made in embedding biodiversity considerations into works, such as drainage and river works through naturalisation and blue-green infrastructure (implementing sponge city concepts), as well as proposing plans under the Northern Metropolis to create a network of large, interconnected ecological parks designed to protect the Deep Bay wetlands.

Such outcomes demonstrate that biodiversity considerations can be integrated into development-led portfolios when supported by policy direction, technical guidance, and professional capacity. Importantly, they also reflect the spillover effects of earlier mainstreaming efforts, as departments applied ecological thinking within their own mandates rather than treating biodiversity solely as an external constraint imposed by AFCD.

Notwithstanding many examples of successes, mainstreaming under the First BSAP may still be said to be selective and project-driven, rather than systemic. Biodiversity considerations were typically introduced during design or mitigation stages, rather than being embedded upstream in strategic planning, budgeting, or investment appraisal.

4. The cumulative effect: a more conscious policy environment

The Second BSAP benefits from more than a decade of incremental mainstreaming, as well as international and national developments in biodiversity. As a result, the policy environment in which the Second BSAP is being developed is materially different from that of the First BSAP. Biodiversity is now more widely recognised

within government as relevant to climate adaptation, long-term resilience, and quality of development outcomes, rather than as a niche conservation concern.

This shift is particularly salient in the Northern Metropolis, where land-use decisions, infrastructure sequencing, wetland protection, and ecological connectivity present both risks and opportunities, and where the new *Nature-based Solutions Design Guidelines* provide an emerging framework for integrating biodiversity considerations into planning and public works delivery.

5. Mainstreaming challenges going forward

The Second BSAP emphasises the need to "deepen mainstreaming," reflecting recognition that incremental, project-based integration is no longer sufficient. However, mainstreaming remains weakly institutionalised. While it acknowledges the importance of integrating biodiversity into planning and decision-making, the Second BSAP provides limited detail on how this will be operationalised across core government systems, including strategic land-use planning, public works approval and funding processes, and policy appraisal frameworks. At a time of tight public finances, mainstreaming also becomes a governance choice, not merely a technical exercise. Departments will increasingly face trade-offs between conventional development approaches and biodiversity- and climate-conscious alternatives whose benefits accrue over longer time horizons. Without clearer mandates, tools, and accountability mechanisms, biodiversity risks being applied unevenly across the bureaucracy, depending on departmental culture and leadership rather than consistent system-wide requirements.

CASE STUDY 2D

What "Mainstreaming" Means in Governance

In governance and public policy analysis, "mainstreaming" typically refers to the integration of a policy objective into the internal systems and decision-making processes of government. This includes embedding considerations into planning frameworks, policy appraisal, budgeting, procurement, regulatory processes, and performance management, so that the objective is systematically considered across all relevant government units.[28]

In the context of biodiversity, international guidance under the CBD and KMGBF emphasises mainstreaming as a means of ensuring that biodiversity considerations influence upstream decisions on land use, infrastructure, public investment, and economic development, rather than being addressed only through stand-alone conservation measures.[29]

In Hong Kong's Second BSAP consultation document, however, the term "mainstreaming" is used more broadly. It encompasses not only integration within government systems, but also public awareness-raising, community engagement, education, and outreach to stakeholders. While these activities are essential for building societal support for biodiversity conservation, they differ conceptually from institutional mainstreaming within the bureaucracy.

This distinction matters for governance analysis. Public engagement and awareness can support biodiversity outcomes, but they do not substitute for embedding biodiversity considerations within core government decision-making processes. Clarifying how mainstreaming is understood, and how different tools are deployed to achieve it, is therefore important for assessing the effectiveness of BSAP implementation.

6. Pillar 3 assessment

From a Pillar 3 perspective, this points to a familiar governance gap: while mainstreaming is widely endorsed in principle, it remains weakly institutionalised in practice. Hong Kong's biodiversity governance exhibits both strength and fragility. Mainstreaming has advanced through institutional learning and project experience, particularly within works-related departments, but it continues to rely largely on discretionary choices rather than embedded systems and procedures.

The Second BSAP offers an opportunity to consolidate these gains by shifting mainstreaming from an emergent practice to a more deliberate governance function. This would not require altering Hong Kong's executive-led system, but it would require clearer expectations about how biodiversity considerations are weighed alongside development, fiscal, and climate objectives within core government decision-making processes.

The challenge is further complicated by the growing convergence of biodiversity, climate adaptation, and finance. Nature-based solutions, ecosystem resilience, and biodiversity risk increasingly shape climate outcomes and long-term economic stability. Yet, biodiversity considerations are not yet systematically integrated into financial appraisal frameworks, infrastructure investment criteria, or public-sector risk management processes. As a result, biodiversity objectives struggle to influence decisions at the scale and pace required.

In this context, the Second BSAP's emphasis on diversified funding sources and resource mobilisation is significant. However, mobilising private or philanthropic capital is unlikely to be effective unless biodiversity objectives are first mainstreamed within government's own planning and investment systems. External finance typically responds to clear policy signals, predictable frameworks, and credible long-term commitments. Where biodiversity remains peripheral to core government processes, financing efforts are likely to remain fragmented and opportunistic.

Overall, the biodiversity case illustrates that mainstreaming is fundamentally an institutional challenge rather than a technical one. Progress depends not only on data or expertise, but on whether biodiversity is treated as a core consideration within government systems alongside economic, social, and fiscal objectives. Strengthening mainstreaming therefore requires attention to governance design, incentives, and accountability, issues that intersect directly with leadership and coordination under Pillar 2, and with transparency and review under Pillar 4.

IX: TRANSPARENCY, MONITORING, REPORTING (TMR) AND INDEPENDENT REVIEW (IR) – PILLAR 4

Transparency, monitoring, and periodic review are essential to effective biodiversity governance, particularly where implementation spans multiple bureaux, long time horizons, and diverse policy domains. Under Pillar 4, the focus is not only on whether information is disclosed, but on whether monitoring and review mechanisms are sufficiently structured to support learning, accountability, and adaptive adjustment over time.

1. Transparency and reporting under the First BSAP

Under the First BSAP, progress reporting was undertaken primarily through periodic updates to ACE, supported by inputs coordinated through IWGB. These reporting arrangements enabled the HKSAR Government to track delivery of individual action items and to provide visibility on achievements and implementation progress across thematic areas, such as habitat conservation, species protection, and capacity building. The availability of a consolidated review of BSAP implementation, including summaries presented to the Legislative Council, reflects a baseline level of transparency and institutional accountability.

At the same time, monitoring and review under the First BSAP were largely *output-focused*. Reporting tended to emphasise completion of actions and initiatives, rather than systematic assessment of outcomes, effectiveness, or longer-term biodiversity trends. While individual projects and programmes were evaluated within their respective domains, there was limited evidence of a comprehensive framework linking BSAP actions to measurable ecological outcomes or to explicit performance indicators across government.

2. Monitoring, outcomes, and adaptive learning

The Second BSAP acknowledges the importance of strengthening monitoring, data, and information systems. It highlights the role of improved data collection, knowledge sharing, and use of digital platforms in supporting biodiversity management. Initiatives such as the Hong Kong Biodiversity Information Hub point to growing recognition of the need for more robust information infrastructure to support decision-making.

However, the Second BSAP provides limited detail on how enhanced data and monitoring will be translated into *formal review and adaptive learning mechanisms*. It does not specify whether there will be regular, time-bound review cycles, outcome-based indicators, or formal processes for adjusting priorities and actions in response to monitoring results. Nor does it clarify how lessons learned from implementation will be systematically fed back into policy refinement, resource allocation, or cross-bureau coordination.

From a governance perspective, this raises a familiar Pillar 4 challenge. Transparency and data availability, while necessary, are not sufficient on their own. Without clearly defined review points, responsibilities for evaluation, and mechanisms for acting on findings, monitoring risks becoming a reporting exercise rather than a driver of continuous improvement. This is particularly salient for biodiversity policy, where ecological responses often lag policy interventions, and where uncertainty and changing environmental conditions require adaptive management.

The growing intersection between biodiversity, climate risks, and land-use pressures further heightens the importance of adaptive learning. As climate impacts intensify and development pressures evolve, biodiversity priorities and trade-offs may need to be reassessed over time. Effective Pillar 4 arrangements would therefore require not only transparency in reporting, but also the institutional capacity to revisit assumptions, revise targets, and recalibrate actions as conditions change.

3. The role and limits of advisory oversight

Overall, the biodiversity case illustrates that while Hong Kong has established basic mechanisms for transparency and reporting, the review and learning dimension of governance remains underdeveloped. Although the Second BSAP places stronger emphasis on data generation, monitoring, and digital platforms, it continues to rely on existing advisory and reporting arrangements rather than establishing a distinct function for independent review, outcome evaluation, or policy adjustment. As a result, improvements in information availability are not yet matched by commensurate mechanisms for systematic learning and accountability, limiting the ability of governance arrangements to adapt as ambitions expand and conditions evolve.

CASE STUDY 2E

Advisory Council on the Environment (ACE): Nature Conservation Subcommittee, and Scope of Independent Review

ACE, established in 1990, is a statutory advisory body tasked with providing independent and expert advice to the government on a wide range of environmental matters.[30] It operates as part of Hong Kong's executive-led governance system and is designed to support evidence-based, consultative decision-making across policy formulation, regulatory review, and project appraisal.

ACE's functions extend beyond general policy advice. A core component of its work is the review of Environmental Impact Assessments (EIAs), where ACE scrutinises proposed development projects to assess environmental risks, mitigation measures, and compliance with statutory requirements. To support this function, ACE operates several specialist subcommittees, including the Nature Conservation Subcommittee, which focuses specifically on proposals affecting habitats, biodiversity, ecological connectivity, and conservation value.

Through the Nature Conservation Subcommittee, ACE has played an important role in shaping development outcomes in ecologically sensitive areas. Its reviews have contributed to the refinement of mitigation measures, species protection protocols, habitat compensation requirements, and ecological design features for infrastructure, housing, and coastal projects. In this respect, ACE performs a meaningful evaluative role at the project and regulatory level, particularly where biodiversity impacts are directly engaged.

Nevertheless, the scope of ACE's review function has important limits when assessed against Pillar 4 criteria. While ACE provides structured scrutiny of EIAs and policy proposals brought before it, it does not operate as an independent review body for strategic policy frameworks such as BSAP. Oversight of the First BSAP at the strategic level was conducted primarily through government-prepared progress reports presented to ACE, rather than through outcome-based evaluations commissioned or led by ACE itself.

Publicly available ACE papers and meeting records relating to the First BSAP indicate that reporting focused largely on descriptive accounts of actions undertaken and initiatives completed, rather than systematic assessment of ecological outcomes, effectiveness, or implementation challenges. ACE's ability to interrogate performance at the strategy level was therefore constrained by its advisory mandate and by its reliance on information provided by the government, rather than by any deficiency in technical expertise.

This distinction is central to understanding Pillar 4 in Hong Kong's biodiversity governance. ACE combines project-level evaluative scrutiny (notably through EIA review and the Nature Conservation Subcommittee) with strategic-level advisory oversight, but it is not designed to function as an independent reviewer of long-term biodiversity outcomes or BSAP effectiveness. The effectiveness of independent review at the strategy level therefore depends on how monitoring data are structured, the extent to which outcome indicators are developed, and whether formal mechanisms exist to translate findings into policy adjustment and adaptive learning.

As the ambitions of the Second BSAP expand, clarifying the respective roles of advisory oversight, project-level evaluation, and strategic review, and how these functions interact, will be important for strengthening transparency, accountability, and learning within Hong Kong's biodiversity governance framework.

X: STAKEHOLDER AND PUBLIC ENGAGEMENT – PILLAR 5

Stakeholder engagement plays an increasingly visible role in biodiversity governance, reflecting the wide range of actors whose activities affect ecosystems and conservation outcomes. Under Pillar 5, the focus is not simply on whether engagement takes place, but on how it is structured, at what stages of the policy cycle, and to what ends, whether for information sharing, consultation, implementation support, or some form of shared decision-making within an executive-led government.

1. Engagement under the First BSAP

Under the First BSAP, stakeholder engagement was framed primarily in terms of community involvement and public participation, particularly through education, awareness-raising, citizen science initiatives, and collaboration with NGOs on conservation projects. These forms of engagement supported implementation and helped build societal support for biodiversity objectives, but they did not constitute shared governance or joint decision-making arrangements.

2. Engagement under the Second BSAP: continuity and change

The Second BSAP signals a shift in terminology from "community involvement" to "collaborative partnering," encompassing engagement at local, regional (GBA), national, and international levels. These forms of engagement are inherently different in purpose, scope, and institutional context. While regional and international collaboration primarily relates to policy alignment, knowledge exchange, and cross-boundary coordination, local engagement raises distinct governance questions.

At the local level, stakeholders are likely to focus on how "collaborative partnering" will be operationalised in practice. It remains unclear whether engagement will continue to be structured mainly around consultation, project-based participation, and information exchange, or whether it will evolve toward deeper and more sustained forms of collaboration that more fully reflect the language of partnership. Clarifying this distinction will be important for managing expectations and for shaping effective engagement mechanisms under the Second BSAP.

3. Project-based engagement versus strategic participation

In practice, stakeholder engagement in biodiversity governance has been most pronounced where conservation objectives intersect with specific projects or development pressures. Recent examples include engagement processes associated with the Wetland Conservation Parks under the Northern Metropolis, where biodiversity considerations are closely linked to land-use planning, livelihoods, and compensation arrangements. In such cases, engagement involves a wide range of stakeholders, including environmental and conservation groups, rural communities, fishpond operators, landowners, and developers, and is supported by structured consultation exercises and advisory scrutiny through ACE and its Nature Conservation Subcommittee.

These project-based engagement processes can be substantive and technically detailed, and they play an important role in identifying concerns, refining mitigation measures, and managing trade-offs. At the same time, they remain bounded by project scope and timelines, and do not extend to shared oversight of biodiversity strategy design, prioritisation, or long-term performance. Engagement is therefore episodic and issue-specific, rather than continuous and systemic.

From a governance perspective, this pattern highlights a distinction between *engagement for implementation and engagement for governance*. While Hong Kong's biodiversity framework demonstrates active engagement in implementation contexts, particularly where development impacts are salient, it provides fewer institutionalised channels for stakeholders to contribute to strategic review, adaptive learning, or accountability for outcomes under BSAP.

4. Managing expectations around "whole-of-society" and partnering

Overall, the biodiversity case illustrates that stakeholder engagement is active and evolving but remains instrumental rather than constitutive of governance. As ambitions under the Second BSAP expand, a key Pillar 5 question is whether existing engagement arrangements, largely consultative, project-driven, and advisory, are sufficient to support long-term biodiversity outcomes, or whether stronger mechanisms are needed to link stakeholder inputs more systematically to review, learning, and policy adjustment over time.

CASE STUDY 2F

Interpreting "Whole-of-Society" and "Collaborative Partnering" in Biodiversity Governance

At the same time, the evolving language used in global, national, and local biodiversity frameworks has contributed to divergent interpretations among stakeholders. Terms such as "whole-of-society implementation," "community involvement," and "collaborative partnering" are, in international discourse, sometimes associated with deeper forms of participation in strategy design, priority-setting, and governance. As reflected in submissions by civil society organisations and ecology-focused bodies, some stakeholders in Hong Kong have interpreted this language as signalling the potential for more sustained and structured participation in biodiversity governance, beyond project-level consultation.

However, as reflected in the Second BSAP and the prior consultation document, Hong Kong's governance approach remains government-led (i.e. executive-led), with stakeholder engagement oriented toward consultation, implementation support, and information exchange rather than shared decision-making or co-governance. This creates an important Pillar 5 governance tension: *while engagement mechanisms are active and expanding, expectations regarding the depth and scope of participation may exceed what current institutional arrangements are designed to deliver.*

XI. GOVERNANCE CONSIDERATIONS FROM CASE STUDY

The following considerations build on the direction signalled by the Second BSAP, while focusing on governance choices that are not yet explicitly articulated in the strategy itself.

This case study highlights that biodiversity governance is entering a period of rapid transformation, shaped by the accelerating impacts of climate change, growing emphasis on NbS, and increasing integration between environmental policy, infrastructure planning, and financial regulation. These dynamics do not fundamentally alter Hong Kong's executive-led governance model, but they do place new demands on how policy is designed, implemented, and coordinated across domains.

1. Data and knowledge

A first and foundational consideration is the central role of data and knowledge. Effective biodiversity conservation, ecosystem restoration, and climate adaptation all depend on robust understanding of how ecosystems function, how they respond to stress, and how interventions perform over time. Such knowledge is inherently location-specific, particularly in terms of climatic condition and landscape, as well as a dense and highly modified environment such as Hong Kong. This underscores the importance of sustained investment in ecological research, monitoring, and data infrastructure, drawing on the strengths of universities, research institutions, and specialist practitioners. Without such investment, policy ambition risks outpacing implementation capacity, and adaptive learning remains constrained.

2. Finance and investment

Second, the importance of data extends beyond public policy into the realm of finance and investment. NbS increasingly require substantial and sustained funding, often beyond what public budgets alone can provide. Private capital, whether from banks, institutional investors, blended finance vehicles, impact investors, or philanthropy, depends on credible information about risks, outcomes, and performance. Data on biodiversity condition, ecosystem services, and intervention effectiveness therefore becomes a prerequisite not only for environmental management, but also for mobilising non-government financing at scale.

3. Reshaping of the governance landscape

Third, this growing intersection between biodiversity and finance is reshaping the governance landscape. Financial regulators and market actors are increasingly engaging with frameworks such as sustainability-related disclosure standards and nature-related risk assessment tools. As biodiversity becomes progressively 'data-fied' and incorporated into financial decision-making, governments face the challenge of aligning conservation policy, infrastructure delivery, climate adaptation, and financial regulation in a coherent manner. This alignment is not primarily about financialisation for its own sake, but about ensuring that public policy signals, regulatory frameworks, and investment practices reinforce rather than undermine biodiversity objectives.

4. No longer in its silo

These developments place pressure on traditional policy silos. Biodiversity can no longer be treated solely as a conservation issue, nor climate adaptation as a technical infrastructure challenge, nor finance as a separate regulatory domain. Instead, these areas are increasingly interdependent, requiring coordination across environmental, development, planning, financial, and research institutions. In this context, while the HKSAR Government has clearly signalled the maintaining of Hong Kong's executive-led system, effective governance may increasingly depend on more structured and sustained collaboration with stakeholders, short of formal co-governance. This includes collaboration on data generation, knowledge sharing, implementation partnerships, and feedback mechanisms that support learning and adjustment over time.

5. Hybrid governance options

Finally, this case study illustrates that governance choices are becoming increasingly consequential as policy domains converge. Many of the considerations identified here are already implicit in the direction signalled by the Second BSAP consultation, even if they have not yet been articulated as a coherent or explicit governance framework. The analysis and ideas set out in this paper are therefore not intended as prescriptive solutions, but as illustrations of how biodiversity governance could evolve in response to emerging pressures and interdependencies.

These considerations point to the importance of strengthening institutional capacity, clarifying roles and responsibilities across government, deepening collaboration with knowledge institutions and financial actors, and ensuring that engagement mechanisms remain meaningful as expectations rise and complexity increases. Such an approach would enable Hong Kong to preserve its executive-led governance model while responding pragmatically to the growing interlinkages between biodiversity, climate adaptation, infrastructure delivery, and finance.

Taken together, the biodiversity case reinforces a broader insight emerging across the Case Studies in this report: that effective climate and environmental governance increasingly depend not on individual policy instruments, but on the ability of governments to integrate vision, coordination, knowledge, finance, and engagement within a coherent and adaptive framework. How Hong Kong navigates governance choices will shape not only biodiversity outcomes, but also its wider capacity to respond to climate and sustainability challenges in the years ahead.

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DISCUSSION BRIEF

BIODIVERSITY AND ENVIRONMENTAL GOVERNANCE CHOICES IN HONG KONG

This case study examines Hong Kong's approach to biodiversity conservation through the lens of climate governance, analysing leadership, coordination, integration, transparency, and engagement under its BSAPs. The analysis shows that while Hong Kong has clear objectives and tangible outcomes, biodiversity governance is entering a more complex phase where expectations, policy scope, and implementation demands are expanding, especially as biodiversity converges with climate adaptation, infrastructure, and finance.

The following points are intended to guide structured reflection and engagement by policymakers, advisory bodies, practitioners, and stakeholders. They are not recommendations, nor do they imply a shift away from Hong Kong's executive-led governance system. Instead, they highlight governance choices, tensions, and hybrid options that shape how policy may evolve.

1. Reframing biodiversity as foundational infrastructure for resilience

A central theme is the shifting framing of biodiversity from a sectoral conservation issue to a foundational element of long-term resilience, climate adaptation, and sustainable development. Treating biodiversity explicitly as *essential public infrastructure* could strengthen its integration into mainstream policy, planning, and investment appraisal. This reframing does not alter governance structures but influences how biodiversity is weighed against development, fiscal, and climate priorities.

2. Interpreting and operationalising "whole-of-society" implementation

The Second BSAP adopts terms like "whole-of-society implementation." A key discussion point is how Hong Kong operationalises these concepts within an executive-led framework. Clarifying whether engagement aims for consultation, implementation support, data generation, or long-term collaboration is crucial for managing expectations. This leads to a related governance choice: whether to move from ad-hoc consultation toward more structured and sustained collaboration models in areas like data generation and project design, preserving government authority while leveraging external expertise for effective delivery.

3. Strengthening cross-domain coordination and upstream mainstreaming

Biodiversity outcomes are shaped by decisions in land-use planning, infrastructure, transport, and public works. While coordination exists via the Inter-departmental Working Group, it remains largely consensus based. The critical discussion is whether current arrangements are sufficient to embed biodiversity considerations upstream in strategic planning and investment decisions, rather than addressing them primarily through project-level mitigation. Mainstreaming needs to evolve from a discretionary, project-driven practice to a deliberate governance function.

4. Project-based collaboration as a practical pathway

A tangible option for deepening mainstreaming is to concentrate collaborative innovation at the project level. Public works, infrastructure projects, and NbS pilots offer concrete opportunities to embed ecological design early, draw on external expertise, and manage trade-offs transparently. This allows collaboration to add value where it matters most, without altering core accountability structures.

5. Biodiversity data and knowledge as shared public infrastructure

Robust, location-specific ecological data is the bedrock for climate resilience and NbS. A foundational option is to treat biodiversity data and knowledge as shared public infrastructure, supported by sustained public investment but produced collaboratively with universities, research institutions, and specialists. This strengthens evidence-based decision-making while ensuring public ownership and accountability.

6. Aligning policy with finance and enabling investment in NbS

As biodiversity intersects with financial disclosure, risk management, and sustainability reporting, a key question is how to align policy with evolving financial frameworks without ceding control over conservation outcomes. A hybrid option is for government to set policy objectives and safeguards, while enabling private finance, impact investment, and philanthropy to participate in NbS where credible data and monitoring frameworks exist. This requires careful design to ensure financial tools support, rather than drive, biodiversity objectives.

7. Enhancing transparency, adaptive learning, and collaborative capacity

The Second BSAP emphasises monitoring and digital platforms, but the use of information for adaptive learning remains underdeveloped. Discussion should focus on strengthening feedback loops: how outcomes are assessed, trade-offs revisited, and policies adjusted. Furthermore, as governance becomes more complex, investing in collaborative capacity, including facilitation skills, interdisciplinary coordination, and knowledge-sharing platforms — becomes a strategic governance asset to improve policy quality and support long-term delivery.

8. Engagement as an enabling condition for complex governance

Biodiversity outcomes increasingly depend on actors beyond government. Engagement is a necessary condition but not a substitute for clear policy direction and coordination. The discussion should focus on whether current engagement practices are sufficiently structured and sustained to build trust, support learning, and enable delivery as interdependencies grow.

Conclusion

Taken together, these points underscore that biodiversity governance is increasingly a system-level challenge. Hong Kong has demonstrated the capacity to deliver when intent is clear and responsibilities are defined. As ambitions expand under the Second BSAP, the central question is how leadership, coordination, mainstreaming, and engagement are aligned for durable outcomes. The hybrid options presented from framing biodiversity as infrastructure to structuring collaboration and enabling finance to provide a basis for deliberating how executive-led systems can remain effective as environmental, climate, and development pressures converge.

Readers are encouraged to use this synthesis for further reflection, critique, and the development of alternative perspectives within Hong Kong's institutional framework.

CASE STUDY 3

SHIPPING AND PORT DECARBONISATION: GOVERNING A GLOBAL INDUSTRY AND A PORT CITY

I. INTRODUCTION

1. Shipping decarbonisation is also a port governance challenge

Shipping and port decarbonisation presents one of the most complex climate governance challenges facing any major port city, including Hong Kong.

One dimension is international shipping, with sea-borne cargo arriving to Hong Kong, which remains a major international port and maritime hub. In terms of container handling, the Port of Hong Kong handled about 13.7 million TEUs in 2024, making it one of the world's busiest container ports. Of this total, around 10.4 million TEUs were handled at the Kwai Tsing Container Terminals and approximately 3.3 million TEUs at mid-stream and other wharves. Total throughput thus remains significant, even as competition from other regional ports has contributed to a relative decline in its global ranking. The port's activity is anchored by the Kwai Tsing Container Terminals – nine terminals with a combined handling capacity in excess of 20 million TEUs per year – and a dense network of liner services connecting Hong Kong to regional and global trade routes. Beyond containers, Hong Kong's port continues to handle substantial volumes of other cargo, with recent data indicating total port cargo throughput on the order of around 175-177 million tonnes in 2024, reflecting its ongoing role as an integrated logistics, energy and services hub.[31]

In addition to containerised cargo, the port also handles substantial volumes of bulk and liquid cargo, including energy-related imports such as petroleum products and liquefied natural gas (LNG), reflecting Hong Kong's role as a logistics, energy, and services hub. The commissioning of the offshore LNG terminal in 2023, with commercial operations commencing in 2024, further underscores the port's growing role in supporting Hong Kong's energy system and power generation.[32] This infrastructure links maritime activity directly to territory-wide decarbonisation choices through energy infrastructure that is physically and operationally port-dependent.

Equally important, but often less clearly articulated, is the role of the port itself as a place-based, multifunctional system. Hong Kong's port is not merely an interface for ocean-going vessels. It is embedded within a dense urban and coastal environment and supports an exceptionally wide range of maritime activities. Beyond container terminals serving international trade, Hong Kong accommodates over 100,600 arrivals of ocean-going and river-trade vessels annually, alongside about 20,600 licensed local vessels operating within Hong Kong waters and the Pearl River ports. These include river trade vessels, barges, tugs, work boats, fishing vessels, pleasure craft, and other specialised harbour craft. In addition, the HKSAR Government operates a marine fleet of more than 1,000 vessels, serving 13 departments and covering functions such as law enforcement, emergency response, marine works, and port operations. The harbour also supports cross-boundary ferry services linking Hong Kong with Macao and multiple Mainland ports, carrying over 8 million passengers in 2024, as well as cruise operations at the dedicated Cruise Terminal and an active boating and yachting sector.[33] These diverse and intensive activities take place within one of the world's most spatially constrained harbours, alongside marine ecosystems and areas of ecological value. As a result, port and harbour functions intersect directly with land use and coastal planning, air and water quality management, energy and fuel logistics, public access to the waterfront, and the everyday experience of Hong Kong as a coastal city, reinforcing the character of the port as a complex urban-marine system rather than a single-purpose logistics asset.

This case study treats shipping decarbonisation as a dual governance challenge:

- Governing international shipping, shaped by global rules set by the UN International Maritime Organization (IMO), green fuel transitions and commercial imperatives; and

- Governing the port and harbour as part of a Port City system, where climate action intersects with urban planning, environmental stewardship, recreation and tourism, and public value.

While these domains are analytically distinct, they are deeply interconnected in practice, creating coordination challenges that place governance capacity at the centre of the transition. This distinction is central to understanding why governance will determine whether Hong Kong's port and shipping sector can remain competitive while meeting climate and sustainability objectives.

2. Clarifying the governance domains

International shipping: global rules, fuels, and market credibility

The decarbonisation of international shipping is largely driven by the IMO and by market dynamics operating at a global scale. For Hong Kong, this dimension is characterised by:

- Compliance with international regulatory timelines and standards
- Dependence on imported fuels such as traditional marine diesel, LNG and new shipping fuels, such as green methanol
- Competition with other ports to provide safe, reliable and commercially viable bunkering services
- Participation in or facilitation of regional and international initiatives, such as onshore power, as well as green shipping corridors

In this domain, Hong Kong's policy challenge is less about direct control and more about credibility and facilitation, creating confidence among maritime stakeholders that the city can support the next generation of fuels, electrification, and vessels.

The port as a Port City system

At the same time, Hong Kong must govern its port as part of a broader urban-marine system. Beyond cargo throughput and shipping services, port cities need to deal with the multifunctional interface connecting sea, land, city, people, technology and ecology. From this perspective, decarbonisation is not limited to ocean-going vessels. It also encompasses:

- Electrification of port operations and terminals to improve local air quality, which can bring about substantial public health benefits
- Zero-emission harbour craft, including government fleets and domestic vessels, such as ferries and barges, which can improve air quality, as well as noise pollution
- Marine biodiversity protection within Hong Kong waters
- Recreational, tourism, and sporting uses of the harbour and coastal waters
- Long-term urban coastal planning, including sea level rise, and public access to the waterfront

These are place-based responsibilities, governed through local policy, planning, regulation and investment decisions, and involving a wider range of bureaux beyond transport alone.

This distinction matters for climate governance analysis

Distinguishing between international shipping and port development as a Port City system allows this case study to do three things that would otherwise be obscured:

1. **Clarify accountability**
   International shipping outcomes depend heavily on global actors, while port and harbour outcomes are largely shaped by local governance choices.

2. **Expose coordination challenges**
   Decarbonisation requires alignment across fuel strategy, port infrastructure, urban planning, environmental protection and public access, and areas governed by different bureaux and departments.

3. **Reframe success beyond cargo metrics**
   Success includes cleaner air and water, resilient ecosystems, inclusive waterfronts, and a harbour that supports economic, social, and ecological value simultaneously.

This framing sets up the governance analysis that follows, allowing the case study to examine not only *whether* Hong Kong is responding to shipping decarbonisation, but *how well its governance system meets the challenge of global commercial pressures, as well as deal with local public-interest responsibilities.*

II. PURPOSE AND SCOPE OF THIS CASE STUDY

This case study examines Hong Kong's approach to shipping and port decarbonisation through the lens of good climate governance, using the Five-Pillar Model presented in the engagement discussion report *Good Climate Governance: Principles and Practices for Effective Action* (Pack One Chapter 3).

This case study draws on a composite evidence base, including international regulatory developments under the IMO, Hong Kong government policy statements and consultation papers, port-related infrastructure development, and stakeholder discussions across the maritime, energy, and port sectors. Together, these sources provide a sufficiently robust basis to examine how Hong Kong governs a highly complex, multi-level climate policy domain.

This case study is structured against the Five-Pillar Model of Good Climate Governance, namely:

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

The objective of this case study is to clarify governance roles, policy intent, and implementation pathways, and to assess how effectively Hong Kong's governance system responds to the combined pressures of global shipping decarbonisation and the local responsibilities of a port city.

III. HONG KONG'S PORT AND SHIPPING CONTEXT

1. An international port shaped by global trade and China's rise

Hong Kong's development as a port has been closely tied to the evolution of global shipping and, more recently, to China's emergence as the world's leading manufacturing and trading economy and a leading maritime nation. Historically, as a free port, Hong Kong played a pioneering role in containerisation and was among the earliest ports globally to introduce container handling services in the 1970s, positioning it at the forefront of a major transformation in maritime logistics. This early mover advantage, combined with its location, efficiency, and open trading system, enabled Hong Kong to grow rapidly as a regional and global shipping hub.

From the 1980s through the early 2000s, Hong Kong served as the principal transhipment gateway for China-related cargo, particularly during the period when manufacturing activity in the Pearl River Delta expanded faster than port capacity on the Mainland.

This role propelled Hong Kong to become, for a time, the world's busiest container port by throughput, a status that has had a lasting influence on how port performance is perceived locally. Against this historical backdrop, subsequent declines in container throughput have often been viewed negatively in Hong Kong's discourse, even as the global and regional port landscape has fundamentally changed.

As Mainland Chinese ports such as Shenzhen, Guangzhou, Ningbo-Zhoushan, Shanghai, Dalian, and Qingdao expanded rapidly in scale, automation, and hinterland integration, container traffic increasingly shifted closer to production centres. Among shipping stakeholders, it is widely recognised that this evolution reflects structural change rather than a loss of relevance. Hong Kong's competitive role has correspondingly shifted from volume-based container handling towards higher value-added maritime services, including ship owning, ship management and agency, ship brokering, ship finance and leasing, marine insurance, maritime legal and arbitration services, marine surveying, classification societies, and maritime education and talent development. This transition has been gradual but reflects a broader rebalancing of functions within an increasingly integrated regional port system. There are currently more than 1,200 port and maritime services companies in Hong Kong.[34]

2. Institutional arrangements and the absence of a port authority

In many major international ports, strategic planning, coordination, and long-term development are overseen by an independently managed port authority – such as in Singapore, Rotterdam and Los Angeles – which typically plays a coordinating role across infrastructure planning, terminal development, environmental performance, safety, and increasingly, decarbonisation and energy transition. In many cases, port authorities also serve as the primary institutional interface between government, terminal operators, shipping lines, and other stakeholders, enabling coordination across planning, regulation, and investment.

The Chinese Mainland represents a distinct governance model. China's major ports are generally organised under state-owned enterprise (SOE) port groups, operating within a strong framework of municipal, provincial, and national planning, with regulatory authority and ownership closely aligned through the state system. These SOE-led structures allow for large-scale infrastructure investment, integration with industrial and logistics systems, and alignment with national strategic priorities, including decarbonisation and technological upgrading.

Hong Kong differs from both the port authority and SOE-based governance models. It does not have a single port authority responsible for integrated port planning, development, and coordination, nor does it operate under a public sector-owned port group comparable to those found in the Chinese Mainland. Instead, Hong Kong's port has historically been characterised by market-led terminal operations, operating within a regulatory and policy framework set by government.

At the institutional level, Hong Kong has typically relied on a key, dedicated advisory body on port and maritime matters to provide strategic advice. This advisory body is government-appointed and usually comprises senior representatives drawn from across the maritime sector, including leaders of private trade associations such as shipowners, liner operators, and shipping service providers. These trade bodies remain private, industry-led organisations that engage with government through consultation and dialogue.

This institutional arrangement reflects Hong Kong's historical context of limited direct state intervention in port operations. However, it also means that strategic issues, such as long-term infrastructure planning, fuel transition, environmental performance, and coordination across shipping, energy, and urban systems, are addressed through dispersed governance mechanisms rather than a single integrating institution.

From a climate governance perspective, this raises a critical but open question: does the absence of a central port authority or equivalent coordinating body affect Hong Kong's capacity to make timely decisions, align stakeholders, and implement complex decarbonisation measures across the port and harbour system? This question does not assume a particular institutional solution, but it is central to understanding how governance structure shapes policy coherence, implementation capacity, and accountability in the context of shipping and port decarbonisation. As a result, *coordination in Hong Kong relies more heavily on alignment through policy signals, incentives, and administrative processes than on institutional command*.

IV. SHIPPING'S ROLE AND A MULTI-LEVEL GOVERNANCE CHALLENGE

1. Evolution under the Five-Year Plans

Hong Kong's role as a major port and maritime hub has not only been shaped by market forces and historical advantage but has been progressively embedded within China's national development planning. A critical institutional shift occurred with the 12th Five-Year Plan (2011-15), which, for the first time, included a dedicated section on Hong Kong and Macao. This marked a structural change in governance terms: Hong Kong began to have designated roles within national development.

Under the 12th Five-Year Plan, Hong Kong was explicitly positioned as an international financial centre, international trade centre, international shipping centre, and international aviation hub. Importantly, shipping appeared explicitly alongside finance and aviation, establishing an early baseline expectation that Hong Kong's port and maritime services would remain strategically important over the long term.

The 13th Five-Year Plan's (2016-2020) emphasis shifted toward connectivity, transportation, and integration. Hong Kong was framed as an international transportation hub, with shipping increasingly embedded within broader narratives of cross-boundary infrastructure, supply chains, and regional integration, particularly in South China. Shipping remained important, but it was not foregrounded as a distinct strategic sector.

A further qualitative step occurred under the 14th Five-Year Plan (2021-2025), which explicitly reaffirmed and strengthened Hong Kong's role as an international shipping and logistics centre, alongside its roles in finance and aviation. Compared with earlier formulations, shipping was no longer merely implicit within transport connectivity but clearly identified as a core component of Hong Kong's function. While the plan does not prescribe delivery mechanisms, this explicit designation raises expectations regarding continuity, upgrading, and alignment with broader national priorities, including climate and energy transition.

Alongside the designation of Hong Kong as an international shipping and logistics centre, China's national development planning has, since the 12th Five-Year Plan, increasingly emphasised the development of the "marine economy" (海洋經濟) as a strategic priority. Subsequent Five-Year Plans have progressively expanded this framing, moving from a focus on marine industries and port competitiveness toward a more integrated approach that incorporates innovation, environmental protection, and, under the 14th Five-Year Plan, the pursuit of green marine development. While this marine economy framing is articulated at the national level and has been taken forward most actively in coastal provinces such as Guangdong, it provides an important backdrop for understanding the evolving strategic context in which Hong Kong's port and maritime policies are situated.

2. National decarbonisation and global regulation: the rising importance of shipping

This renewed national articulation of Hong Kong's shipping role has occurred alongside two broader and reinforcing developments. First, China's economy-wide commitment to peak carbon emissions before 2030 and achieve carbon neutrality before 2060

(30/60 goals) has increasingly drawn policy attention to hard-to-abate sectors, including shipping, even where emissions are governed primarily through global frameworks rather than domestic regulation. China has also played an active role within the IMO as a member state, participating directly in debates over the pace and design of global shipping decarbonisation.

The decarbonisation of international shipping has moved to the centre of international regulatory attention. During 2023 and 2024, negotiations within the IMO intensified around the design of fuel standards, market-based measures, and timelines for achieving net-zero emissions from international shipping. These discussions coalesced at the IMO's Marine Environment Protection Committee meeting in April 2025 (MEPC 83), which represented an important inflection point in shaping the future regulatory trajectory of the sector. While MEPC 83 advanced agreement on the overall direction of travel, final voting by Member States scheduled in October 2025 was "adjourned" for a year. This extended deliberation reflects both the technical complexity and the political sensitivity of global shipping decarbonisation.[35]

Taken together, these developments place Hong Kong at the intersection of national role designation and tightening global regulation. While national development planning reaffirms Hong Kong's strategic importance as an international shipping centre, and global rules increasingly define the parameters of maritime decarbonisation, the governance challenge for Hong Kong lies in how these external expectations are translated into coherent local strategy, infrastructure readiness, and policy coordination within a dense port city context, and against the backdrop that China is a major supplier of new green fuels and a dominant maritime nation.

3. Hong Kong's policy response: from strategic recognition to active facilitation

Against this evolving national and global backdrop, Hong Kong's own policy attention to shipping has become markedly more explicit in recent years. Historically, shipping tended to feature implicitly within discussions of trade, logistics, or transport, and was less prominent in climate and sustainability narratives than sectors such as power generation or land transportation. This began to change in the early 2020s, with shipping receiving more explicit attention in policy addresses and sector-specific initiatives.

A significant milestone was reached in November 2024, when the Transport and Logistics Bureau (TLB), in collaboration with the Environment and Ecology Bureau (EEB), promulgated the *Action Plan on Green Maritime Fuel Bunkering*.[36] The Action Plan sets out Hong Kong's strategic plan to develop green maritime fuel bunkering services and support the transition toward lower-carbon maritime operations, explicitly referencing both the IMO's net-zero emissions objective for international shipping and national decarbonisation priorities under the 14th Five-Year Plan.

The Action Plan is notable for moving beyond high-level signalling to include quantitative targets and implementation measures, such as reducing emissions from Hong Kong-registered vessels relative to 2019 levels, transitioning a substantial share of the HKSAR Government's diesel-fuelled fleet to green maritime fuels by 2026, reducing emissions at the Kwai Tsing Container Terminals, and achieving measurable uptake of green fuels among Hong Kong-registered ships by 2030. It also identifies actions spanning fuel supply, infrastructure support, incentives, collaboration, and capacity building.

Subsequent developments in 2025 indicate further operationalisation of this agenda. These include the introduction of incentive schemes to encourage early adoption of LNG and green methanol bunkering, facilitation of pilot projects and demonstrations, and the establishment of platforms to enhance coordination across the maritime fuel supply chain.[37] Together, these steps point to an increasingly active and engaged phase of policy-making on green shipping.

4. Governance implications for Hong Kong as a port city

While these initiatives mark an important shift toward more proactive policy engagement, they also underscore the nature of the governance challenge facing Hong Kong. National development planning designates Hong Kong as an international shipping and logistics centre, global regulation increasingly constrains the emissions profile of shipping, and local policy has begun to respond through targeted action plans and enabling measures. However, these elements do not yet coalesce into a fully articulated, long-term transition pathway for the port and maritime sector.

From a governance perspective, the issue is not the absence of policy activity, but the need to align role designation, regulatory expectations, infrastructure planning, and long-term strategic intent across multiple levels of decision-making. As shipping decarbonisation accelerates globally, the question for Hong Kong is whether its emerging policy framework is sufficient to support the sustained transformation of a sector that is simultaneously nationally designated, globally regulated, and locally embedded within a complex port-city system.

This sets the stage for the next section, which examines whether Hong Kong has articulated a sufficiently clear long-term vision, supported by targets and milestones, to anchor decision-making and investment under Pillar 1 of the Five-Pillar Model of climate governance.

V. LONG-TERM VISION, TARGETS, AND STRATEGIC DIRECTION – PILLAR 1

Pillar 1 assesses whether a jurisdiction has articulated a clear long-term vision, supported by credible targets and milestones, capable of guiding investment and decision-making over time. In the case of shipping and port decarbonisation, this assessment requires a different lens from that applied to more territorially bounded sectors such as retrofitting existing buildings or biodiversity. Shipping is a globally mobile, commercially driven industry, in which vessels call at ports based on commercial and operational factors – efficiency, cost, fuel availability, and regulatory certainty – rather than local policy ambition alone.

1. Reframing "vision" in a commercially driven global sector

For Hong Kong, the strategic question under Pillar 1 is not simply whether long-term decarbonisation goals are articulated, but whether the vision is framed in a way that is meaningful to commercial shipping decisions in the near and medium term. Even where governments and port authorities embrace the decarbonisation narrative, shipping companies will ultimately act according to what is technically feasible and commercially viable across global trade routes. After all, there are nearby ports in competition with each other for business.

This structural reality fundamentally shapes what effective target-setting looks like. Unlike stationary sectors, shipping assets are long-lived, capital-intensive, and mobile. Decisions on fleet renewal and retrofitting, as well as fuel choices, are made years in advance and are highly sensitive to fuel availability, infrastructure readiness, price differentials, and regulatory alignment at the international level. As a result, ports that are unable to offer commercially viable low carbon fuels bunkering and operational services risk losing traffic, regardless of their stated climate ambition.

Against this backdrop, Hong Kong's emerging approach to shipping decarbonisation places less emphasis on distant end-state targets and more on *near-term readiness to serve decarbonising fleets*. This reflects a pragmatic understanding that, for shipping, leadership is established not by declarations alone, but by the ability to support vessels that are already beginning to transition.

2. Near-term milestones as strategic signals

Hong Kong's policy actions in 2024 and 2025 illustrate this reframing of Pillar 1 in practice. Rather than relying on long-horizon targets, the HKSAR Government has prioritised short- to medium-term milestones that are directly relevant to commercial shipping operations, particularly in relation to green maritime fuel bunkering.

The *Action Plan on Green Maritime Fuel Bunkering* released in late 2024 by TLB, in collaboration with EEB, places strong emphasis on fuel availability and bunkering capability as critical enablers of Hong Kong's maritime decarbonisation pathway. The Action Plan sets out quantified targets and timelines linked to fuel uptake, port emissions reduction, and early adoption by government and commercial fleets, while identifying LNG and green methanol as the most foreseeable transition fuels in the near term under a multi-fuel strategy reflecting their relative technological maturity, emerging global supply chains, and increasing adoption by major ports and shipping lines. LNG is discussed as a transitional fuel already available at many international ports, while green methanol is identified as a priority fuel for early preparation and pilot bunkering in Hong Kong.[38]

Subsequent policy signals in 2025 further reinforced this emphasis on operational readiness. The Chief Executive's Policy Address in October reaffirmed Hong Kong's role as an international shipping centre and highlighted the strategic importance of green maritime fuels and bunkering capability as part of that role.[39] Building on this direction, the HKSAR Government elaborated its intent through the announcement of incentive frameworks for early adopters, support for pilot bunkering operations, continued efforts to strengthen coordination across the maritime fuel supply chain, as well as identified "partner ports" with which Hong Kong could adopt green practices together.[40] Taken together, these measures and signals are intended to provide confidence to shipowners and operators that Hong Kong aims to remain a viable and competitive port of call as international shipping decarbonisation accelerates, even as detailed implementation continues to evolve.

From a Pillar 1 perspective, these near-term milestones function as *strategic signals*. They reduce uncertainty around infrastructure availability, demonstrate commitment to enabling early movers, and align Hong Kong's port services with the evolving requirements of global shipping markets. In doing so, they arguably carry more immediate behavioural influence than long-term targets that lack clear pathways to delivery.

3. Balancing long-term direction with commercial realism

This emphasis on near-term action does not imply the absence of long-term ambition. Hong Kong's shipping-related initiatives are explicitly framed within broader climate commitments, including carbon neutrality before 2050, national decarbonisation objectives, and the trajectory of international regulation under the IMO. However, the governance logic underpinning Pillar 1 in the shipping context is one of sequencing and credibility.

Rather than attempting to prescribe a detailed long-term transition pathway for a globally regulated sector, Hong Kong's approach to date focuses on ensuring that the port is positioned as a front-runner capable of serving decarbonising ships as they emerge. This reflects an understanding that long-term outcomes in shipping will be shaped by the interaction of global fuel standards, market-based measures, and technological evolution, many of which lie beyond the direct control of any single port or government.

In this sense, Hong Kong's Pillar 1 challenge is not the absence of targets, but the need *to ensure that vision, targets, and milestones are framed in ways that resonate with commercial decision-making*. Onshore power supply, alternative fuel bunkering, and harbour craft transition all require substantial investment and

system-wide coordination. If these measures are not aligned with cost structures, operational practices, and international regulatory signals, uptake will remain limited regardless of policy intent.

4. Pillar 1 assessment: directionally strong, structurally constrained

Taken together, Hong Kong's recent policy actions suggest a Pillar 1 framework that is *directionally strong but structurally constrained* by the nature of the shipping sector itself. The vision that is emerging is less about prescribing an end-state for shipping decarbonisation, and more about positioning Hong Kong as a commercially credible, internationally aligned, and operationally ready port in an era of accelerating global transition.

From a governance standpoint, this represents a realistic, and arguably necessary, adaptation of Pillar 1 to the specific characteristics of the shipping sector. The effectiveness of this approach will ultimately depend on whether near-term milestones are able to crowd in sustained investment, primarily from the private sector, by providing sufficient clarity, confidence, and commercial viability. This, in turn, hinges on whether enabling conditions are in place for infrastructure and fuel supply to scale in line with global demand, and whether Hong Kong can remain aligned with evolving international rules while maintaining its competitiveness as a port and maritime services hub.

This framing also places greater weight on subsequent governance pillars. If Pillar 1 sets direction through commercially relevant readiness rather than prescriptive long-term targets, then leadership and coordination (Pillar 2) and policy integration across energy, finance, and port planning (Pillar 3) become critical in determining whether this vision can be maintained and deepened over time.

VI. HIGH-LEVEL POLITICAL LEADERSHIP AND WHOLE-OF-GOVERNMENT COORDINATION – PILLAR 2

Pillar 2 examines whether high-level political leadership and coordination mechanisms are in place to steer complex, cross-cutting transitions. In the case of shipping and port decarbonisation, this pillar is particularly critical. The sector sits at the intersection of international regulation, national strategic expectations, local infrastructure planning, energy transition, environmental protection, and commercial decision-making by global private actors. No single bureau, department, or stakeholder can deliver the transition alone although TLB clearly plays a critical role.

1. Distributed authority in a system without a port authority

As discussed above, Hong Kong does not have a port authority responsible for integrated planning, coordination, and long-term strategy. Nor does it operate under a public sector-owned port group model comparable to those in Mainland China. Instead, authority relevant to shipping and port decarbonisation is distributed across multiple bureaux and departments, with commercial operations largely in private hands.

At the policy level, TLB has the central role in maritime and port-related matters, including shipping competitiveness, bunkering policy, and engagement with international maritime institutions. At the same time, EEB is responsible for overarching climate and energy policies, emissions targets, and air quality. Land use, coastal planning, and recreation and tourism fall under yet further policy domains.

This fragmentation is not unique to Hong Kong, but its implications are heightened by the absence of a central coordinating institution for the port. As a result, leadership under Pillar 2 must be exercised through coordination, alignment, and signalling, rather than hierarchical command.

2. Recent evidence of stronger political leadership

Recent developments suggest that high-level political leadership on shipping decarbonisation has strengthened compared with earlier periods. The inclusion of shipping and green maritime fuels in the 2023, 2024 and 2025 Policy Addresses, the promulgation of the *Action Plan on Green Maritime Fuel Bunkering* in late 2024, and subsequent follow-up measures in 2025 indicate that shipping has moved from the periphery toward the mainstream of Hong Kong's economic and climate policy discourse.

Importantly, these initiatives reflect cross-bureau collaboration, particularly between TLB and EEB. The articulation of quantified targets, near-term milestones, and facilitation measures also signals that political leadership has moved beyond general aspiration toward implementation-oriented governance. In a sector where commercial actors closely watch government intent, such signalling plays a critical role in shaping expectations and reducing uncertainty.

Nevertheless, leadership in this context remains largely issue-driven rather than system-driven. While specific initiatives have been advanced, there is limited evidence to date of a standing, high-level coordination mechanism dedicated to overseeing the port and maritime transition as an integrated system over time.

CASE STUDY 3A

Enhanced Advisory Architecture: The Hong Kong Maritime and Port Development Board[41]

In July 2025, the HKSAR Government reconstituted the existing Hong Kong Maritime and Port Board as the Hong Kong Maritime and Port Development Board (HKMPDB), reflecting a broader and more strategic advisory role. The HKMPDB is chaired by a non-official with members mainly from the maritime industry, backed with dedicated staff and enhanced funding to support research, overseas and Mainland promotional work, and talent development linked to maritime and port strategies. The expanded mandate signals an attempt to embed long-term planning, industry engagement, and implementation support into Hong Kong's maritime governance architecture. Its terms of reference explicitly include research on port competitiveness and green measures, strategic promotion of Hong Kong's maritime brand, and talent development initiatives. Four thematic committees covering port development, maritime services, promotion and external relations, and manpower have been formed to focus the board's work.

From a Pillar 2 perspective, the HKMPDB enhances Hong Kong's ability to convene industry stakeholders, surface strategic insights, and channel industry perspectives into government policy design. However, as an advisory body without executive authority, its influence ultimately depends on the extent to which its recommendations are taken up across the dispersed policy and regulatory apparatus.

Administrative coordination within the TLB

An important, though often understated, element of Hong Kong's leadership and coordination architecture in the maritime domain is the role of the Commissioner for Maritime and Port Development (CMPD), responsible for driving policies to strengthen the city's status as an international maritime and hub port. The post is held by a Deputy Secretary within TLB, combining a formal senior civil service position with a designated functional role that is outward facing.

In the capacity as Deputy Secretary, the Commissioner operates within TLB's internal hierarchy, overseeing policy development, coordinating departmental inputs, supporting the Secretary in legislative and policy processes, and ensuring continuity between political direction and administrative execution. This role anchors the Commissioner's authority and accountability within the civil service system.

At the same time, the designation as CMPD reflects the functional responsibilities of the same post when engaging externally. In this capacity, the Commissioner serves as a key interface with maritime and port stakeholders, participates in advisory and trade bodies, and communicates government priorities to industry. This dual-facing role allows industry feedback and operational concerns to be fed directly into policy formulation, while enabling policy intent to be translated into sector-specific pathways.

From a Pillar 2 perspective, the Commissioner exemplifies Hong Kong's reliance on administrative coordination rather than hierarchical command to manage complex policy domains. In a port system without a dedicated port authority, and where responsibilities are distributed across bureaux and departments, the dual role of the Commissioner provides an important connective function. However, the role's influence is necessarily bounded by portfolio limits and does not substitute for cross-bureau coordination on issues such as climate policy, energy transition, and air quality, which sit outside TLB.

3. Vertical coordination across policy hierarchies: a structural challenge

A further coordination challenge arises from the way responsibilities are distributed across Hong Kong's governance structure. TLB, which leads on port operations, shipping competitiveness, and green maritime initiatives, falls under the supervision of the Financial Secretary. By contrast, EEB, which is responsible for climate and energy policy, emissions targets, air quality, and broader environmental outcomes, reports to the Chief Secretary.

This institutional arrangement reflects Hong Kong's longstanding governance logic, in which economic and transport functions are anchored within the Financial Secretary's portfolio, while environmental and climate policy is coordinated under the Chief Secretary.[42] However, in the context of shipping and port decarbonisation, this split introduces an additional layer of complexity for Pillar 2, particularly where policy measures generate costs and benefits that cut across portfolios.

Electrification provides a clear illustration. Decisions relating to onshore power supply for ocean-going and cruise vessels, electrification of terminals, and the transition of non-ocean-going vessels such as ferries, barges, and government craft involve capital investment and operational costs borne largely by port operators, shipping companies, or infrastructure providers. At the same time, the benefits of electrification accrue across multiple domains, including reduced air pollution, improved public health outcomes, progress toward climate targets, enhanced quality of life in waterfront districts, and potential co-benefits for tourism, such as quieter and cleaner cross-harbour ferry services and to outlying islands.

From a governance perspective, these cross-sectoral cost-benefit profiles make coordination essential. While the Steering Committee on Climate Change and Carbon Neutrality (SCCCN), chaired by the Chief Secretary, is formally mandated to provide whole-of-government coordination on climate matters, it remains unclear to what extent this mechanism is actively shaping decision-making in the shipping and port domain.[43] There is limited public visibility on whether electrification and maritime decarbonisation measures are being assessed through an integrated lens that spans climate, transport, energy, environment, public health, and economic competitiveness.

The absence of clear evidence of such coordination does not imply inaction, but it does point to a governance risk: that decisions affecting shipping decarbonisation may be evaluated primarily within

sectoral or portfolio-specific frameworks, rather than through a whole-of-government assessment of net public value. In a sector characterised by high capital costs, long asset lifetimes, and strong commercial sensitivities, the lack of an explicit coordination mechanism linking economic, environmental, and social objectives may constrain the pace and coherence of transition.

4. Leadership and coordination through regulatory orchestration

A further and often underappreciated dimension of Pillar 2 in the shipping context concerns the coordination of local regulatory functions that collectively determine whether Hong Kong operates as an efficient, safe, and internationally credible port in an era of decarbonisation and digitalisation. While international shipping is governed by global rules set through the IMO, ports must still operationalise these rules through all kinds of local regulations, permits, inspections, and enforcement, all of which fall within the remit of multiple departments under different bureaux.

In Hong Kong, port and shipping-related regulation spans a wide range of functions, including maritime safety, vessel registration, fuel handling, emissions control, fire and explosion risk, customs clearance, etc. These responsibilities are distributed across departments such as the Marine Department (MD), Environmental Protection Department (EPD), Fire Services Department, Customs and Excise Department, and others, each operating under distinct statutory mandates and policy objectives. In the context of traditional marine fuels, this fragmentation has been manageable, supported by long-established practices and regulatory routines.

However, the transition to low- and zero-carbon shipping fuels, including LNG and green methanol, places new demands on regulatory coordination. Alternative fuels introduce novel safety risks, technical standards, and operational procedures that cut across departmental boundaries. Efficient and commercially viable bunkering operations depend not only on infrastructure availability, but also on the ability of regulatory systems to function seamlessly, predictably, and at speed, without compromising efficient operation, safety and environmental performance.

From a Pillar 2 perspective, effective leadership therefore involves more than policy direction or high-level coordination between bureaux. It requires *regulatory orchestration*: the ability to align rules, approvals, inspections, and enforcement practices across departments so that they collectively support port efficiency, safety, digitalisation, and decarbonisation objectives. Where regulatory processes are fragmented, sequential, or inconsistent, the result can be increased cost, delay, and uncertainty for operators – precisely the conditions that undermine Hong Kong's competitiveness as a port of call.

This challenge is particularly acute in areas such as green fuel bunkering, onshore power supply, and the electrification of non-ocean-going vessels, where new technologies intersect with legacy regulatory frameworks. Without clear leadership to ensure coherence across departments, there is a risk that well-intentioned policies are diluted at the implementation stage, not through opposition, but through misalignment and institutional inertia.

CASE STUDY 3B

Leverage Status at IMO – From Safety to Climate Governance

China is a full Member State of the IMO. Despite not being a state, Hong Kong has long maintained observer status at the IMO and has stationed a MD officer in London to monitor developments and participate in relevant discussions. Historically, Hong Kong's engagement at the IMO has focused primarily on marine safety and navigational standards, reflecting the MD's statutory responsibilities and the traditional emphasis of IMO deliberations. In recent years, however, the centre of gravity within the IMO has shifted markedly toward environmental and emissions-related issues, particularly under the Marine Environment Protection Committee (MEPC). Negotiations during 2023-2025, culminating in MEPC 83, have increasingly centred on fuel standards, market-based mechanisms, and timelines for achieving net-zero emissions from international shipping. These issues extend beyond marine safety and require environmental knowledge.

This evolution raises a governance question for Hong Kong. While the MD remains the natural focal point for IMO engagement, the growing prominence of decarbonisation suggests potential value in broadening the composition of Hong Kong's representation, for example through participation by officers with environmental and climate expertise from EPD.

Although Hong Kong does not possess voting rights, the IMO's committee structure allows for extensive technical discussion, information exchange, and informal influence – arenas in which well-prepared observers can play a meaningful role. Many maritime stakeholders attend IMO meetings for this reason.

From a Pillar 2 perspective, this highlights an underutilised leadership lever. Effective climate governance is not only about domestic coordination, but also about strategic presence in global rule-shaping processes. Leveraging Hong Kong's observer status more deliberately could enhance policy learning, improve anticipation of regulatory change, and strengthen alignment between global developments and local readiness.

5. Pillar 2 assessment: leadership improving, coordination under strain

Taken together, Hong Kong's performance under Pillar 2 can be characterised as improving in political attention and intent, but under strain in system-wide coordination and regulatory integration. The elevation of shipping decarbonisation within policy addresses, the development of targeted action plans, and increasing cross-bureau engagement all point to stronger leadership.

At the same time, the governance demands of shipping decarbonisation extend beyond policy formulation into the realm of day-to-day regulatory execution, where coordination remains uneven and largely dependent on informal mechanisms. Leadership is dispersed not only across bureaux, but also across departments whose mandates were not originally designed with decarbonisation, alternative fuels, or integrated port-city objectives in mind.

In a sector characterised by global competition, long investment cycles, and heightened safety and environmental risks, these coordination challenges carry material consequences. Shipping companies, terminal operators, fuel suppliers, and investors assess ports not only on policy ambition, but on whether regulatory systems function smoothly, transparently, and predictably. Where coordination is weak, even well-designed policies may fail to translate into operational advantage.

From a climate governance perspective, the central challenge under Pillar 2 is therefore not the absence of leadership, but the *institutionalisation of coordination*. Sustaining Hong Kong's position as a leading international port in a decarbonising world will require leadership mechanisms that can consistently align policy direction, regulatory practice, and commercial realities across departments and over time, without

undermining the market-led character that has historically underpinned the port's success.

This assessment reinforces the importance of Pillar 3, which examines whether decarbonisation objectives are effectively mainstreamed across energy policy, infrastructure planning, finance, environmental regulation, and urban development – the domains where the practical success or failure of coordination ultimately becomes visible.

VII. INTEGRATION ACROSS ALL POLICY SECTORS ("MAINSTREAMING") – PILLAR 3

Pillar 3 examines whether climate objectives are effectively integrated into the core policy, regulatory, and investment systems of government. For shipping and port decarbonisation, this pillar is particularly consequential. The transition to a green port depends on the alignment of energy planning, infrastructure investment, port operations, environmental regulation, finance, and urban development within a dense port city system.

1. Electrification and green fuels as cross-sector integration tests

Electrification and the transition to lower-carbon marine fuels provide a clear lens through which to assess mainstreaming. These measures sit at the intersection of multiple policy domains:

- **Energy**, including electricity supply and shipping fuels
- **Port and transport**, including terminal operations, vessel turnaround times, digitalisation and competitiveness
- **Environment and health**, covering air quality, carbon emissions, and public health
- **Infrastructure and land use**, including shipping fuels storage, battery storage and waterfront uses
- **Finance and market facilitation,** where investment risks and returns are distributed unevenly across actors

In Hong Kong, responsibility for these domains is dispersed across multiple bureaux and departments. As a result, the success of decarbonisation depends less on the ambition of individual measures than on whether climate objectives are consistently embedded into routine decision-making processes across these systems.

2. Progress in selective integration

Recent policy developments suggest that Hong Kong has begun to make progress in selective areas of mainstreaming. *The Action Plan on Green Maritime Fuel Bunkering* explicitly links shipping decarbonisation to fuel supply planning, port operations, and international regulatory trajectories. The identification of LNG and green methanol as near-term transition fuels reflects coordination between transport, safety, and energy considerations, as well as an understanding of what is commercially and technically feasible in the foreseeable future.

Similarly, initiatives related to onshore power supply, harbour craft electrification, and pilot projects for alternative fuels indicate growing recognition that port-related emissions are connected to air quality, public health, and urban liveability. In these areas, decarbonisation objectives are increasingly influencing how infrastructure priorities and regulatory frameworks are defined, at least at the project level.

The electrification of local ferries and other non-ocean-going vessels is particularly illustrative in this context, as it directly links maritime decarbonisation with electricity system planning, air quality and public health objectives, and the everyday experience of residents in a dense port city.

However, this integration remains uneven and largely initiative-driven, rather than embedded systematically across policy domains.

3. Structural limits to mainstreaming in a market-led port system

A central constraint on mainstreaming arises from Hong Kong's market-led port model and the absence of a single integrating institution such as a port authority. While this model has historically supported efficiency and flexibility, it complicates the integration of climate objectives into core systems such as infrastructure planning, decarbonisation strategy, and investment decision-making.

For example, decisions on port electrification and green fuel infrastructure often involve costs borne by private operators, while the benefits – cleaner air, reduced emissions, improved public health, and enhanced waterfront quality – accrue broadly across society. Without mechanisms to explicitly recognise and internalise these cross-sector benefits, decarbonisation objectives risk being marginalised in investment appraisals and regulatory prioritisation.

In addition, mainstreaming is constrained by the way policy and regulatory systems are organised. Energy planning, port operations, environmental permitting, safety regulation, and customs processes each follow their own logic, timelines, and performance metrics. Climate objectives are not always embedded as shared criteria across these systems, increasing the risk that decarbonisation considerations are addressed sequentially or reactively rather than as part of an integrated design.

4. Mainstreaming beyond compliance: from projects to systems

From a Pillar 3 perspective, the key challenge for Hong Kong is to move from *project-based integration to system-level mainstreaming.* While individual initiatives, such as green fuel bunkering pilots or harbour craft electrification schemes, demonstrate progress, they do not by themselves ensure that decarbonisation objectives shape long-term patterns of infrastructure investment, regulatory design, or urban development.

For shipping and port decarbonisation, effective mainstreaming would imply that climate considerations are routinely incorporated into port and coastal planning decisions, energy infrastructure development, regulatory processes governing vessel operations and fuel use, investment appraisal frameworks, and broader port city strategies linking economic competitiveness with environmental and social outcomes.

Absent such embedding, there is a risk that decarbonisation remains dependent on individual policy champions or time-limited programmes, rather than becoming a durable feature of how the port and harbour system is governed.

5. Pillar 3 assessment: emerging integration, not yet institutionalised

Overall, Hong Kong's performance under Pillar 3 can be characterised as emerging but not yet institutionalised. There is growing evidence that decarbonisation objectives are influencing decisions across transport, energy, and environmental domains, particularly where international shipping pressures and local air quality concerns intersect. However, integration remains partial and uneven, shaped more by specific initiatives than by systemic change.

In a port city facing intensifying global competition and accelerating climate constraints, the effectiveness of shipping decarbonisation will depend on whether climate objectives are consistently mainstreamed into the everyday workings of government and market systems. Without this, gains achieved under Pillars 1 and 2 may prove difficult to sustain or scale.

VIII. TRANSPARENCY, MONITORING, REPORTING (TMR) AND INDEPENDENT REVIEW (IR) – PILLAR 4

Pillar 4 examines whether governance systems provide sufficient transparency, monitoring, reporting, and review to track progress, support learning, and enable adjustment over time. In the context of shipping and port decarbonisation, this pillar presents its own challenges. Emissions are generated by mobile assets operating across jurisdictions, regulatory authority is shared between global and local institutions, and relevant data is dispersed across public agencies, private operators, and international reporting systems.

1. The transparency challenge in a global-local sector

International shipping emissions are primarily addressed through global mechanisms under the IMO, while local port-related emissions arise from a combination of ocean-going vessels at berth, harbour craft, terminal operations, and supporting infrastructure. This creates inherent limits to what any port city can monitor or disclose independently.

For Hong Kong, transparency challenges arise from the need to reconcile:

- International reporting frameworks for shipping emissions
- Local air quality and environmental monitoring systems
- Project-level data, such as electrification, bunkering, and infrastructure use
- Commercially sensitive information held by private operators

As a result, transparency under Pillar 4 is less about comprehensive emissions accounting and more about whether credible, decision-relevant information is made available to support governance, investment, and public accountability.

2. What is currently visible

Hong Kong has established several mechanisms that contribute to transparency in the maritime and port domain. These include:

- Reporting on emissions and fuel use from Hong Kong-registered vessels
- Disclosure of targets and milestones under the Action Plan on Green Maritime Fuel Bunkering
- Monitoring of air quality and emissions from port-related activities, including terminal operations and harbour craft
- Public announcements and updates on pilot projects, incentive schemes, and infrastructure initiatives related to green fuels and electrification

Together, these elements provide partial visibility into the direction of travel and early implementation progress.

3. Monitoring and policy review

There is limited public visibility on how the suite of new shipping and port-related policies introduced by the TLB over the past two years are being tracked, reviewed, and adjusted over time. While TLB provides updates to the Legislative Council on initiatives and implementation progress from time to time, these updates tend to be episodic and initiative-specific rather than part of a consolidated monitoring and review framework. Given that the recent policy measures represent significant structural and operational changes for the port and maritime sector, good governance practice would normally call for a more explicit mechanism to synthesise progress, assess cumulative impacts, and identify implementation challenges across policy areas.

4. Review, learning, and adaptive governance

From a governance standpoint, the most significant limitation under Pillar 4 lies not in data collection per se, but in the *absence of a clearly articulated review and learning framework* for shipping and port decarbonisation. While targets and milestones have been announced, there is limited clarity on:

- How progress will be reviewed against objectives
- Which institutions are responsible for synthesising results across domains
- How lessons from pilots and early deployment will inform subsequent policy design
- How strategies will be adjusted in response to technological, market, or regulatory change

The HKMPDB provides channels for stakeholder feedback, but they are not substitutes for formal review mechanisms. Similarly, while the SCCCN provides a potential platform for whole-of-government oversight, its role in systematically reviewing shipping and port decarbonisation outcomes is not yet evident.

In this context, it is also relevant that the HKMPDB has only recently been revamped, with its expanded mandate and committee structure still bedding down in practice. As a newly enhanced advisory body, its internal working arrangements, reporting rhythms, and pathways for feeding implementation insights back into policy formulation are likely still evolving. While the board has the potential to support learning, synthesis, and strategic reflection over time, its role in providing systematic review of policy implementation and outcomes under Pillar 4 has yet to be fully established.

In a sector characterised by rapid global change and high capital intensity, the absence of explicit review and learning processes increases the risk that policy evolves reactively rather than strategically.

5. Pillar 4 assessment: improving visibility, weak learning loops

Overall, Hong Kong's performance under Pillar 4 can be characterised as *improving in transparency but weak in structured review and learning*. Key policy directions and initiatives are increasingly visible, and there is greater disclosure of intent and early action than in the past. However, monitoring remains fragmented, and mechanisms for systematic evaluation and adjustment are underdeveloped.

For shipping and port decarbonisation, where uncertainty is high and pathways are still evolving, the ability to learn, adapt, and recalibrate policy will be as important as initial ambition. Strengthening Pillar 4 would therefore enhance Hong Kong's capacity to navigate transition risks, maintain competitiveness, and align local action with global regulatory developments.

IX. STAKEHOLDER AND PUBLIC ENGAGEMENT – PILLAR 5

Pillar 5 examines whether governance arrangements enable meaningful, inclusive, and effective engagement with stakeholders and the wider public. In the case of shipping and port decarbonisation, engagement is particularly consequential. The sector is commercially driven and globally networked, yet port and harbour decisions also generate local environmental, social, and spatial impacts that extend well beyond the maritime industry itself.

1. A globally connected maritime industry community

Hong Kong benefits from a dense and well-organised maritime community comprising shipowners, liner operators, terminal operators, shipbrokers, maritime service providers, and classification and standards organisations. These actors are deeply embedded in global shipping networks, operate across multiple jurisdictions, and are accustomed to engaging with international regulatory processes, through the IMO and a host of other international maritime bodies.

As commercial businesses, these stakeholders have strong incentives to engage actively with government on policy development. They routinely provide views on competitiveness, fuel feasibility, infrastructure readiness, safety standards, regulatory alignment, and investment risk. Consultation processes led by TLB therefore tend to be heavily attended by industry representatives, reflecting both the technical nature of shipping and the commercial stakes involved.

From a Pillar 5 perspective, this represents a clear strength of Hong Kong's governance system. Industry engagement is continuous, informed, and operationally grounded. It enables rapid feedback on proposed measures and helps government test feasibility before implementation. At the same time, the dominance of industry voices inevitably shapes the scope of engagement, with discussions often focused on cost, operational practicality, and alignment with international rules.

2. Local operators and territorially embedded stakeholders

Alongside globally oriented maritime actors, Hong Kong also has locally embedded operators, including ferry companies, barge operators, harbour craft owners, and service providers whose activities are concentrated within Hong Kong and regional (GBA) waters. These stakeholders face different constraints from international shipping companies, including probably tighter margins, shorter asset lifecycles, and more direct exposure to local regulation and public scrutiny.

Engagement with these operators tends to focus on the practical challenges of transition: vessel replacement cycles, access to charging or bunkering infrastructure, operating costs, and the pace at which regulatory requirements can be absorbed. Their participation highlights the distributional dimensions of decarbonisation, particularly where costs are borne locally while benefits accrue more broadly in the form of improved air quality, reduced noise, and public health gains.

3. Parallel engagement tracks for port development and harbourfront issues

A different pattern of engagement emerges in relation to port development, harbourfront use, and coastal planning. Issues such as waterfront design, marine pollution, biodiversity protection, recreational and sporting uses, tourism development, and public access to the harbour engage a broader set of stakeholders, including environmental groups, planners, architects, community organisations, and tourism interests.

These discussions typically take place through separate advisory and consultation mechanisms, such as harbourfront or planning-related committees, rather than through maritime policy forums. As a result, engagement on spatial, environmental, and social dimensions of the harbour is often decoupled from engagement on shipping competitiveness and decarbonisation, even where the underlying issues, such as electrification of ferries, harbour craft emissions, or allocation of waterfront space are closely linked.

From a governance perspective, this segmentation reflects institutional specialisation but also introduces a risk of fragmented engagement, where different stakeholder communities engage on different aspects of the harbour without a shared forum to consider trade-offs, synergies, or cumulative impacts.

4. Patterns of consultation and limits to public engagement

Formal consultations led by TLB on shipping-related initiatives are, by design, oriented toward industry and technical stakeholders. This is appropriate for many aspects of shipping decarbonisation, particularly those involving fuel safety, bunkering operations, and international regulatory compliance. However, it also means that broader public interests, such as air quality, waterfront liveability, and the social value of the harbour, are often addressed indirectly or through parallel policy channels.

This governance pattern is not unusual in a market-led port system, but it raises questions under Pillar 5 about whether existing engagement mechanisms are sufficient as shipping decarbonisation increasingly intersects with urban life, public health, and environmental stewardship.

5. Emerging "marine economy" framing and future engagement

Beyond current policy initiatives, a broader strategic framing is beginning to emerge at the national and regional levels around the concept of the marine or "marine economy" (also referred to as ocean or blue economy). Since the 12th Five-Year Plan, China's national development planning has progressively emphasised the marine economy as a strategic domain, with increasing attention under the 14th Five-Year Plan to green, innovative, and integrated marine development.[44] This framing has been taken forward most actively in coastal provinces such as Guangdong.[45]

While this marine economy perspective has not yet been explicitly articulated within Hong Kong's policy framework, it provides an important forward-looking context. It suggests a shift from sector-specific treatment of shipping, ports, tourism, marine ecology, and coastal development toward a more integrated understanding of how maritime space generates economic, environmental, and social value.

From a governance standpoint, this raises questions about future engagement models. Moving toward an ocean economy perspective would require broader and more integrated stakeholder dialogue that cuts across shipping, energy, environment, planning, tourism, and community interests. In this regard, the recently revamped HKMPDB could potentially play a constructive role as a research and agenda-setting platform, helping to examine how marine economy strategies are being developed elsewhere and what implications they may hold for Hong Kong over time.

6. Pillar 5 assessment: strong industry engagement, fragmented public dialogue

Overall, Hong Kong's performance under Pillar 5 can be characterised as strong in industry engagement but fragmented in broader public and cross-sector dialogue. The maritime industry is highly engaged, globally connected, and technically sophisticated, providing a solid foundation for policy design and implementation in a commercially driven sector. This has been a critical asset in advancing initiatives related to green fuels, port operations, and international alignment.

At the same time, engagement remains segmented across issue areas. Commercial shipping stakeholders, local operators, environmental groups, planners, and tourism interests tend to engage through different institutional channels, with limited integration across these conversations. As shipping decarbonisation increasingly intersects with harbourfront development, air quality, biodiversity, and public space, the absence of more integrated engagement mechanisms may constrain policy coherence and legitimacy.

From a climate governance perspective, strengthening Pillar 5 requires complementing industry engagement with more inclusive and integrated forms of dialogue that reflect the multiple roles of the harbour as an economic asset, environmental system, and public space. Doing so would enhance governance capacity and support more balanced decision-making as Hong Kong navigates the complex transition of its port and maritime system.

X. GOVERNANCE SYNTHESIS AND KEY INSIGHTS

This case study illustrates the distinctive governance challenges of shipping and port decarbonisation in Hong Kong. Unlike territorially bounded sectors, shipping operates through mobile assets, international markets, and global regulatory regimes, while ports remain deeply embedded in local economic,

environmental, and spatial systems. The result is a policy domain in which authority is distributed, incentives are commercially driven, and outcomes depend heavily on coordination rather than command.

- **A dual governance challenge: global industry, local port city**

At its core, shipping decarbonisation presents a dual governance challenge. On the one hand, international shipping is shaped by global rules, commercial competition, and fuel availability across multiple jurisdictions. On the other, ports are place-based systems where infrastructure, air quality, public health, waterfront use, and urban development intersect. Hong Kong must therefore navigate decarbonisation not only as a climate objective, but as a competitiveness and readiness challenge within an evolving global regulatory landscape.

This duality explains why Hong Kong's approach under Pillar 1 has emphasised near-term milestones, infrastructure readiness, and fuel availability rather than distant end-state targets. In a sector where ships will only call at ports that can meet operational and commercial needs, credibility is built through practical preparedness rather than aspirational timelines alone.

- **Strengths of Hong Kong's governance approach**

Across the five pillars, several governance strengths emerge clearly.

First, Hong Kong's policy framing demonstrates commercial realism. Decarbonisation measures are closely linked to what shipping operators can adopt in practice, particularly in relation to bunkering, safety, and port operations. This realism enhances policy credibility in a highly competitive sector.

Second, industry engagement is strong and continuous. The maritime community is globally connected, technically sophisticated, and accustomed to dialogue with government. This has enabled informed feedback on policy design and early implementation challenges, supporting iterative progress.

Third, there is growing evidence of policy attention and institutional adaptation. The elevation of shipping and green maritime issues in recent policy addresses, the articulation of green fuel bunkering strategies, and the revamping of advisory architecture reflect recognition that shipping decarbonisation has strategic importance for Hong Kong's future as an international maritime centre.

- **Structural constraints and coordination risks**

At the same time, the case study highlights persistent structural constraints.

Hong Kong has not adopted a single port authority or integrating institution to align infrastructure planning, regulatory design, and investment decisions across the harbour system. Instead, coordination is achieved through a combination of policy leadership, advisory bodies, and administrative orchestration. While this approach offers flexibility, it also places heavy demands on coordination capacity.

Vertical and horizontal fragmentation remains a key risk. Responsibilities relevant to shipping decarbonisation span multiple bureaux and departments, with costs and benefits distributed unevenly across portfolios. Administrative coordination mechanisms can mitigate but not eliminate these tensions, particularly where climate, energy, transport, public health and financial objectives intersect.

Under Pillar 4, transparency and monitoring have improved in terms of policy visibility, but system-level review and learning mechanisms remain underdeveloped. Without clearer feedback loops, it may be difficult to assess cumulative progress, adjust strategy, or manage transition risks as technologies and international rules evolve.

- **Sequencing, readiness, and credibility**

A recurring theme across the case study is the importance of sequencing and readiness. In shipping, decarbonisation is not primarily constrained by long-term ambition, but by short- to medium-term

feasibility. Fuel supply, infrastructure availability, safety standards, and operational integration must advance together. If these elements fall out of sync, policy risks losing credibility with market actors.

Hong Kong's focus on enabling conditions, such as bunkering capability, pilot projects, and regulatory preparedness, reflects an implicit understanding that readiness is itself a form of climate governance. This distinguishes shipping from sectors where government can mandate change more directly.

Looking ahead: integration beyond shipping

The emerging national and regional framing around the marine or "marine economy" points to a broader horizon for governance. While Hong Kong has not yet adopted this framing explicitly, it suggests future questions about how shipping, ports, marine industries, environmental stewardship, and public use of the harbour might be considered more holistically. Addressing these questions would require more integrated stakeholder engagement and stronger links between sectoral policy domains.

What this case reveals about climate governance

Taken together, this case study underscores that effective climate governance in complex, market-led sectors depends less on hierarchical control than on coordination capacity, institutional alignment, and credibility with stakeholders. Shipping and port decarbonisation expose the limits of sector-by-sector policy making and highlight the importance of adaptive governance capable of operating across scales and jurisdictions.

In this respect, this case study reinforces the central conclusion that climate ambition alone is insufficient. What ultimately determines outcomes is whether governance systems can align incentives, manage trade-offs, and learn over time in the face of uncertainty and change.

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DISCUSSION BRIEF

SHIPPING AND PORT DECARBONISATION

This case study examines the governance challenges of decarbonising shipping and port activities in a global, market-led port city. It highlights how international regulation, commercial decision-making, and local environmental and urban concerns intersect, and how governance capacity, rather than formal authority alone, shapes outcomes.

The questions below are intended to guide discussion and reflection. Participants may reach different conclusions depending on their perspectives, professional backgrounds, or institutional roles.

1. Governance scope and limits

Shipping is regulated internationally, while ports are governed locally and regionally.

- What are the practical limits of what a port city government like Hong Kong can influence in shipping decarbonisation?
- Where does local governance add the most value, despite the absence of direct control over vessels or fuels?

2. Commercial realism versus climate ambition

Hong Kong's approach emphasises near-term readiness (e.g. fuel availability, bunkering capability, infrastructure, safety frameworks) rather than distant end-state targets.

- Is this a strength or a limitation from a climate governance perspective?
- How should governments balance long-term decarbonisation goals with the commercial realities of a globally competitive shipping sector?

3. Coordination without a port authority

Hong Kong lacks a single port authority and relies instead on political leadership, advisory bodies, and administrative coordination.

- What are the advantages and risks of this model for delivering complex transitions such as port electrification or green fuel adoption?
- Under what conditions might coordination through people and processes be sufficient, and when might it fall short?

4. Vertical and cross-bureau coordination

Responsibilities relevant to shipping decarbonisation span transport, environment, energy, public health, and urban development.

- How do vertical reporting lines and bureau silos affect decision-making in this case?
- What role should high-level coordination mechanisms play in resolving cross-portfolio trade-offs, and what are their practical limits?

5. Transparency, learning, and adaptive governance

Monitoring and reporting mechanisms provide partial visibility into progress, but system-level review and learning remain limited.

- What kinds of information are most critical for governing shipping decarbonisation effectively?
- How can governments design review mechanisms that support learning and adjustment in sectors characterised by uncertainty and rapid change?

6. Stakeholder engagement and legitimacy

Industry engagement in Hong Kong's maritime sector is strong, while public and cross-sector engagement is more fragmented.

- Is this pattern appropriate given the commercial nature of shipping, or does it pose risks to legitimacy as port policies increasingly affect air quality, waterfront use, and urban life?
- How might engagement mechanisms evolve as shipping decarbonisation intersects more directly with public interests?

7. Looking ahead: beyond shipping

National and regional policy discourse is beginning to frame maritime development in terms of a broader marine or "ocean economy."

- What opportunities and governance challenges would such a framing present for Hong Kong?
- Should shipping decarbonisation remain a sector-specific policy domain, or be embedded within a wider vision for harbour and marine space?

Purpose of the discussion brief

These questions are not intended to produce a single "correct" answer. Rather, they are designed to help participants explore how governance structures, institutional arrangements, and stakeholder dynamics shape climate outcomes in complex, globally connected sectors.

CASE STUDY 4

GREEN FINANCE: GOVERNING CAPITAL FOR CLIMATE TRANSITION IN AN INTERNATIONAL FINANCIAL CENTRE

I. INTRODUCTION

Green finance as a governance challenge in a global financial system

As a long-established international financial centre, Hong Kong plays a distinctive role in mobilising capital, intermediating global savings, and supporting investment across borders. Its financial system serves not only the local economy, but also Chinese Mainland and the wider Asia-Pacific region, connecting global investors with companies, projects, and assets operating across multiple jurisdictions.

Many firms operating in Hong Kong conduct business both locally and internationally. Their financing needs span Hong Kong, Chinese Mainland, and overseas markets, and both listed and private firms often seek to attract international capital. For these firms, access to finance is shaped not only by firm-level performance and credit, but by the policy signals, regulatory frameworks, and long-term climate transition pathways articulated by the jurisdictions in which they operate.

In recent years, climate change and environmental sustainability considerations have entered the global financial mainstream. Climate risks are increasingly recognised as material financial risks; environmental, and increasingly biodiversity, performance is scrutinised by investors and regulators alike; and climate-related public policy in many jurisdictions is reshaping how capital is allocated. Jurisdictions that articulate credible long-term climate strategies with regulatory clarity and stable transition pathways are more likely to attract international investment looking for green opportunities.

Against this backdrop, since 2020, with the establishment of the Green and Sustainable Finance Cross-Agency Steering Group (CASG), Hong Kong has set a strategic vision and steer for green and sustainable finance, by creating the financial architecture for the greening of finance, and what this means for the city. This is not only a question of developing new financial products or attracting global capital flows. It is also a governance question for the Hong Kong administration about how public policy, regulatory frameworks, and market practices interact to steer investment toward greener outcomes across multiple markets.

A defining feature of green finance is its critical dependence on public policy across jurisdictions. The ability to direct investment toward green or greener activities is shaped by climate targets, regulatory standards, disclosure requirements, taxonomies, incentives, and long-term policy credibility. For Hong Kong, whose financial services ecosystem spans Hong Kong itself, Chinese Mainland, and the Asia-Pacific region, the policy environments of each influence investor expectations, capital allocation decisions, and the overall effectiveness of green finance markets.

Funding Hong Kong's own green transition

At the same time, Hong Kong itself is not merely a financial intermediary for Asia. While small in physical size and population, it is a highly developed, wealthy, and infrastructure-intensive city with substantial local demand for green and transition finance. Hong Kong faces significant climate and biodiversity challenges that require large-scale investment within the city, including retrofitting its existing building stock to improve energy and overall performance (Case Study 1), financing nature-based solutions (NbS) for biodiversity conservation (Case Study 2), and supporting the decarbonisation of local port activities and harbour-related infrastructure and developments (Case Study 3).

These place-based and sector-specific investment needs are not peripheral to Hong Kong's green finance agenda. Rather, they represent concrete, investable opportunities through which the financial sector can develop practical expertise, deepen its understanding of transition risks and project finance, and build credibility in structuring green and transition finance solutions. Creating green markets within Hong Kong itself should therefore be seen as a vital part

of strengthening the city's position in terms of skills, capabilities, and market depth, enabling its financial sector to serve the wider Asian transition more effectively.

This framing gives rise to a dual governance challenge for Hong Kong. On the one hand, it must maintain competitiveness and credibility as an international financial centre amid rapidly evolving global expectations around sustainable finance. On the other, it must ensure that its financial system can meaningfully support climate risk mitigation, adaptation, and resilience in the real economy within Hong Kong itself.

II. GREEN FINANCE AS A DISTINCT CLIMATE GOVERNANCE DOMAIN

Green finance differs fundamentally from other climate-related policy domains. While sectors such as buildings, biodiversity, or local port infrastructure involve territorially bounded assets, identifiable operators, and sector-specific regulators, green finance operates across the entire economy. It does not constitute a discrete sector, but rather a system-wide mechanism that influences investment decisions across all sectors simultaneously.

Green finance itself does not directly reduce emissions or deliver physical environmental outcomes. Rather, through pricing, eligibility criteria, disclosure requirements, and risk assessment practices, *financial markets shape who can access capital, on what terms, and at what cost*. These decisions, in turn, affect the pace, direction, and distribution of the low carbon transition across the economy. As a result, weaknesses in green finance governance can have economy-wide consequences, even where sectoral climate policies are otherwise well designed.

A further distinguishing feature of green finance is its reliance on credibility and coordination beyond individual sectors. Capital is highly mobile, particularly in international financial centres. Investors assess not only project-level fundamentals, but also the consistency, clarity, and durability of the policy environments in which firms operate. Long-term climate strategies, stable regulatory signals, and credible transition pathways reduce uncertainty and support investment, while fragmented or ambiguous frameworks can discourage capital allocation or reinforce short-term decision-making.

For Hong Kong, this systemic and cross-jurisdictional dimension is especially pronounced. Its financial system serves companies and projects spanning Hong Kong and across Asia. Green finance governance in Hong Kong is therefore shaped simultaneously by local policy choices, internal and external regulatory developments, and international market expectations. Alignment and interoperability matter not as ends in themselves, but because they affect market confidence and the effective mobilisation of capital.

Green finance also differs from other climate domains in the division of roles between the public and private sectors. Governments play a critical role in setting climate objectives, regulatory frameworks, disclosure standards, and incentives. However, the scale of investment required for climate risk mitigation, adaptation, and resilience means that private capital must ultimately provide most of the financing. The governance challenge is therefore less about direct state provision and more about *market shaping*: designing and reinforcing institutions, rules, and signals that crowd in private investment while safeguarding market integrity and financial stability.

In addition, green finance governance must contend with risks that are inherently long-term, uncertain, and systemic. Climate- and biodiversity-related physical and liability risks unfold over extended time horizons, often beyond conventional investment cycles. Their impacts are unevenly distributed across sectors, regions, and communities, and may interact in non-linear ways. Without appropriate governance frameworks, self-interested financial markets may underprice these risks, delay adjustment, or concentrate exposures in ways that amplify future instability.

Finally, green finance is particularly exposed to challenges of credibility and integrity. The rapid expansion of sustainable finance products has heightened concerns about greenwashing, inconsistent definitions, and weak disclosure. Maintaining investor confidence requires governance mechanisms that support transparency, comparability, and accountability, not only to protect market participants, but to preserve the legitimacy of green finance as a tool for climate transition.

For these reasons, green finance cannot be governed effectively through sector-specific policy instruments alone. It requires an integrated governance approach that combines long-term strategic direction, high-level coordination, policy mainstreaming, transparency and review, and stakeholder engagement. The following sections therefore assess Hong Kong's green finance framework through the Five-Pillar Model of good climate governance, examining whether existing arrangements can align financial markets with climate and biodiversity objectives in a credible, coherent, effective, and durable manner.

III. CHINESE MAINLAND'S TRANSITION AND HONG KONG'S GREEN FINANCE

The scale and direction of Chinese Mainland's low carbon and biodiversity transition are critical parts of the context in which Hong Kong's green finance system operates. As the world's largest carbon emitter and manufacturing economy undergoing rapid structural transformation, China is where many of the most significant decarbonisation and ecological restoration investments are taking place. These developments shape investment demand, policy signals, and market expectations that directly affect Hong Kong's role as an international financial centre.

Over the past decade, China has progressively integrated green development objectives into its economic and financial policymaking. Climate risk mitigation, pollution control, energy transition, and biodiversity and ecosystems protection have become embedded in national planning and regulatory frameworks, generating substantial demand for capital across sectors such as renewable energy, power grids, transport, buildings, industrial upgrading, and nature conservation. The scale of this transition means that green finance opportunities for Hong Kong cannot be understood independently of China's policy trajectory and investment needs.

Hong Kong's relevance lies in its role as an intermediary between systems. Many Chinese firms raise capital, manage treasury functions, or structure financing through Hong Kong, while international investors seeking exposure to China's transition rely on Hong Kong-based financial institutions, advisors, and market infrastructure. As a result, policy signals from Chinese Mainland influence not only investment destinations, but also the design, credibility, and evolution of green finance practices in Hong Kong.

This dynamic is reinforced by the nature of Hong Kong's corporate ecosystem. Many companies operating in Hong Kong conduct business across multiple jurisdictions. Their financing needs relate simultaneously to local operations and to assets, supply chains, and projects located elsewhere. For these firms, access to capital is increasingly shaped by environmental performance, transition planning, and data disclosure across their full geographic footprint.

International market expectations further amplify these pressures. Global investors are paying closer attention to climate risk, transition strategies, and sustainability performance, regardless of where underlying assets are located. Multinational firms face growing expectations from shareholders to demonstrate credible green performance, for example renting high-performing green office buildings, requiring lower carbon supply chains, and disclosing transparent environmental, social and governance reporting. External regulatory developments, including measures such as the European Union's Carbon Border Adjustment Mechanism (CBAM), signal that

carbon intensity and environmental data are material factors for market access in key export destinations. Firms operating across Chinese Mainland and the wider region, while raising capital or managing finance through Hong Kong, must increasingly account for embedded emissions, data quality, and transition pathways.

Interoperability of regulatory systems

In this context, Hong Kong's green finance governance challenge is about navigating interoperability of regulatory systems. Financial regulators and market institutions in Hong Kong must remain attentive to international best practices: regulators engage with international organisations including International Organisation of Securities Commissions (IOSCO) and the Network for Greening the Financial System (NGFS). Moreover, as Chinese Mainland is adopting a vast array of green practices and innovations, Hong Kong, including its regulators, must maintain a deep understanding of the former's evolving climate, energy, environmental, and biodiversity policy frameworks. This enables them not only to identify risks and opportunities, but also to act as a credible interlocutor for international investors seeking to understand China's transition efforts and policy direction.

Hong Kong's local investible green markets

This case study mainly focuses on governance alignment within Hong Kong itself. While credible signalling about the Chinese Mainland's transition requires understanding policy developments beyond the financial sector, Hong Kong's own interest lies in using its domestic assets, market reach, and policy priorities to create investable green markets. By mobilising finance for large-scale existing building retrofits (Case Study 1), nature-based solutions and biodiversity conservation (Case Study 2), and place-based development initiatives such as port decarbonisation and harbour-related infrastructure (Case Study 3), Hong Kong can build practical financing capability, institutional expertise, and market credibility. These areas are still underdeveloped globally, and Hong Kong therefore has the potential to serve as a demonstration case for how new forms of green finance can be structured and governed in practice.

CASE STUDY 4A

Chinese Mainland's 2016 Green Finance Reform: A Structural Turning Point

In 2016, China's State Council issued its landmark guidance on establishing a green financial system, marking the first time that green finance was elevated to a coordinated national policy priority in China.[46] The reform aimed to mobilise private capital to support pollution control, energy efficiency, clean energy, and ecological protection, recognising that public finance alone would be insufficient to meet China's environmental objectives.

The 2016 framework signalled a shift from project-based environmental funding toward system-wide financial reform, encompassing green credit, green bonds, information disclosure, emissions trading, incentives, and institutional coordination. While implementation has evolved over time, the reform sent a strong and enduring signal about the direction of China's economic transition and the role of finance within it.

For Hong Kong, the significance of the 2016 reform lies less in its specific instruments than in its policy signalling effect. It reinforced expectations that financial institutions serving Chinese Mainland would need to develop green finance capabilities, understand transition risks, and align with Chinese Mainland's emerging environmental priorities. This context continues to shape how Hong Kong's regulators, financial institutions, and market participants perceive their role in supporting regional and global climate transition.

IV. GREEN FINANCE THROUGH THE LENS OF THE FIVE-PILLAR MODEL

This case study assesses green finance in Hong Kong through the lens of good climate governance, using the Five-Pillar Model set out in *Good Climate Governance: Principles and Practices for Effective Action* (Chapter 3). The objective is not to evaluate the performance of individual financial products, institutions, or markets, but to examine whether Hong Kong's governance arrangements can align financial activity with climate and biodiversity objectives in a credible, coherent, and durable manner.

Green finance is treated here as a *governance function,* rather than as a discrete sector or a catalogue of instruments. While products such as green bonds, sustainability-linked loans, transition finance, and ESG-labelled funds are important, their effectiveness depends on the surrounding policy environment: long-term strategic direction, regulatory coordination, market rules, enforcement and credibility, disclosure frameworks, and stakeholder engagement. The analysis therefore focuses on how governance arrangements shape incentives, manage risk, and influence capital allocation across the economy.

The scope of this case study is intentionally place-based and demand-focused. While the abovementioned sections establish the importance of international standards, cross-border capital flows, and Chinese Mainland's transition, the governance assessment that follows concentrates on how Hong Kong's own policy priorities, assets, and development pathways create conditions for green investment. Accordingly, this case study does not attempt to benchmark Hong Kong exhaustively against other international financial centres, nor does it provide a technical comparison of global disclosure or taxonomy frameworks. Such standards form part of the background conditions within which Hong Kong operates, and are referenced where relevant, but they are not the primary object of analysis. The central question is how governance alignment within Hong Kong enables regulators, policymakers, and market participants to translate policy objectives into investable opportunities in the real economy.

The Five-Pillar Model is applied as follows:

- **Pillar 1 (Long-term vision, targets, and strategic direction)** examines whether Hong Kong has articulated a clear and credible long-term role for green finance that is grounded in its own economic structure and transition needs.

- **Pillar 2 (High-level political leadership and whole-of-government coordination)** assesses how responsibilities are distributed and coordinated across financial regulators, policy bureaux, and other public institutions.

- **Pillar 3 (Integration across all policy sectors ("mainstreaming"))** considers how green finance is integrated into wider policy areas, including land use, infrastructure planning, environmental policy, and sectoral transition strategies.

- **Pillar 4 (Transparency, monitoring, reporting (TMR) and independent review (IR))** evaluates disclosure, data, and reporting arrangements in terms of their usefulness for decision-making and learning, rather than technical compliance alone.

- **Pillar 5 (Stakeholder and public engagement)** examines how financial institutions, businesses, and civil society are engaged in shaping and implementing Hong Kong's green finance agenda.

The analysis that follows focuses on strengths, gaps, and areas for further development, with the aim of identifying how Hong Kong can deepen its green finance capability while reinforcing its role as an international financial centre.

Pillar 1:
Long-term vision, targets, and strategic direction

Pillar 1 examines whether Hong Kong has articulated a clear and credible long-term vision for green finance that is grounded in its own economic structure and transition needs, rather than defined solely by regulatory alignment or international positioning.

1. An evolving vision: from exploration to regulatory alignment

Hong Kong's approach to green finance has evolved over the past decade. Early attention was prompted by the State Council's new focus on green finance in 2016 as noted in Case Study 4A. The HKSAR Government then invited the government-funded Financial Services Development Council (FSDC) to undertake research on the development of green finance. The first report was published in 2016;[47] subsequent years saw an expanding body of studies, consultations, and policy statements examining green bonds, disclosure practices, and sustainable investment. This period coincided with rapid international developments in climate-related financial disclosure and the growing expectation that financial centres would align with emerging global standards. Hong Kong's financial regulators responded by progressively adopting international best practices, including climate-related disclosure frameworks such as Task Force on Climate-related Financial Disclosures (TCFD) and, later, International Sustainability Standards Board-aligned (ISSB) sustainability reporting, while also beginning to monitor emerging frameworks related to nature and biodiversity, including the Taskforce on Nature-related Financial Disclosures (TNFD).[48]

This phase of development helped establish Hong Kong's regulatory credibility and provide a sound basis for decision-making. By aligning disclosure expectations and supervisory practices with international norms, Hong Kong positioned itself as a jurisdiction attentive to global investor expectations and committed to maintaining market integrity in the context of climate-related financial risk.

2. Coordination and credibility: the creation of CASG

A more explicit articulation of strategic intent emerged in 2020 with the establishment of CASG. Its creation marked an important step in recognising that green finance is not the responsibility of any single regulator or bureau but requires coordination across financial regulators and relevant public authorities.

CASG has played an important role in enhancing coherence across regulatory initiatives, strengthening Hong Kong's alignment with international standards, and signalling collective commitment at a high level. As a coordination mechanism, it reflects an emerging vision of green finance as a systemic topic that cuts across financial regulation, risk management, and market infrastructure.

However, the strategic emphasis to date has been weighted more heavily toward regulatory alignment and disclosure frameworks than toward the explicit use of green finance as a tool to support Hong Kong's own economic transition. While regulatory credibility is a necessary condition for a green finance hub, it does not in itself constitute a complete strategic vision.

3. Vision gap: from regulatory alignment to market creation

At the same time, as financial regulators have strengthened alignment with international best practices, Hong Kong's domestic climate and environmental policy agenda has also become more concrete, with the HKSAR Government progressively adopting policies and targets across key domestic domains, including retrofitting of existing buildings, biodiversity conservation and NbS, and the decarbonisation of port and maritime activities (Case Studies 1, 2, and 3).

These domains represent substantial and long-term investment needs within Hong Kong itself. They also present opportunities for the financial sector to develop practical expertise in structuring, financing, and managing green and transition investments linked to real assets and policy objectives. Yet, these

domestic transition pathways are not consistently articulated as part of a unified green finance vision that explicitly links policy priorities to market development.

The result is a partial strategic alignment. On the one hand, Hong Kong has invested significantly in establishing the regulatory foundations of green finance and maintaining international credibility. On the other, there is less explicit articulation of how green finance is expected to support, and be shaped by, Hong Kong's own transition priorities, or how domestic green markets can be deliberately developed to build market depth, skills, and innovation.

4. Strategic implications for Pillar 1

From a Pillar 1 perspective, Hong Kong's vision for green finance can therefore be characterised as evolving but incomplete. The trajectory from early research, through regulatory alignment, to cross-agency coordination reflects genuine progress and institutional learning. The establishment of CASG provides a platform from which a more integrated strategic direction could emerge.

Looking ahead, the strategic challenge is not whether Hong Kong should continue aligning with international standards – this remains essential – but whether its green finance vision can more explicitly connect regulatory frameworks with place-based market creation. This would involve articulating how green finance supports priority local decarbonisation needs and how these domestic markets can serve as testbeds for developing financing models relevant to the wider region.

In this sense, Pillar 1 points to an opportunity: to evolve Hong Kong's green finance vision from one centred primarily on credibility and compliance toward one that also emphasises capability-building, market development, and real-economy impact.

Pillar 2: High-level political leadership and whole-of-government coordination

Pillar 2 examines whether Hong Kong has effective arrangements for high-level coordination and leadership to support green finance as a cross-cutting governance function. This challenge is common to many jurisdictions, as green finance necessarily spans financial regulation, climate and biodiversity policy, infrastructure planning, and economic development. In Hong Kong, as elsewhere, these responsibilities are distributed across multiple policy bureaux and statutory regulators, each operating within clearly defined mandates, making effective alignment a central governance task rather than a given.

1. Strategic leadership and institutional constraints

The Financial Secretary has overarching responsibility for Hong Kong's economic and financial policy and a clear strategic interest in the health, competitiveness, and international positioning of the financial services sector. This role is especially significant given Hong Kong's function as China's international financial centre.

At the same time, Hong Kong's financial system is characterised by a high degree of regulatory independence. Banking, securities, insurance, and pensions are overseen by statutory regulators established under separate ordinances, each with clearly defined legal mandates and operational autonomy. This institutional design underpins regulatory credibility and market confidence, but it also means that the Financial Secretary does not exercise direct supervisory control over financial regulators and cannot unilaterally direct regulatory policy across the system.

As a result, leadership on cross-cutting issues such as green finance must be exercised through coordination, consensus-building, and strategic alignment. This creates both a strength and a constraint: while regulatory independence is preserved, system-wide transformation depends on the effectiveness of coordination mechanisms[49].

2. CASG as a coordination platform

The establishment of CASG in 2020 represents a significant step in addressing this coordination challenge. CASG brings together key financial regulators alongside relevant policy bureaux to provide a forum for aligning approaches to green and sustainable finance within Hong Kong's existing governance framework.

The CASG is co-chaired by the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC), the two most influential financial regulators in Hong Kong. CASG's membership brings together a range of regulators and policy bureaux with complementary mandates and expertise. These include the Insurance Authority (IA), which brings oversight of the insurance sector and expertise in risk management; the Mandatory Provident Fund Schemes Authority (MPFA), which oversees retirement savings and long-term investment; the Financial Services and the Treasury Bureau (FSTB), which provides the policy link to the Financial Secretary's broader responsibilities for financial and fiscal policy; the Environment and Ecology Bureau (EEB), which is responsible for climate, environmental, and biodiversity policy objectives; and the Accounting and Financial Reporting Council (AFRC), which contributes expertise on corporate reporting, audit, and disclosure. Together, this composition reflects an explicit recognition that green finance sits at the intersection of financial regulation and public policy, requiring coordination across regulatory oversight, disclosure frameworks, long-term investment, and climate and environmental objectives.

From a Pillar 2 perspective, CASG provides an important institutional platform for high-level coordination. It enables regular interaction among regulators, supports coherence in regulatory approaches, and facilitates alignment between local agencies and with evolving international standards. It also allows policy bureaux to engage with regulators on issues that extend beyond narrow financial supervision.

3. Coordination within CASG: governance beyond regulation

While CASG has been effective in strengthening regulatory alignment and enhancing Hong Kong's international credibility, its role necessarily extends beyond technical coordination. Given Hong Kong's position as a forward-looking international financial centre, CASG must also serve as a venue for governance discussion about how green finance should evolve to meet both local and regional needs.

Green finance governance in Hong Kong is not only about ensuring consistent disclosure standards or supervisory practices. It also involves strategic questions about how financial regulation, public policy, and market development interact to support real-economy transition. These questions include how green finance can help mobilise investment for Hong Kong's own priorities, such as the examples in Case Studies 1, 2 and 3 – while simultaneously supporting companies and projects operating across the region.

Within Hong Kong's institutional system, CASG is one of the few bodies capable of convening these discussions across regulatory and policy domains. Its effectiveness therefore depends not only on harmonising regulatory initiatives, but also on its capacity to consider broader governance issues, including how public policy signals and development strategies can be better aligned with financial frameworks.

4. Implications for leadership and coordination

From the perspective of Pillar 2, Hong Kong's green finance governance exhibits a strong coordination mechanism operating within clear institutional constraints. Regulatory independence is preserved, and coordination is achieved through structured dialogue rather than centralised control. This model has proven effective in building credibility and alignment with international best practices.

At the same time, the reliance on coordination places great weight on shared vision, strategic clarity, and sustained engagement across institutions. For green finance to function not only as a regulatory framework but also as a catalyst for market creation and real-economy transition, CASG must continue to evolve. This does not require new institutions, but rather a deepening of governance discussion within existing ones, ensuring that Hong Kong's green finance agenda remains closely connected to its economic structure, development priorities, and role in the regional transition.

In this sense, Pillar 2 highlights both the strengths and the limits of Hong Kong's coordination model. CASG provides a credible foundation for cross-agency leadership, but its long-term effectiveness will depend on how fully it can integrate regulatory alignment with broader strategic considerations about Hong Kong's future as an international financial centre in a low-carbon and nature-positive world.

Pillar 3: Integration across all policy sectors ("mainstreaming")

Pillar 3 examines whether green finance considerations are mainstreamed across government policy domains, financial regulation, and market practice in ways that support real-economy transition. In the context of green finance, mainstreaming does not refer simply to the diffusion of sustainability language or reporting requirements, but to the integration of financial thinking into policy design and delivery, and of sectoral policy objectives into financial decision-making. Because green finance operates at the intersection of public policy and private capital, effective mainstreaming must occur in both directions and extend beyond the public administration to include asset owners and project developers.

This interpretation of mainstreaming may be atypical for policymakers and regulators, precisely because it cuts across established institutional boundaries. In Hong Kong, as in many jurisdictions, policy bureaux and statutory regulators operate within clearly defined mandates and are understandably cautious about extending their activities beyond their formal responsibilities. Financial regulators, in particular, place strong emphasis on prudential oversight, market integrity, and regulatory certainty, while policy bureaux focus on sectoral objectives and programme delivery. From this perspective, deeper cross-domain engagement can appear to blur lines of accountability or risk mandate creep.

However, the challenge addressed by this pillar is not one of overstepping institutional roles, but of enabling effective alignment across them. Green finance operates in spaces where traditional divisions between policy design, regulation, and market activity intersect. As a result, remaining strictly within institutional "lanes" may limit the ability of the system to mobilise private capital at the scale and speed required for climate risk mitigation, adaptation, and resilience. Mainstreaming, as used here, therefore refers to creating structured channels for learning, coordination, and collaboration across mandates, rather than diluting regulatory independence or policy authority.

1. Mainstreaming finance within the public administration

Traditionally, Hong Kong administration has relied heavily on direct public expenditure to deliver infrastructure and public policy objectives. Many bureaux and departments have therefore been accustomed to framing projects primarily in terms of policy merit and capital works budgets, rather than financing structures, risk allocation, or long-term investment models. This approach reflected Hong Kong's historically strong fiscal position and the availability of public funds to support major projects.

However, the fiscal and policy context is changing. The scale of investment required for climate risk mitigation, adaptation, and resilience plus biodiversity protection is substantial and long-term, while competing demands on public finances and greater uncertainty around future revenues place constraints on any government's

ability to rely mostly on public funding. In this context, it is increasingly clear that public resources alone will be insufficient to deliver the full scope of transition objectives across sectors.

Mobilising private capital therefore becomes necessary. Where appropriate financing frameworks, revenue models, and risk-sharing arrangements can be established, private investment can expand the range of projects that can be undertaken, accelerate delivery, and reduce pressure on public finances. This creates a strong rationale for mainstreaming financial considerations within the bureaucracy itself. For green finance to function effectively, policy bureaux and departments must be able to engage with concepts such as bankability, lifecycle costs, aggregation, and risk allocation, and to work with financial institutions to structure projects that can attract investment alongside public funding, and perhaps even impact financing and philanthropy.

From a governance perspective, mainstreaming finance within the public administration is not about subordinating policy objectives to financial considerations, but about enabling the delivery of more ambitious climate and environmental outcomes than would be possible through public expenditure alone.

2. Mainstreaming sectoral understanding within the financial system

Mainstreaming must also operate in the opposite direction: from sectoral policy domains into the financial system. For financial regulators, financial institutions, and market participants, the development of green and transition finance cannot rely solely on adapting existing risk frameworks or applying standardised product templates. Many investment opportunities associated with climate mitigation, adaptation, and resilience, such as large-scale building retrofits, biodiversity and NbS, or port and infrastructure transition, do not fit neatly within conventional asset classes or established risk-return profiles.

Effective green finance therefore depends on financiers developing a deeper understanding of sector-specific policy objectives, technical constraints, and delivery models. This includes understanding how regulatory requirements, performance standards, land-use planning, conservation goals, or operational realities shape project design, cash flows, and risk distribution. It is through the interaction between financial expertise and sectoral knowledge that innovative, investable project structures can emerge.

This represents a shift in emphasis from viewing green finance primarily as an exercise in risk identification and disclosure toward a more creative process of financial structuring and product design. Rather than asking only how climate- or nature-related risks should be priced or mitigated, financial actors must also consider how new revenue models, aggregation mechanisms, guarantees, or blended finance arrangements can be developed to make projects bankable. Such innovation is unlikely to arise without sustained engagement between financial regulators and market institutions on the one hand, and policy bureaux and sector specialists on the other.

From a governance standpoint, mainstreaming therefore involves enabling financial regulators and market institutions to engage meaningfully with sectoral transition challenges, not merely as external risks to be managed, but as opportunities for financial innovation aligned with public policy objectives.

3. Mainstreaming finance among asset owners and project developers

A further dimension of mainstreaming concerns asset owners, project developers, and operators in the real economy. For many of these actors, capital expenditure remains a persistent barrier to undertaking green investments, particularly where payback periods are long, benefits are diffuse, or revenue streams are uncertain. As a result, technically viable and policy-aligned projects may fail to proceed due to financing constraints rather than lack of merit.

In this context, mainstreaming green finance also involves education, awareness-raising, and engagement with non-financial actors. Asset owners and project developers need greater familiarity with financing options, blended finance, performance-based contracts, risk-sharing mechanisms, and emerging green finance instruments. Equally, they need support in translating policy objectives and technical specifications into project proposals that can be assessed and financed by investors.

This dimension of mainstreaming mirrors experiences in other policy domains, such as biodiversity, where effective implementation depends on the participation of external stakeholders beyond government. In green finance, without deliberate efforts to build understanding and capability among project sponsors and asset owners, market creation is likely to remain fragmented and limited to a small number of well-resourced or sustainability-focused actors.

4. Implications for Pillar 3

Viewed through Pillar 3, mainstreaming emerges as a system-wide governance challenge rather than a narrow administrative task. It requires financial thinking to be embedded within policy design and delivery, sectoral understanding to be embedded within financial regulation and market practice, and financing capability to be extended to asset owners and project developers.

In Hong Kong's context, where the ambition is both to support domestic transition and to serve as a forward-looking international financial centre, effective mainstreaming is essential for translating regulatory goals into real-economy outcomes. The extent to which green finance is mainstreamed across these domains will therefore play a critical role in determining whether Hong Kong's green finance agenda supports incremental improvement or enables more transformative investment at scale.

These mainstreaming challenges are particularly salient for smaller firms and supply-chain actors, which are increasingly subject to climate and nature-related data and financing requirements, an issue examined further under Pillar 5 stakeholder and public engagement.

Pillar 4: Transparency, monitoring, reporting and independent review

Pillar 4 examines whether Hong Kong's green finance governance framework supports transparency, disclosure, and review in ways that enable effective capital allocation and continuous improvement. In the context of green finance, transparency is an enabling condition for market confidence, risk assessment, and the mobilisation of private capital in support of climate and biodiversity transition.

1. Disclosure as transition infrastructure

Hong Kong's approach to green finance transparency has focused on aligning disclosure and reporting practices with evolving international standards. Financial regulators have progressively incorporated global frameworks into supervisory expectations – such as ESG reporting for listed companies – reflecting the view that consistent, comparable, and decision-useful information is essential for investor confidence and market integrity. Sustainability-related financial disclosures aligned with ISSB, together with growing attention to nature-related risks under TNFD, have shaped the direction of travel for Hong Kong's green finance regime.

These developments are widely recognised by businesses as demanding. Reporting requirements require new forms of data collection, internal coordination, and analytical capacity, often extending beyond organisational boundaries into supply chains and value chains. From a governance perspective, however, such demands reflect the scale and complexity of the climate and biodiversity transition itself. As environmental risks and dependencies become financially material, the generation and disclosure of relevant information becomes a necessary component of market functioning.

Viewed in this light, disclosure frameworks serve as transition infrastructure. They create a common informational baseline that allows investors, lenders, insurers, and regulators to assess risks and opportunities more consistently across sectors and jurisdictions. For an international financial centre such as Hong Kong, alignment with international disclosure standards also plays a critical role in maintaining connectivity with global capital markets.

2. Transparency without overreach: limits and trade-offs

At the same time, the reliance on disclosure as a governance tool raises important questions about proportionality, usability, and implementation capacity. For many firms, particularly those operating in asset-heavy or technically complex sectors, compliance with evolving disclosure expectations can be resource-intensive. These challenges are amplified where requirements cascade through supply chains, implicating smaller firms that may lack specialised expertise or data collection capabilities.

From a Pillar 4 perspective, the key issue is therefore not whether disclosure requirements should exist, but how effectively they function in practice. Transparency that generates large volumes of data without improving decision-making risks imposing costs without commensurate benefits. Conversely, overly narrow or static disclosure regimes may fail to capture emerging risks or transition dynamics.

Hong Kong's current approach reflects a careful balancing act. Regulators have prioritised international alignment and market credibility while remaining attentive to implementation challenges. This cautious approach is consistent with Hong Kong's broader regulatory philosophy, which emphasises market stability and proportionality. It also underscores the importance of complementary governance mechanisms that support learning over time.

3. Review, feedback, and learning: an emerging gap

While Hong Kong has made substantial progress in adopting and implementing international disclosure frameworks, there is less evidence of a dedicated mechanism for systematic review and learning across the green finance ecosystem. At present, transparency functions primarily through compliance and supervision, rather than through structured evaluation of how disclosure requirements are shaping market behaviour, investment decisions, or project development.

This does not imply an absence of oversight. Financial regulators monitor compliance within their respective mandates, and coordination mechanisms such as CASG provide a forum for information-sharing and alignment. However, these arrangements are not designed to assess outcomes, identify systemic bottlenecks, or feed lessons back into policy design.

From a governance perspective, the absence of a formal review function reflects both institutional constraints and deliberate choices. Given the statutory independence of regulators and the evolving nature of international standards, Hong Kong has prioritised flexibility and alignment over the creation of new oversight structures. Nevertheless, as green finance markets mature and disclosure requirements expand, the need for feedback loops that support learning across institutions becomes more pressing.

4. Implications for Pillar 4

Viewed through Pillar 4, Hong Kong's green finance governance exhibits strong commitment to transparency and international alignment, but more limited capacity for structured review and adaptive learning. Disclosure requirements aligned with ISSB frameworks provide an essential foundation for market confidence and capital mobilisation, even as they impose significant demands on businesses.

The governance challenge, therefore, is not to intensify disclosure obligations, but to ensure that transparency supports learning, calibration,

and market development over time. This includes understanding how disclosure requirements affect different sectors, how data is used in investment and lending decisions, and where adjustments may be needed to support emerging green markets without undermining credibility.

In this sense, Pillar 4 reinforces the findings of the preceding pillars. Regulatory alignment and coordination have advanced rapidly, but the effectiveness of green finance governance increasingly depends on the system's ability to learn from implementation experience and to adapt requirements in response to real-economy outcomes. How Hong Kong addresses this learning dimension will influence whether transparency serves merely as a compliance exercise or as a catalyst for deeper market development and transition finance.

Pillar 5: Stakeholder and public engagement

Pillar 5 examines how stakeholders are engaged in Hong Kong's green finance governance, and whether existing arrangements support learning, capacity-building, and effective implementation. In the context of green finance, stakeholder engagement goes beyond consultation or information exchange; it concerns how diverse actors contribute to the evolution of governance frameworks and the practical development of green markets over time.

1. An active and willing stakeholder ecosystem

Hong Kong's financial sector is characterised by a dense and sophisticated ecosystem of non-government actors, including financial institutions, industry associations, professional bodies, and service providers. Organisations such as the Hong Kong Green Finance Association, alongside accounting, tax, legal, risk management, and consulting professions, are actively engaged in policy discussions and regularly provide views, technical input, and recommendations to government and regulators.

Stakeholders generally welcome opportunities to contribute and tend to engage on issues aligned with their areas of expertise. Collectively, this diversity of sophisticated perspectives represents a significant asset for Hong Kong's green finance agenda, offering insight into market conditions, implementation challenges, and emerging opportunities for financial innovation.

2. From consultation to collective problem-solving

While stakeholder engagement is active and constructive, it is currently oriented mainly toward advisory input at the outset. Consultation processes and working groups provide channels for feedback, but there are fewer mechanisms through which stakeholders participate in evaluating how green finance policies are functioning in practice, identifying cross-sector bottlenecks, or co-developing solutions to support market growth.

From a governance perspective, this suggests an opportunity rather than a deficiency. Given the complexity of green finance, structured forms of collective problem-solving could help translate stakeholder expertise into practical advances. More integrative engagement would allow insights from market participants to inform not only policy design, but also policy adaptation and market development over time.

3. SMEs, supply chains, and inclusion

A particularly important dimension of stakeholder engagement concerns small and medium-sized enterprises (SMEs), which form a substantial part of Hong Kong's economy and are deeply embedded in regional and global supply chains but are seldom within the engagement sphere of officials and regulators dealing with finance. As climate- and nature-related expectations increasingly extend to value-chain and Scope 3 considerations, SMEs are being drawn into green finance governance.

For many SMEs, capacity constraints, including limited technical expertise, data systems, and access to finance, shape how they experience the transition. Effective stakeholder engagement therefore involves enabling SMEs to participate meaningfully, through

education, simplified tools, technical support, and financing structures that recognise their scale and capabilities. Without such inclusion, green finance risks reinforcing existing asymmetries and creating friction rather than supporting broad-based transition.

4. Implications for Pillar 5

Viewed through Pillar 5, Hong Kong's green finance governance benefits from an engaged and capable stakeholder community but would gain from deeper integration of stakeholder experience into governance processes. The challenge is not necessarily to expand consultation, but to strengthen and adapt engagement mechanisms that support learning, coordination, and shared ownership of transition challenges.

In this sense, Pillar 5 reinforces the findings of the preceding pillars. Regulatory alignment, coordination, mainstreaming, and transparency provide essential foundations, but the effectiveness of green finance governance ultimately depends on how well stakeholders across the spectrum of size and experience are engaged as partners in implementation, innovation, and market creation.

Case Study 4B

CASG Carbon Calculator and Estimator for SMEs[50]

The CASG supported the development of a locally relevant (including the GBA) free carbon calculator and estimator championed by the SFC. Designed especially for SMEs in Hong Kong with simplicity in mind and developed in collaboration with Hong Kong University of Science and Technology, the tools were intended to help SMEs measure and understand their carbon emissions, with a particular focus on energy use, which typically constitutes the largest share of emissions for many small firms.

The calculator tool was launched in February 2024 after having been test-run with a group of SMEs and designed to be intuitive to use. It enables users to calculate their carbon footprint, identify major sources of emissions, and benchmark estimated performance against other companies. In principle, such tools can play an important role in supporting SMEs as carbon data requirements increasingly extend through supply chains and Scope 3 reporting.

Despite its practical design and low barrier to entry, uptake of the carbon calculator has remained limited. This appears to reflect the absence of a clear institutional mechanism for outreach and promotion to SMEs. While the SFC's role in championing the tool aligns with its interest in improving market transparency and disclosure, neither the SFC nor the CASG has a mandate to engage directly with SMEs or to lead economy-wide capacity-building campaigns.

This experience illustrates a broader governance challenge in green finance: the fragmentation of responsibilities across institutions. The development of technical tools may sit naturally with financial regulators, while responsibility for SME engagement, business support, and sector-wide promotion lies elsewhere. Without coordination across these functions, even well-designed initiatives may struggle to achieve scale or impact.

From a governance perspective, this case highlights the importance of aligning tool development with institutional arrangements for implementation. A coordinated approach, potentially involving a policy bureau responsible for commerce, trade, or SME development (such as the Commerce and Economic Development Bureau), could help ensure that practical instruments designed to support transition are effectively communicated, adopted, and embedded within the wider business community.

V. GOVERNANCE CONSIDERATIONS ARISING FROM CASE STUDY

This case study highlights how green finance governance in Hong Kong has evolved rapidly in terms of regulatory alignment and institutional coordination, while facing more complex challenges in translating these strengths into market creation and real-economy transition. Viewed through the Five-Pillar Model, several cross-cutting governance considerations emerge.

First, the case illustrates the importance of clarity of strategic purpose in green finance governance. Hong Kong has made substantial progress in aligning its financial regulatory framework with international standards on climate- and sustainability-related disclosure, reinforcing its credibility as an international financial centre. At the same time, this case study suggests that regulatory alignment alone does not constitute a complete strategic vision. Greater clarity on how green finance is intended to support Hong Kong's own transition priorities would strengthen the link between financial governance and place-based outcomes.

Second, the case underscores both the value and the limits of coordination through existing institutional arrangements. The CASG's coordination among financial regulators and policy bureaux is helpful. However, green finance also raises governance questions that extend beyond regulatory consistency, including how public policy signals, project implementation, and financing structures interact. Addressing these issues does not require new institutions, but it does require existing coordination platforms to engage more explicitly with market-creation challenges and real-economy investment needs.

Third, the case highlights mainstreaming as a two-way governance challenge. On one hand, policy bureaux and departments increasingly need to incorporate financial thinking into programme design as fiscal constraints tighten and private capital becomes essential for delivering climate and environmental objectives. On the other hand, financial regulators and market actors must deepen their understanding of sector-specific policy goals and technical realities to develop innovative, investable financing structures. Effective mainstreaming therefore depends on structured learning and collaboration across traditional institutional boundaries, rather than strict adherence to sectoral "lanes".

Fourth, the case study draws attention to the role of transparency and disclosure as enabling infrastructure, while also revealing a gap in systematic review and learning. Existing Hong Kong government councils for climate and green technology lack transparency on workplan and deliverables, which creates barriers for private sector alignment. Hong Kong's adoption of international disclosure frameworks provides a strong foundation for market confidence and capital mobilisation, even as these requirements impose significant demands on businesses. The more significant governance challenge lies in how disclosure information is used: whether it feeds into learning, policy refinement, and market development, or remains primarily a compliance exercise. Strengthening feedback loops across regulators, policymakers, and market participants would enhance the adaptive capacity of the green finance governance system.

Finally, the case demonstrates that stakeholder engagement is necessary for effective governance but as of yet insufficient. Hong Kong benefits from an active ecosystem of financial institutions, professional bodies, and industry associations that are willing to contribute expertise and perspectives. However, translating engagement into governance outcomes requires mechanisms that support sustained participation, collective problem-solving, and inclusion of capacity-constrained actors, particularly SMEs. Without such mechanisms, well-designed tools and initiatives risk limited uptake, reducing their contribution to economy-wide transition.

Taken together, Case Study 4 suggests that Hong Kong's green finance governance has established strong institutional foundations, but that future effectiveness will depend on how well these foundations are connected to domestic transition priorities, learning processes, and inclusive market development.

ENDNOTES

46. In 2016, China's State Council endorsed the *Guidelines for Establishing the Green Financial System* (《关于构建绿色金融体系的指导意见》), jointly issued by the People's Bank of China and six other ministries, which laid out a coordinated policy framework to mobilise and incentivise private capital into green sectors and to build an institutional green finance system in China.

47. Financial Services Development Council. (2016). *Hong Kong as a regional green finance hub (FSDC Paper No. 23)*. https://www.fsdc.org.hk/media/p4pfkwvj/green-finance-report-english.pdf.

48. The TCFD was established by the Financial Stability Board to develop recommendations for voluntary, consistent climate-related financial risk disclosures for companies and financial institutions. The ISSB, established under the IFRS Foundation, develops global baseline sustainability disclosure standards, incorporating and building on the TCFD framework. The TNFD provides a complementary framework for identifying, assessing, and disclosing nature-related risks and opportunities, including biodiversity and ecosystem impacts. These are all international efforts to harmonise the identification, assessment, and disclosure of sustainability-related financial risks and opportunities, enabling greater comparability, consistency, and decision-usefulness for investors, regulators, and other market participants.

49. See Figure 1 "Bureaux under the Chief Secretary and Financial Secretary Clusters" in Case Study 1 on page 8.

50. Green and Sustainable Finance Cross-Agency Steering Group. "GHG Emissions Calculator". *Hong Kong World's Sustainable Finance Hub*. https://www.sustainablefinance.org.hk/en/data-technology/calculator-for-scope-1-and-scope-2-greenhouse-gas-emissions-of-a-corporation; Green and Sustainable Finance Cross-Agency Steering Group. "GHG Emissions Estimator". *Hong Kong World's Sustainable Finance Hub*. https://www.sustainablefinance.org.hk/en/data-technology/estimator-for-scope-1-and-scope-2-greenhouse-gas-emissions-of-a-corporation.

DISCUSSION BRIEF

GREEN FINANCE

This case study explores how green finance governance in Hong Kong has evolved through regulatory alignment, cross-agency coordination, and engagement with international standards, while raising questions about how these arrangements translate into domestic market creation and real-economy transition.

In reflecting on this case study, participants may wish to consider the following questions:

1. How clearly is green finance positioned within Hong Kong's broader climate, environmental, and development strategy, beyond its role in regulatory alignment and international credibility?

2. To what extent do existing coordination mechanisms enable financial regulators and policy bureaux to jointly address market-creation challenges, such as financing for building retrofits, biodiversity and nature-based solutions, infrastructure transition, or others?

3. How effectively are financial considerations being mainstreamed into policy design and delivery across non-financial bureaux and departments, particularly in a context of tighter public finances and growing reliance on private capital?

4. Conversely, how well are financial regulators and market institutions equipped to engage with sector-specific policy objectives and technical realities to develop innovative, investable financing structures? What forms of support or institutional learning may be needed to enable the next stage of green finance governance?

5. Do current transparency, disclosure, and reporting arrangements support learning and adaptive governance, or do they function primarily as compliance mechanisms? How might feedback and review processes be strengthened without increasing regulatory burden?

6. How can stakeholder engagement, including with SMEs and supply-chain actors, move beyond consultation toward more sustained participation that supports capacity-building and inclusion?

Taken together, these questions invite reflection on how Hong Kong's green finance governance can continue to evolve from a strong regulatory foundation toward a more integrated, learning-oriented system that supports both international financial connectivity and local transition priorities.