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Case Studies of Climate Change Action Plan at the Local Level in Ho Chi Minh City and Hai Phong City of Vietnam

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Case Studies of Climate Change Action Plan at the Local Level in Ho Chi Minh City and Hai Phong City of Vietnam

Koji Fukuda*, Junko Akagi†, and Makoto Kato‡

Abstract

In view of the growing recognition of the role of non-state actors as agents of implementation of addressing climate change under the Paris Agreement, this study sheds light on the measures taken by urban cities in developing countries. Beyond the process of formulating climate action plans reviewed in previous studies, this study aims to identify the factors that drive implementation of city-level climate action plans. To this end, the authors selected the Climate Change Action Plans (CCAP) of two leading cities in Vietnam, i.e., Ho Chi Minh City and Hai Phong City, and investigated the state of implementation based on the status of budget execution for the implementation measures listed in their CCAPs. As a result, the implementation status of the two cities was found to be significantly different. In order to identify the factors that brought about such results, the hypotheses, formulated based on relevant previous studies and adjusted for the Vietnamese context, were verified by empirical evidence. Among the seven possible factors examined, the authors identified the nature of measures expressed by concreteness and co-benefits, the commitment levels of local leaders, and local government institutional capacity as the key factors driving implementation. Based on the findings of the study, possible international support and domestic efforts are discussed as ways of addressing the implementation gaps in Vietnam.

Keywords: Cities; local climate change action plan; drivers of implementation; budget; co-benefits; effectiveness; Vietnam; Paris Agreement

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1. Introduction

The Paris Agreement, adopted under the United Nations Framework Convention on Climate Change (UNFCCC), serves as the post-2020 climate regime guiding the global community in its efforts to combat the adverse impacts of anthropogenic greenhouse gas (GHG) emissions. In order to reach the UNFCCC's ultimate objectives, the Paris Agreement calls for a concerted effort to reduce global GHG emissions below net-zero by the latter half of this century. Multi-stakeholder engagement is indispensable for effective implementation in this direction, and there are a growing number of non-state actors joining forces to address the Agreement's mission (EAUC 2022).

Given their large carbon footprint, which derives from urban cluster development and the associated influx of humans, goods and resources, as well as its vulnerability to the impact of climate change (UN-Habitat 2011; World Bank 2010), it is widely recognized that cities need to play a critical role in countering the effects of climate change. The proactive engagement of cities in the climate area is increasing, not only in developed countries, but also across developing countries in Southeast Asia, where a steady growth in GHG emissions and vulnerability to the impact of climate change due to clustering of urban populations has been observed (Dejan et al. 2015; Garschagen and Marks 2019). The growing participation of non-state actors has been further accelerated by the recent momentum towards long-term net-zero target setting and pledges by local governments. This trend has been particularly evident following the outcome of the COP26 in Glasgow (EAUC 2022). Additionally, urban areas are now home to 4.2 billion people, the majority of the world's population. Urbanization processes generate vulnerability and exposure which combine with climate change hazards to drive urban risk and impact. In all cities and urban areas, the risk faced by people and assets from hazards associated with climate change has increased. Cities and local governments are key among multiple actors facilitating climate change adaptation (IPCC 2022).

In the case of Vietnam, response to climate change at the local level has gradually evolved through the formulation of local climate change action plans (CCAP) in line with national-level policy development, including, inter alia, the National Target Program to Respond to Climate Change (NTP-RCC),¹ the National Climate Change Strategy (NCCS),² and the National Green Growth Strategy (NGGS).³ While all of the 63 provinces, including the 5 centrally-run cities, developed their own CCAPs under the NTP-RCC for the 2010-2013

¹ PM Decision No. 158/2008/QĐ-TTg, dated December 2, 2008.

² PM Decision No. 2139/QĐ-TTg, dated December 5, 2011.

³ PM Decision No. 1393/QĐ-TTg dated September 25, 2012.

period, there is little evidence on the progress of their implementation (Strauch et al. 2018). While cities generally face multi-faceted challenges in the implementation phase, Vietnam's early experience suggests that the implementation gap relates to weak vertical (between national and local governments) and horizontal (among departments within a local government) coordination (Strauch et al. 2018), and a lack of capacity among local policymakers and practitioners to frame the relatively new topic in the context of supporting the local socio-economic development agenda (Phuong et al. 2018).

It is clear that significant effort is needed to fill the implementation gap at the local level in order to realize the effectiveness of the Paris Agreement. In the case of Viet Nam, both structurally-oriented challenges that heavily rely on national policies in a one-party state (Strauch et al. 2018), as well as site-specific challenges should be fully taken into account as the local context. To this end, an in-depth understanding of the factors influencing local government implementation would help fill the gap and facilitate local CCAP implementation.

Against this backdrop, this study focuses on the implementation of the local CCAPs in Vietnam's two leading centrally-run cities⁴, Ho Chi Minh City (HCMC) and Hai Phong City, to identify factors influencing the implementation of local climate actions. The study employs the following three research questions: First, what is the status of the implementation of CCAPs in both cities? Second, what drives the implementation of their CCAPs? Third, how can support best be harnessed to close the observed gaps in implementation?

The novel aspects of this study are three-fold: (1) the implementation status of the local CCAPs, which tends to be regarded as unclear, has been clarified with the state of budget execution of each implementation measure listed in the local CCAPs; (2) the factors affecting the implementation status of the local CCAPs have been identified with reference to the analytical framework of Shirai and Baba (2014); and (3) the factors have been presented in a graph to help intuitive understanding.

The findings of this study have the potential contribute to boosting policy implementation by improving multilevel governance in Vietnam, which is indispensable for realizing a zero-carbon and climate resilient society.

⁴ Centrally-run cities in Vietnam have a special status equal to the provinces.

2. Literature review

2.1 Institutional response to climate change at municipal level in Vietnam

In response to the emerging issue of climate change, the Government of Vietnam established the NTP-RCC in 2008. In 2011, the NCCS was introduced owing to the government's inclination towards a national response to the adverse impact of climate change. The NGGS was then introduced in 2012; this strategy focuses on mitigation through energy intensity improvement in addition to other socio-economic targets such as sustainable consumption and production. The recognition of climate change as the priority development agenda was also specified in the 9th Socio-Economic Development Plan 2011-2015. Institutional arrangements for implementing climate change policies were established, namely the National Committee on Climate Change (NCCC) as the highest-level institutional body to oversee the direction of climate change policy.⁵ The Support Program to Respond to Climate Change (SP-RCC) was set up as a coordination platform to facilitate climate policy measures and mobilize international funds across sectors through a lending policy scheme, in support of the NTP-RCC and the NCCS. A subsequent program, the Target Program for Climate Change Response and Green Growth (2016-2020),⁶ was launched in 2017 and covers both adaptation and mitigation.

The NTP-RCC mandates line ministries, state agencies, and local governments to formulate and implement climate change action plans for the areas under their jurisdiction. The selected local governments represent all 63 provinces including the 5 centrally-run cities. The National Climate Change Action Plan (NCCAP)⁷ promulgated in 2012 in response to the NCCS defined the objectives, tasks, and specific programs, schemes, and projects for entities responsible for implementation until 2020 and serves as the basis for the formulation of subsequent local CCAPs.

As the case of local CCAPs suggests, the evolution of city-level climate change response in Vietnam is characterized by a top-down approach where climate change is perceived as a matter for the national agenda. Its response trickles down to the city-level in a cascading

⁵ Vietnam's announcement at the COP26 Glasgow in November 2021 that it would pursue net-zero emissions by 2050 led to policy and institutional updates. At the top of the NCCC is the Steering Committee to Implement Outcomes of COP26, a high-level committee presided over by the incumbent Prime Minister together with the ministers of relevant sectoral authorities formed in December 2021 as the primary institution to politically guide the domestic climate discourse. The NCCS was also upgraded to anchor the 2050 net zero emissions target, along with the emissions peak out year and 2030 target. In the coming years, the upstream policy update will trickle down to updates of local climate action plans.

⁶ PM Decision No. 1670/QD-TTg dated October 31, 2017.

⁷ PM Decision No. 1474 / QD-TTg dated October 5, 2012.

manner through the development of relevant policy and instructions starting at the national level. This cascading approach and order of policy formulation remains common practice for Vietnam, and while local governments are expected to do more, in general they simply respond to the national government requirements.

As far as the centrally-run cities are concerned, the mandate and instructions for their CCAP formulation are shaped by the above national policies and supplementary instructions from the Government through official letters⁸ issued by the focal point Ministry - the “Instruction for Updating the Climate Change Action Plan for Ministries, Sectors and Localities.”

Although all local governments developed the CCAP under the first phase of the NTP-RCC (2010-2013), there is little evidence on the progress of their implementation (Tyler et al. 2016; Nguyen et al. 2015; Strauch et al. 2018). Early studies indicate that the empirical barriers extended to both vertical and horizontal coordination, i.e., limited vertical integration of planning and budgeting, and weak horizontal climate change coordination mechanisms (Strauch et al. 2018).

2.2 Research focusing on factors influencing the implementation of local climate action

There are a number of studies focusing on the factors that affect the implementation of local climate actions, regardless of mitigation or adaptation measures.

Salon et al. (2014), who studied the motives, enabling factors, and barriers of local climate actions, summarize the factors affecting local climate action implementation with reference to previous studies and on their own findings as follows: city attributes (e.g., size of population and economy, culture of environmental activism, and partisanship), motivations (e.g., developmental and environmental co-benefits of implementation measures, and status as environmental leader), endogenous conditions (e.g., presence of political leaders, understanding of local people, human resources, and funds), presence of data as a basis for policy-making, technical resources and support, and authority, among others.

Studies on multi-level governance suggest that improving both horizontal and vertical coordination could help fill policy gaps in the country concerned and thus facilitate local

⁸ MONRE Official Letters, No. 3815 / BTNMT-KTTVBĐKH dated October 13, 2009; No. 990/BTNMT-KTTVBĐKH dated March 24, 2014.

climate actions (Corfee-Morlot et al. 2009; Strauch et al. 2018). The vertical dimension refers to a policy alignment between all levels of administration, such as national and local governments, while the horizontal dimension refers to cross-references between relevant departments and agencies within the local authorities, as well as cross-regional cross-references. Multi-level governance is seen as comprising a combination of these vertical and horizontal dimensions together with the aforementioned factors.

Shirai and Baba (2014) studied the factors that promote and hinder the adoption and implementation of adaptation measures by local governments in Japan. The authors developed an analytical framework that combines research on policy diffusion (Rogers 1983; Ito 2002) with the findings of previous studies on the implementation of mitigation measures by Japanese local governments (Baba 2005; Sugiyama 2008; Hosei University 2012). The analytical framework consists of reference factors (vertical and horizontal linkages) and attribute factors (the nature of measures and endogenous conditions). Their study takes the approach of developing hypotheses on the factors that facilitate and inhibit implementation based on the analytical framework; the hypotheses were then verified by interviews with officials in the four advanced prefectures in Japan. Based on the results of the study, the factors that affect the implementation and diffusion of adaptation measures by local governments in Japan are presented in a diagram. As a reference, a simplified version of the diagram is presented in Figure 1.

As the current study aims to explore the factors that promote or hinder the implementation of local CCAPs in Vietnamese cities, the Shirai and Baba approach, which focuses on local government implementation, was deemed a better reference point than the multi-level governance approach, which views implementation at the local level as being a result of governance in the subject country.

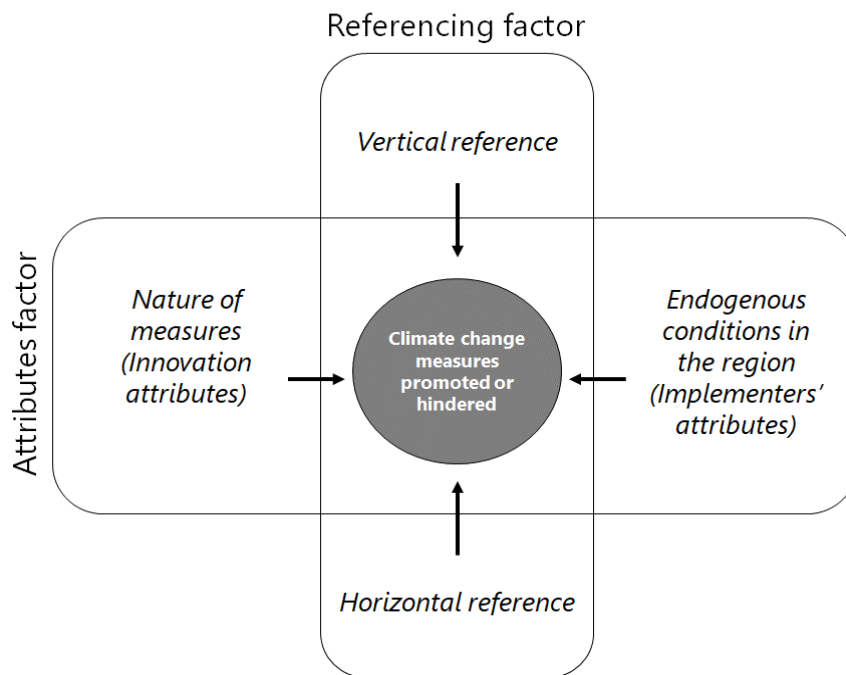


Figure 1: A simplified diagram summarizing factors influencing the implementation of measures

Note: The arrows mean that each factor influences the implementation of measures.

Source: Modified from Shirai & Baba (2014).

3. Overview of Study Methodology

3.1 Justification for the selection of Ho Chi Minh City and Hai Phong City

HCMC is the largest city in Vietnam and serves as the country’s commercial hub. Located in the south, the city has 9 million residents within an area of 2,061 km² (GSO 2019). The city’s gross regional domestic product (GRDP) is USD 57.3 billion, which accounts for about 20% of national GDP, and its growth rate is 8.3% (HCMC Statistics Office 2019). HCMC was an early mover in the formulation of CCAPs, and the city government has been proactive in addressing climate change for the sake of its own sustainable development and its international commitments to inter-city cooperation, such as the C40 Cities program.

Hai Phong City is the third-largest city of Vietnam and the biggest industrial port city in the north with a population of 1.9 million within a 1,519 km² area. The city’s GRDP is USD 5.83 billion with a growth rate of 16.03% (Haiphong DPI 2018). The city’s target of per capita GRDP by 2025 is the highest of all 63 provinces and centrally-run cities in Vietnam (VN Express 2020). In view of the expected rapid growth, sustainable development is a critical challenge for local government. In 2013, the Communist Party Politburo launched a Green Port City concept to Hai Phong City. (No. 72-KL/TW, 2013/10/10) and since then the concept has been laid out across the development agenda.

HCMH and Hai Phong City were selected as focal cities for this study based on the scale and importance of these centrally-run cities in driving up-coming economic development in Vietnam, and the observed proactive attitudes of local governments for environmentally-friendly cities irrespective of their locational differences and economic structures.

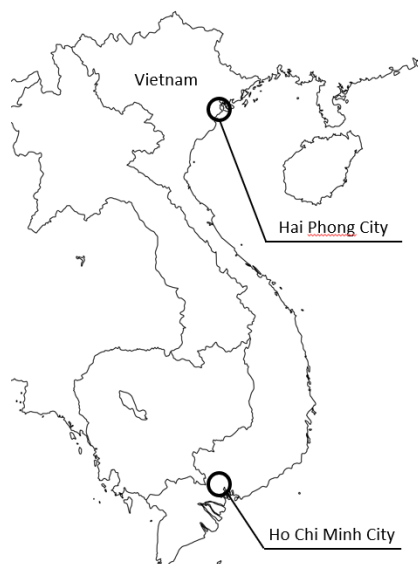


Figure 2: Locations of Ho Chi Minh City and Hai Phong City
Source by Authors.

3.2 Local CCAPs subject to study

In order to examine factors influencing the state of implementation, the authors used and examined the CCAPs of the targeted cities which completed their implementation before 2020.

The local CCAPs that form the subject of this study are shown in Table 1. There are 53 measures defined in Annex 1 and 3 of the HCMC's CCAP. Annex 2 was disregarded since the activities there, including those with less budgetary certainty at the time of implementing the plan, were proposed as contingent on international support. For Hai Phong City, 46 of the actions stipulated in the Annex of its CCAP were utilized for this analysis.

HCMC's CCAP presents a wide scope of objectives, setting out both mitigation and adaptation measures across 10 priority economic sectors. Hai Phong City set enhancement of adaptive capacity to respond to the impact of climate change as the primary objective of its CCAP. This led to adaptation-oriented measures, such as the ones addressing climate impacts and rises in sea levels.

Table 1: Summary of contents of CCAP for Ho Chi Minh City and Hai Phong City

	Ho Chi Minh City (HCMC)'s CCAP	Hai Phong City's CCAP
Document	No.1159/QD-UBND (2017/3/17)	No.65/QD-UBND (2014/1/8)
Period covered	2017-2020	2014-2025
Objectives	<p>General Objectives:</p> <ul style="list-style-type: none"> • To develop solutions to strengthen the capacity of climate change adaptation in HCMC when implementing socio-economic development schemes and plans; • To contribute to the national objective of reducing GHGs by improving the efficiency of energy and resource use in socio-economic developments towards a low carbon society; • To improve the efficiency of the State management system in response to climate change, contributing to socio-economic development in a sustainable manner. <p>Specific Objectives:</p> <ul style="list-style-type: none"> • Integrating climate change elements into HCMC's Socio-economic Development Strategies (SEDS), Programs, Schemes and Plans for 2017-2020; • Assessing climate change impacts in HCMC and on sectors and industries; • Developing and implementing climate change programs and projects for 10 socio-economic sectors; • Enhancing international cooperation and the ability to attract investments needed to respond to climate change; • Strengthening management capacities and efforts to implement and manage mitigation, by establishing a city-level GHG inventory. 	<p>Objectives:</p> <p>To improve the city's ability to respond to climate change, prevent and minimize the negative impacts of climate change, ensure sustainable development, and protect people's lives.</p> <p>Specific actions and targets:</p> <ul style="list-style-type: none"> • Action 1: Proactively respond to the impacts of climate change and rising sea levels; consolidating river and sea dykes, and combating saline intrusion; protecting coastal areas; ensure agricultural production and protect water resources (response to climate change impacts); • Action 2: Strengthen management capacity on climate change; human resource development: mobilizing the participation of economic sectors, promoting the role of the political and professional organizations in the country and foreign countries (enhancement of management capacity); • Action 3: Implement scientific and technological activities to update and supplement assessments of the impacts of climate change and rising sea levels on sectors, fields, and regions in Hai Phong City, as a basis for integrating climate change issues into socio-economic development plans and proposing specific solutions (scientific technical studies & evaluation); • Action 4: Strengthen and implement activities to reduce GHG emissions, increase the ability to absorb GHGs, and take advantage of development opportunities brought about by climate change (climate change mitigation activities).
Number of measures	53	46
Budget	Not Stated	4,620.885 billion Dong

<p>Category of measures (Number of measures) [Budget]</p>	<p>Measures classified by 10 socio-economic sectors:</p> <ol style="list-style-type: none"> 1. Urban Planning (2) 2. Energy (4) 3. Transport (9) 4. Industry (1) 5. Water Management (8) 6. Waste Management (1) 7. Construction (2) 8. Medical (3) 9. Agriculture (13) 10. Tourism (1) 11. Others (9) 	<p>Measures classified by attributes:</p> <ol style="list-style-type: none"> 1. Action 1: Response to climate change impacts (29) [4,452.383 Billion Dong] 2. Action 2: Enhancement of management capacity (6) [54.5 Billion Dong] 3. Action 3: Scientific technical studies & evaluation (6) [29 Billion Dong] 4. Action 4: Climate change mitigation activities (5) [85 Billion Dong]
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Source: Summarized from the references: No.1159/QD-UBND (2017) and No.65/QD-UBND (2014).

3.3 How to identify the state of implementation of local CCAPs

To identify the state of implementation of the city-level climate action plans, the authors primarily referred to the progress reports for the on-going local CCAPs. The document numbers for the progress reports are: No. 1390/BC-STNMT-KTTV (2019/3/4) for HCMC; and No. 907/STNMT-CCBHD (2019/3/15) for Hai Phong City, respectively. The state of implementation was analyzed by checking the progress of a set of respective tangible measures listed in the Annexes to the CCAPs.

In this study, the authors applied the state of budget execution to making value judgements as to whether the respective measures under the city-level CCAP were implemented or not. A measure was regarded as implemented if its budget was executed or acquired; while a measure was regarded as not implemented if the relevant authorities were still in the process of coordination for budget acquisition, or if the measure required further clarity to ensure implementation, including the designation of responsible agencies. Additionally, where there was a lack of sufficient description of implementation in its progress reports, the measure was deemed to have not been implemented.

Where there was insufficient information available in the desk-top reviews, supplemental information was collected through the on-site stakeholder interviews.

3.4 How to identify factors affecting the implementation of local CCAPs

To design a set of factors and potential drivers likely to influence local CCAP implementation, the authors referred to the concept and analytical framework of Shirai and Baba (2014) and tailored them to the context of Vietnam.

The analytical framework is composed of two prime factors: the referencing factor and the attribute factor. The former is subdivided into vertical reference and horizontal reference, while the latter is comprised of the nature of measurement attributes and the attributes of implementers.

The attributes factor is also further subdivided into the nature of measurement attributes and the attributes of implementers. The nature of measurement attributes factor is further subdivided into the concreteness of measures and the co-benefit of measures, as the implementation of local climate action is considered a matter of relevance and embodiment of a solution to local developmental challenges (Corfee-Morlot et al. 2009; Shirai and Baba 2014; Strauch et al. 2018). The attributes of the implementers are the local endogenous conditions of local government. Based on previous studies that identified the enablers and barriers of local climate actions, this list includes the commitment of the local government leader (Burch 2010; Salon et al. 2014), the jurisdiction, the allocation of administrative resources (Corfee-Morlot et al. 2009; Phuong et al. 2018), and the institutional capacity of local government (Corfee-Morlot et al. 2009; Phuong et al. 2018). While capacity can take on the form of individuals, institutions, and society at large, this study primarily examines the institutional capacity of local organizations in relation to local CCAP implementation.

Based on the analytical framework, indicators and working hypotheses for the respective factors are summarized in Table 2, together with the items that were investigated. To identify the factors that facilitate or impede the implementation of CCAP in HCMC and Hai Phong City, the authors examined the current state of each city against each indicator in the context of local CCAP implementation.

Table 2: Factors and indicators for the CCAP implementation

Factors		Indicators	Items investigated
Referencing factor	Vertical reference	(1) Engagement of national government: The more the direction, guidance and support measures are provided by the national government, the more the implementation of local measures progresses (i.e., progress of measures by national-level, top-down engagement).	[1] National guidance by MONRE – Contents incl. suggested outline for a LCCAP
	Horizontal reference	(2) Interaction with other cities: The more opportunities the city has to refer to the experiences of other early moving cities, the more the implementation of local measures progresses (i.e., addressing local barriers through referencing early movers).	[2] North-south inter-city cooperation in the climate change domain
Attributes factor	Nature of measures	(3) Concreteness of measures: The more the measure is concrete (with numerical evidence and clarity over implementation arrangements), the more the implementation progresses. (4) Co-benefits of measures: On top of the climate impacts of the measure per se (GHG emission reduction, enhanced resilience of local community), the more the localized socio-economic developmental co-benefits the measure realizes, the more the implementation of measures can progress.	[3] Nature of measures and their budget sources
	Implementers' attributes	(5) Local leader commitment (and prioritization): The stronger the commitment of the city-level management and People's Committee, the more the implementation of local measures progresses. (6) Jurisdiction and administrative resources allocation: The more the city reflects managerial commitment into local jurisdiction and administrative resources (e.g., budget, human resources), the more the implementation of measures progresses. (7) Local government institutional capacity: The higher the capacity of officers of local government to connect the CCAP with the local agenda, the more the implementation of local measure progresses.	[4] Reports and statements on leader commitment [5] Main actors' roles and responsibilities and the diversity of agencies for taking climate measures as indicated in CCAPs [6] Reports and statements on capacity, on interpretation, and coordination

Source by Authors.

3.5 On-site stakeholder interviews

The semi-structured interviews were conducted in February 2020 in both cities. The objectives of the interviews were to collect supplementary information on the state of implementation of local CCAPs, how to implement the climate policy at the local level, and the challenges the interviewees face in the local CCAP implementation and potential solutions to overcome the challenges.

The stakeholders that were interviewed included focal point agencies, sectoral authorities, and other city-level stakeholders including from academia (Table 3).

Table 3: Interviewees for this study

Ho Chi Minh City (HCMC)	Hai Phong City
<ul style="list-style-type: none"> • Department of Natural Resources and Environment (DONRE); • Department of Construction (DOC); • Department of Planning and Investment (DPI); • Vietnam National University. 	<ul style="list-style-type: none"> • DONRE; • DPI; • Department of Foreign Affairs (DOFA); • Hai Phong People’s Committee.

Source by Authors.

4. Results and Discussion

4.1 State of progress of local CCAP implementation

According to the criteria for implementation in this study, the implementation rates of local CCAPs by 2019 were 31% for HCMC and 80% for Hai Phong City (Figure 3). It should be noted that the apparently lower rate of implementation in HCMC does not necessarily mean no progress was made at all. Based on the stakeholder interviews, it is evident that there were local coordination efforts put in place that were aimed at implementation, and 43% of these listed measures were progressing with the operational details such as identification of implementers and ways to enable steady implementation associated with the measures. As the timing at which the status of implementation was checked in this study falls two years after the development of the subject CCAPs in HCMC and five years in Hai Phong City, the difference in implementation rates might be due to differences in the implementation period. However, considering the fact that HCMC was in its second implementation phase and was considered to have the same or better knowledge and experiences as Hai Phong City, the period of implementation was not regarded an essential factor for the implementation rates.

The observed contrast in the implementation rates between the two cities would have become more evident from the budgetary perspective as per suggested in the progress reports. A local CCAP, with or without the budgetary information at the time of approval by the City’s People’s Committee, might have indicated the differences in the readiness of climate measures and have manifested the subsequent speed of implementation thereafter. It may be argued that the low rate of implementation emanates from the CCAPs having different starting years in each of the cities. However, according to the stakeholder interviews in both cities, the preparedness for budget acquisition at the time of planning seems to be more influential in determining swift implementation beyond approval.

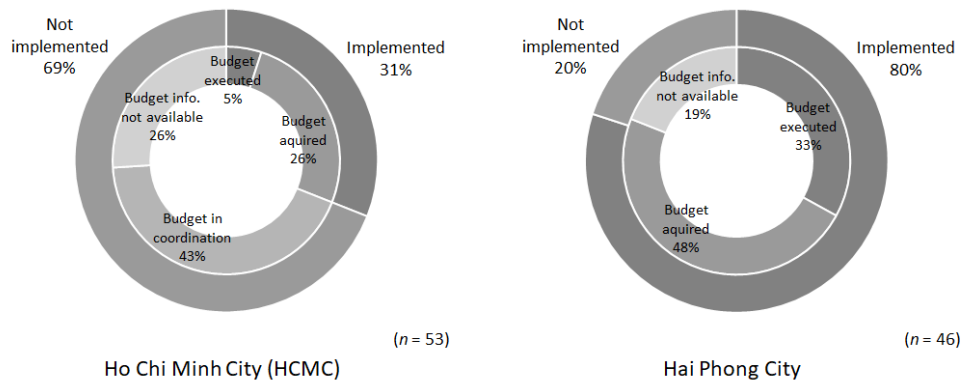


Figure 3: State of the CCAP implementation in Ho Chi Minh City and Hai Phong City as of 2019
Note: The outer circle indicates the implementation status of measures, while the inner circle shows the status of budget acquisition. Source by Authors.

4.2 Assessment of indicators

The results of this study suggest that the readiness of the local CCAP at the time of approval by the local authority might have affected the subsequent implementation status. Therefore, in conjunction with the potential influence of the readiness aspect of the local CCAP, this study explored the factors contributing to the divergence in the state of progress of the local CCAP implementation between HCMC and Hai Phong City against the respective seven indicators specified in the analytical framework of Table 2.

Indicator 1: Engagement of national government (“vertical reference”)

With respect to the vertical reference, authors hypothesize that the more the direction, guidance, and support measures are provided by the national government, the more the implementation of local measures progresses (i.e., progress of measures through national-level, top-down engagement).

The role of the national government is to issue a clear guidance for local governments to help them formulate and implement their own CCAPs. MONRE issued its guidance (No.3815/BTNMT-KTTVBDKH) in 2009, and consequently, all 63 local government authorities (58 provinces and 5 centrally-run cities) formulated their own CCAPs. Since the national guidance was the only instruction available for local government, it was left to the discretion of the local government authorities to decide how to engage with this program. Some provinces/cities formulated plans in rather standard contents irrespective of their geographical diversity, whereas others took more their local context into account

when developing the plans; this suggests that the manner in which cities respond to the guidance is at the discretion of the local government (Nguyen 2017; Strauch et al. 2018). When comparing the composition of the local CCAPs for HCMC and Hai Phong City with the national guidance, it is evident that rather than perfectly following the national guidance, each city adopted their own style tailored to suit the local situation. This can be seen in Table 3. Likewise, the overarching National Climate Change Action Plan for 2012-2020 (NCCAP No.1474/QD-TTg) is available for all local government authorities to reference when formulating the local CCAP. Therefore, vertical reference itself is not considered a direct decisive factor influencing the implementation of local CCAP or the observed diversity in content and structure.

Indicator 2: Interaction with other cities (“horizontal reference”)

To assess the horizontal reference, authors explore whether the following statement holds true: the more opportunities a city has to refer to the experiences of other early moving cities which developed and implemented CCAP, the more the implementation of local measures progresses (i.e., addressing local barriers through referencing early movers)

Horizontal reference or mutual learning among local government authorities, is considered an effective means to facilitate policy implementation (Habitat 2001, 2002). In the case of Vietnam, there are a number of relevant platforms to facilitate peer-to-peer learning among local cities such as Vietnam Urban Forum (VUF), the Urban Climate Resilience Community of Practice, and the Climate Change Working Group; however, major cities including HCMC were not involved in the above platforms or with limited engagement probably due to a lack of significance or gains (Strauch et al. 2018). Provided the experience of climate change response at local level is mostly accumulated in developed country cities, the learning values and gains were sought mainly by interaction with cities outside the country, and not so much within the country. Stakeholder interviews confirmed this perception and differentiated appetite when comes to interaction with cities within and outside the country., As HCMC and Hai Phong City have established their own international networks, it is evident these cities focused largely on north-south interactions.

Both cities have demonstrated that they had opportunities for horizontal reference (Table 4). For instance, HCMC has established official city-to-city partnerships under a Memorandum of Understanding with Rotterdam City and Osaka City. Moreover, even before the CCAP began, Hai Phong City had a similar cooperation modality with Kitakyushu City in the climate change domain under the sister-city cooperation framework. Both cities also enjoy other means of interaction to supplement horizontal reference,

including city-level networks and joint implementation of technical assistance/climate projects offered by development partners and foreign institutions. These all provide the means for capacity building,⁹ mutual dialogue, and access to relevant information needed to undertake climate-related measures.

As mentioned in many of the interviews, the horizontal reference opportunities and approaches embraced by both cities are reasonably similar; therefore, this indicator does not sufficiently explain the observed gap in the implementation rate. It is therefore inferred that horizontal reference *per se* is not a direct factor influencing the implementation of local CCAPs.

Table 4: North-South inter-city cooperation frameworks in the area of climate change

Ho Chi Minh City (HCMC)	Hai Phong City
<ul style="list-style-type: none"> • MOU on Adaptation (HCMC-Rotterdam City [Netherlands]/Vietnam Climate Adaptation Partnership); • MOU on Low Carbon Society (HCMC-Osaka City [Japan]); • City Network (C40 Cities, CityNet); • Climate-related ODAs (Multilateral/bilateral technical assistance). 	<ul style="list-style-type: none"> • Sister City Cooperation/MOU (Kitakyushu City, Japan); • CityNet; • World Bank’s Ecological Cities as Economic Cities (Eco2 Cities); • Climate-related ODAs (Multilateral/bilateral technical assistance).

Source by Authors.

Indicator 3: Concreteness of measures (“nature of measures”)

When considering the nature of the attributes of the measures, the authors explored the correlation between the concreteness of a measure (with numerical evidence and clarity over implementation arrangements), and the progress of its implementation.

While the CCAPs of both cities encompass mitigation and adaptation measures, the proportions of the types of measures appear to be different from one another. HCMC’s CCAP presents broader range of measures types, whereas 80% of Hai Phong City’s measures fall under the adaptation category (Figure 4). Based on case studies from Japanese cities, Shirai and Baba (2014) argued that implementation of adaptation measures is likely to be delayed due to the inherent uncertainty about the future impact of climate change. Indeed, a low rate of implementation (9%) of adaptation measures was observed

⁹ One example that epitomizes how the individual technical assistance directly supports the measure under CCAP is JICA’s technical cooperation project *Support to Planning and Implementation of NAMAs* (SPI-NAMA). This included capacity building of city-level GHG inventory development and supplement transparency requirements for HCMC. To capture opportunities, cities tend to adopt a more receptive approach to allow interested external stakeholders to approach them, then to consider potential gains, rather than vice versa.

for HCMC’s CCAP, while a high rate of implementation (76%) was confirmed for Hai Phong City’s adaptation-oriented CCAP (Figure 5).

Distinctive differences were observed in the type of adaptation measures for both CCAPs. HCMC’s CCAP focused more on supplementing the enabling environment by shaping its measures mainly as studies to develop climate policies supported by scientific operation expenditure (SOE), whereas Hai Phong City’s CCAP primarily looked to concrete projects and investment-type activities as exemplified by climate-proofing infrastructure investment projects (Figure 6). When interviewed, HCMC officials mentioned that investment-type projects, such as the project for the development of HCM Metro Lines, would require significant coordination work which itself becomes a burden when considering integrating into the plan despite the significant impact they would have on GHG reduction. In contrast, Hai Phong City officials responded that there was consensus among different departments that both study and investment-type projects should be listed in the CCAP. Although both types fall into the category of adaptation measures in the local CCAPs, the more concrete the measures, the more they are expected to be implemented, as the ideas can be shared with a wide range of stakeholders. Therefore, Indicator 3 (Concreteness of measures) is regarded as one of the factors influencing the rate of implementation.

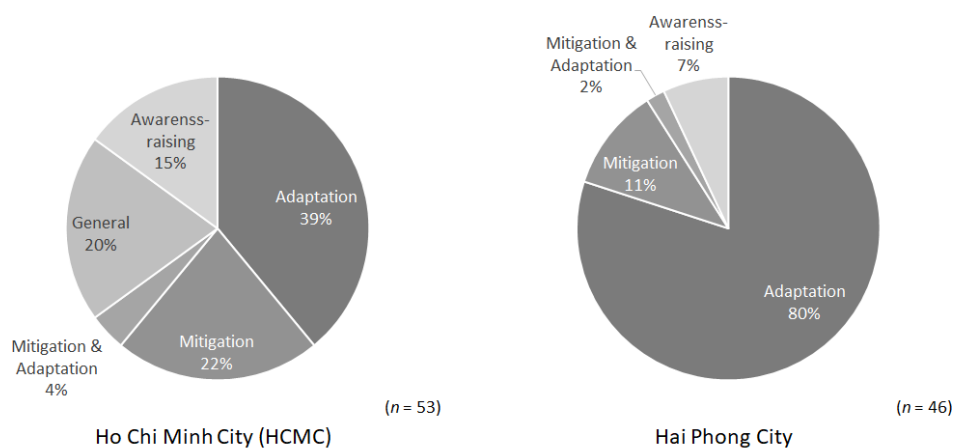


Figure 4: Breakdown of all climate measures listed in local CCAPs by type Source by Authors.

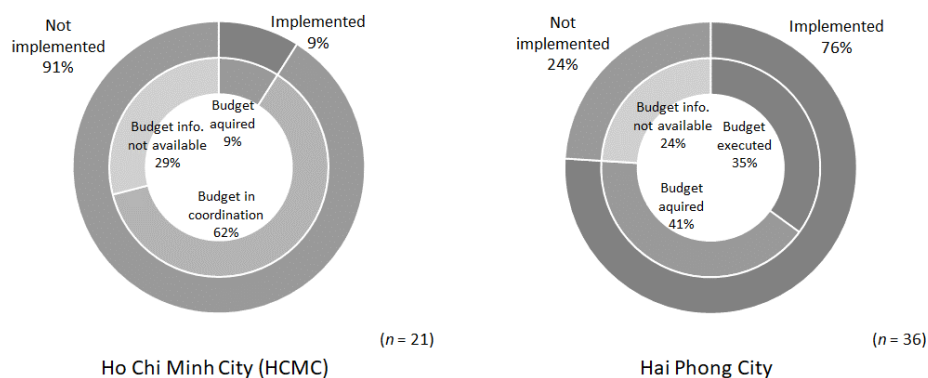


Figure 5: Implementation status for the adaptation-related measures under the local CCAPs
Source by Authors.

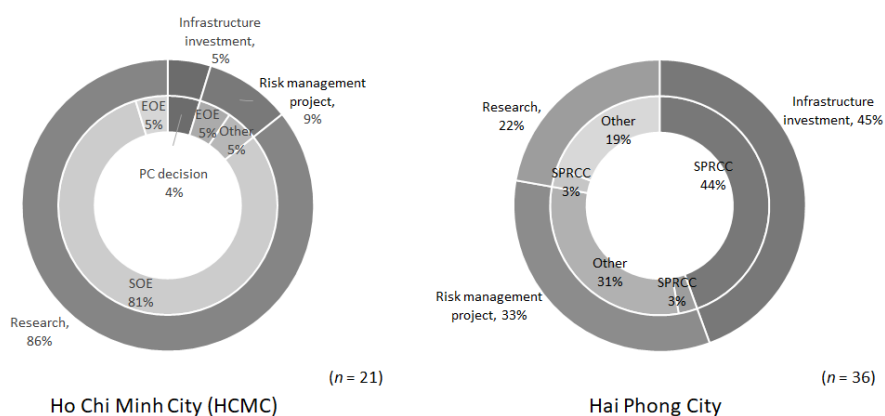


Figure 6: Nature of measures and budget sources for the adaptation-related measures as indicated in the CCAPs
Note: Budget sources for HCMC are indicated as a People’s Committee (PC) decision. The city’s Environmental Operation Expenditure (EOE) is coordinated by DONRE, while City Scientific Operation Expenditure (SOE) is coordinated by DOST. For Hai Phong City, both EOE and DONRE are coordinated by SP-RCC and others. The “other” category includes state budgets allocated annually in line with the NTP-RCC and the budget for the integration of other relevant local programs and projects. Source by Authors.

Indicator 4: Co-benefit of measures (“nature of measures”)

Co-benefit represents the other important aspect of nature of measures. On top of the climate impacts of the measure per se (e.g., GHG emission reduction and enhanced resilience of the local community), the authors looked at whether the inclusion of more localized socio-economic developmental co-benefits in measures increased progress in their implementation.

In addition to the concreteness of measures, as discussed for Indicator 3, the co-benefits of measures are considered to be important, especially for local governments with limited resources. While research activities, such as those included in HCMC’s adaptation

measures, are essential, local government should take time and develop processes to attain the concrete outcomes and co-benefits. City infrastructure-oriented measures such as those highlighted in Hai Phong City’s adaptation measures, could present tangible city-wide co-benefits; such co-benefits may include, enhanced quality of life as a result of the upgrading and increased usability of urban infrastructure such as bridges, roads, and traffic. It is evident that the stakeholders are motivated and appealed to measures with more co- or multiple benefits.

It is therefore inferred that Indicator 4 (Co-benefit of measures) is regarded as one of the factors influencing the rate of implementation.

Indicator 5: Commitment of local government leaders (“implementers’ attributes”)

To gauge the commitment level of leaders, the authors explored whether the stronger the commitment of the city-level management and the People’s Committee, the greater the progress in implementation of local measures.

Both HCMC and Hai Phong City use similar institutional structures to guide their CCAP implementation through city-level steering committees. Specifically, the steering committee is hosted under the auspices of the city People’s Committee, which provides a holistic, cross-cutting platform to allow multi-stakeholder participation among concerned departments and agencies across sectors (Table 5). This setup can be considered as evidence that city management is aware of the cross-cutting nature of climate change and is therefore adopting new oversight approaches instead of the conventional, departmental command and control methodology exercised by the focal point department to tackle the issue.

The respective steering committees are presided over by the Chairman of the People’s Committee for HCMC and the Vice-Chairman for Hai Phong City. The observed slight divergence in the rank of leadership appears to display HCMC’s higher commitment when the first CCAP was launched. In fact, the success of HCMC’s pioneer role in CCAP formulation and implementation at the city-level in Vietnam, is attributable to the active engagement and political support of top management at the oversight level. The initiation of international cooperation on climate change, which started in the early 2010s, is further evidence of this top-level commitment during the early stages of the CCAP’s evolution (Dutch Water Sector 2013; GEC 2015). This momentum was also seen during the first CCAP period (2013-2015) in HCMC with the establishment of the Climate Change Bureau (CCB) under the People’s Committee. The Bureau was tasked with the day-to-day

coordination, and the Secretariat function of the committee, which meant that it received the largest staff allocation of all the centrally-run cities at that time. Stakeholder interviews indicate that the frequency of organizing the steering committee gradually declined during the second CCAP implementation period (2017-2020). This suggests the degree of managerial commitment has gradually shifted over time, slowing down some of the related measures in a dynamic socio-economic environment. Such fluctuation in the political atmosphere surrounding the CCAP might have affected the relative priority of climate change and its relative placement within the day-to-day responsibilities of departments. Progress reports and stakeholder interviews support this point, and it subsequently affects the duration of administrative process for CCAP.

Hai Phong City has shown clear overarching signals and aspirations for the “greening” of the city as the strategic avenue for city development, which can be seen from city’s effort to crowd in investment in line with the Green Port City initiative and Green Growth agenda. Such overarching green agenda of the city serve as the political signal from leadership to the planning level that policy implementation is top-down in nature. Since the CCAP is framed as part of the city’s green agenda, which that the city-level leadership values, the frequency of organizing steering committee meetings, the number of budget appropriations, and the monitoring of implementation have all steadily progressed. In addition, the direct responses given by the Vice-Chairman of the city's People's Committee in charge of the Steering Committee and other officials representing the relevant departments during the interviews we conducted in early 2020, suggest that top-level engagement is still strong.

HCMC and Hai Phong City provide empirical evidence that managerial commitment (Indicator 4) has significant influence over both the subsequent adoption of the CCAP and the speed of implementation of city-level CCAPs. In addition, HCMC’s case suggests the non-static nature of managerial commitment and highlights the need for renewed efforts to maintain political support with priority being given to ensuring the smooth implementation of CCAPs, especially at a time of transition from one phase to another.

Hai Phong City’s case also shows the integration of the CCAP into both the city-level agenda and the green policy agenda as a critical element in winning sufficient recognition and commitment from local stakeholders for its implementation. The observed inclination towards coastal management-related measures in Hai Phong City’s CCAP seems to be the outcome of the alignment with the Green Port City initiative and the city prioritizing coastal management sector development. Such alignment is likely to manifest the types of measures to be set under the CCAP, as discussed under Indicator 3. This creates a self-

feedback mechanism where CCAP functions as the means to achieve the city-level agenda, and implementing entities respond by delivering outcomes to achieve the overall city goals.

Table 5: Members of the CCAP steering committees in HCMC and Hai Phong City

HCMC's Steering Board	Hai Phong City's Steering Committee
<p>Head : Chairman of City People's Committee; Standing deputy head : Director of Department of Natural Resources and Environment (DONRE); Deputy heads: Director of Department of Agriculture and Rural Development (DARD); Vice Director of Department of Planning and Investment (DPI); Members: Director/Vice Director of the following 17 organizations:</p> <ul style="list-style-type: none"> • Department of Science and Technology (DOST); • Department of Finance (DOF); • Department of Culture, Sports and Tourism (DCST); • Department of Construction (DOC); • Department of Information and Communication (DOIC); • Department of Health (DOH); • Department of Education and Training (DOET); • Department of Industry and Trade (DOIT); • Department of Planning and Architecture (DPA) • Department of Transportation (DOT); • HCMC Institute for Development Studies (HIDS); • Department of Tourism (DOT); • Agency of Irrigation and Storm prevention; • City Military Commander; • Saigon Giai Phong Newspaper; • HCMC Police; • Steering Centre for Urban Flooding Control (SCFC) . 	<p>Head: Vice Chairman of City People's Committee; Deputy head: Director of DONRE; Member secretary: Manager of Islands and Seas Branch - DONRE; Members: Leaders of the following 19 organizations:</p> <ul style="list-style-type: none"> • DONRE; • DARD; • DOC; • Department of Transport (DOT); • DOST; • Department of Education and Training (DOET); • DOH; • Department of Information and Communication (DOIC); • DPI; • Department of Finance (DOF); • DOIT; • Department of Foreign Affairs (DOFA); • Hai Phong City Union of Science and Technology Associations; • Propaganda Department; • Vietnam Fatherland Front Committee of Hai Phong City; • Hai Phong City Military Command; • Hai Phong City Municipal Police Department; • Hai Phong City Municipal Border Guard; • Hydro-meteorological Station of the Northeast Region.

Source: Summarized from the references: Nguyen (2015) and No.65/QD-UBND (2014).

Indicator 6: Jurisdiction and administrative resource allocation (“implementers’ attributes”)

For the implementer’s attributes, the authors explored whether a city’s increased managerial commitment to the local jurisdiction and administrative resources (e.g., budget and human resources), increases the progress towards the implementation of measures.

With respect to the roles and responsibilities of institutions when engaging in CCAP implementation, Hai Phong City designated the director of DONRE as the focal point for coordination, whereas in HCMC, the CCB under DONRE assumes this role (Table 6). HCMC has longer experience handling CCAP implementation, with two phases having taken place since 2013, along with the establishment of the CCB to facilitate more cross-

cutting implementation of the plan. While the CCB was originally placed under the direct command of the Chairman of the People’s Committee, for the second CCAP it was housed in the DONRE. Stakeholder interviews suggest that the reassignment of the CCB from a subordinate body under the People’s Committee to the DONRE has reduced its function by top-down intervention. Observed differences relate to the degree of details of roles and functions stipulated in those CCAPs, i.e., while Hai Phong City’s CCAP only articulates the tasks of the director of DONRE, HCMC’s CCAP sets out the responsibilities of all relevant stakeholders. This suggests that HCMC employed the more comprehensive approach of encouraging stakeholder participation.

Approximately 15 entities are involved in the implementation of the measures specified in the Appendices of the CCAPs in both cities (Figure 7). Six of them, mainly sectoral line departments, are identified as common players in both cities, while the rest were totally different, reflecting the variation in measures. Where the distinctive differences are really observed is the number of measures assigned to responsible entities; 61% of the total measures in Hai Phong City’s CCAP fall under the responsibility of DONRE and DARD, whereas a more equal distribution among assigned entities is observed in HCMC’s CCAP. Such a difference is most likely attributable to the nature of the measures (Indicator 3) adopted under the CCAPs. However, as the jurisdiction and mandate of the designated entities does not show clear differences across the cities, Indicator 5 (jurisdiction and administrative resources allocation) was not regarded as a factor representing significant differences influencing implementation.

Table 6: Roles and responsibilities of actors indicated in the local CCAPs

Ho Chi Minh city (HCMC)	Hai Phong City
<ul style="list-style-type: none"> • Responsibility of the Standing Steering Board for implementation of the CCAP (DONRE) <ul style="list-style-type: none"> ➢ Collecting and approving proposals and estimates for programs and projects; ➢ Reporting the implementation results of the annual Action Plan to the city’s People’s Committee and proposing the implementation plan for the next year; • Responsibilities of the support agency of the Standing Steering Board (CCB under the DONRE) <ul style="list-style-type: none"> ➢ Coordinating the relevant departments participating in the Steering Committee and support their guidance; ➢ Executing budget under agreements with designated departments; • Responsibilities of Departments, agencies and People’s Committees of districts and related units <ul style="list-style-type: none"> ➢ Estimation of budget for projects; 	<ul style="list-style-type: none"> • Tasks for the Deputy Head of the Steering Committee (Director of DONRE) <ul style="list-style-type: none"> ➢ Advising and assisting the City People’s Committee in directing, coordinating, facilitating, and handling tasks, programs and projects related to the action plan; ➢ Developing 5-year and annual programs and plans, concretizing goals, tasks and solutions to implement the action plan; ➢ Directing relevant departments, branches, agencies and units based on their assigned functions, tasks and powers to develop and report to the City People’s Committee for promulgation of relevant mechanisms and policies to the management, and implementation of the action plan; ➢ Directing, organizing the implementation of international cooperation activities, mobilizing

<ul style="list-style-type: none"> ➤ Implementation of projects and request resources from CCB; ➤ Conducting other relevant activities within their responsibility; ➤ Reporting to the Steering Committee on demand. <ul style="list-style-type: none"> • Responsibilities of organizations, NGO, enterprises, communities, other <ul style="list-style-type: none"> ➤ Providing comments to projects; ➤ Providing human and financial resources and technical support, as appropriate. 	<ul style="list-style-type: none"> ➤ funding and organizing the implementation of international projects and topics on climate change and activities to respond to climate change; ➤ Developing a coordination mechanism between departments, agencies, and sectors with People's Committees of districts, relevant agencies and units, agencies of the Party, Fatherland Front, mass organizations in order to mobilize the whole political system to participate in the implementation of the tasks of the action plan.
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Source: Summarized from the references: No.1159/QD-UBND (2017) and No.65/QD-UBND (2014).

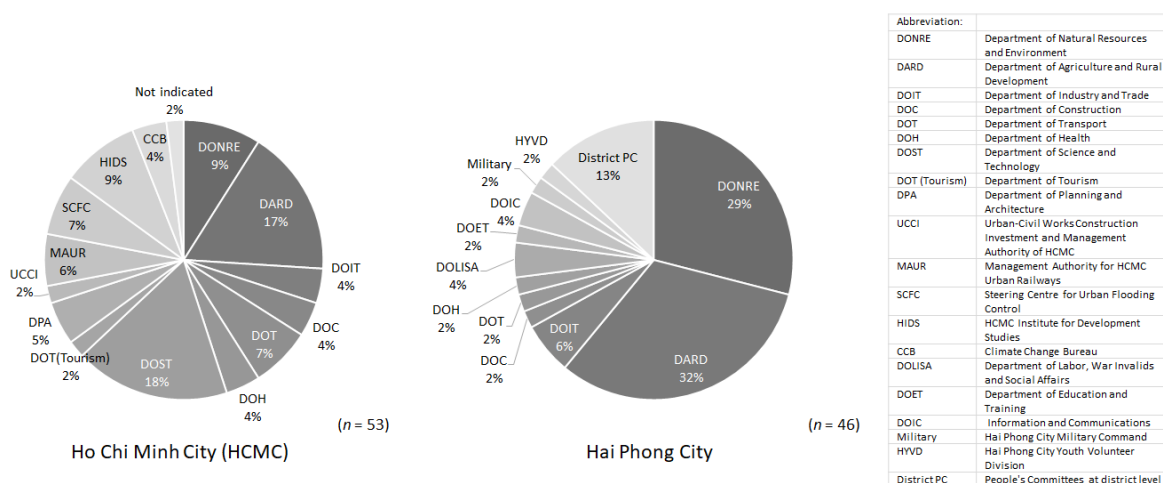


Figure 7: Breakdown of measures under the local CCAPs by assigned agency
 Source: Summarized by authors based on the references: No.1159/QD-UBND (2017) and No.65/QD-UBND (2014).

Indicator 7: Local government institutional capacity (“implementers’ attributes”)

In order to assess the influence of the institutional capacity of CCAPs, the authors hypothesize that the higher the capacity of local government officers to connect the CCAP with the local agenda, the more the implementation of local measure progresses.

Climate change is different in nature and scope to traditional environmental issues, in that in order to come to solutions, both global and multidisciplinary issues and local issues need to be addressed in an integrated manner. It was observed that because climate measures are relatively new in developing countries like Vietnam, acquiring sufficient literacy and control measures within local government-level officials remains a common challenge across cities (Phuong et al. 2018).

When the CCAPs of HCMC and Hai Phong City were reviewed, it was confirmed that both cities employed different approaches and interpretations of how it can be harnessed to meet city's objective, tailored to the local context. Given the comprehensive and diverse sectors mentioned in the CCAP (Table 1), and the assignment of roles and responsibilities to multiple stakeholders (Table 6), it can be seen that HCMC adopted a more bottom-up approach whereby line departments and other implementers brought proposed measures to the table. This suggests that HCMC has the capacity to localize the global issues and create an environment for promoting multi-stakeholder measures. However, based on the nature of measures, most of the activities proposed by line departments were qualitative in nature, such as common forms of studies and capacity building measures (Figure 6). This finding was also confirmed by the stakeholder interviews, which discussed the gradation of engagement and appetite among line departments where some were not proactively integrating climate change into their main programs and projects, but rather, qualitative measures specific to climate change had become dominant. This might have been partly affected by the mood created by the commitment shown by the aforementioned leaders.

Hai Phong City showed its capacity to interpret and harness CCAP as a tool for implementing the city's priority agenda and initiatives. Such interpretation creates a stronger linkage with the city agenda and makes the CCAP unique to the local context. The uniqueness of Hai Phong City's CCAP is evident from the sources of its budget. At the national level, the SP-RCC was launched in 2009 to facilitate public investment in climate change by local authorities. While SP-RCC adopted its budgetary support which channels through the general state budget, its investment list (No.1443/TTg-IR, 2012/9/19) includes 12 projects in Hai Phong City but no projects in HCMC. This explains why it was indeed possible for Hai Phong City to include a large share of infrastructure-related measures in the CCAP. Moreover, this is an indication of the city's capacity to access information about the state of affairs at the national level and demonstrates its capacity to attract and win resources from the state budget. In addition, the approach adopted by Hai Phong City to define actions under the CCAP is closely linked with its overarching Green Port City initiative; this demonstrates the administrative capacity of local officials to interpret and frame the CCAP as the means of achieving the local green initiative agenda and goals.

The coordination capacity among stakeholders serves as the critical lever to translate management's instructions into concrete measures to facilitate implementation. Because most of the measures fall under the auspice of the two authorities of DONRE and DARD for adaptation-related measures in Hai Phong City, the CCAP might have been more manageable with less coordination effort in contrast to the CCAP for HCMC which

displays wider coverage of sectors with wider spectrum of stakeholders engaged. The progress reports from Hai Phong City display its flexibility to modify the relative priority of particular measures during the course of implementation judging from the speed of progress, and endorses such modification based on winning prior agreement among implementing agencies by the time of annual reporting. The city seems to be able to manage the plan in line with the principles of PDCA.

Based on those observations, we infer that Indicator 7 (local government institutional capacity) has a significant influence over the implementation of city-level CCAP.

4.3 Visual summary of the factors

Figure 8 visually summarizes the results of the investigation of the seven indicators set out in Table 2. The results suggested that the deviation in the implementation of local CCAPs in HCMC and Hai Phong City is primarily due to differences in indicators 3 (concreteness attributes), 4 (co-benefit attributes), 5 (commitment of local leaders) and 6 (local government institutional capacity). In contrast, non-significant differences were observed for vertical reference (Indicator 1), horizontal reference (Indicator 2), and jurisdiction and administrative resource allocation (Indicator 6) as the factors impacting on the progress of implementation.

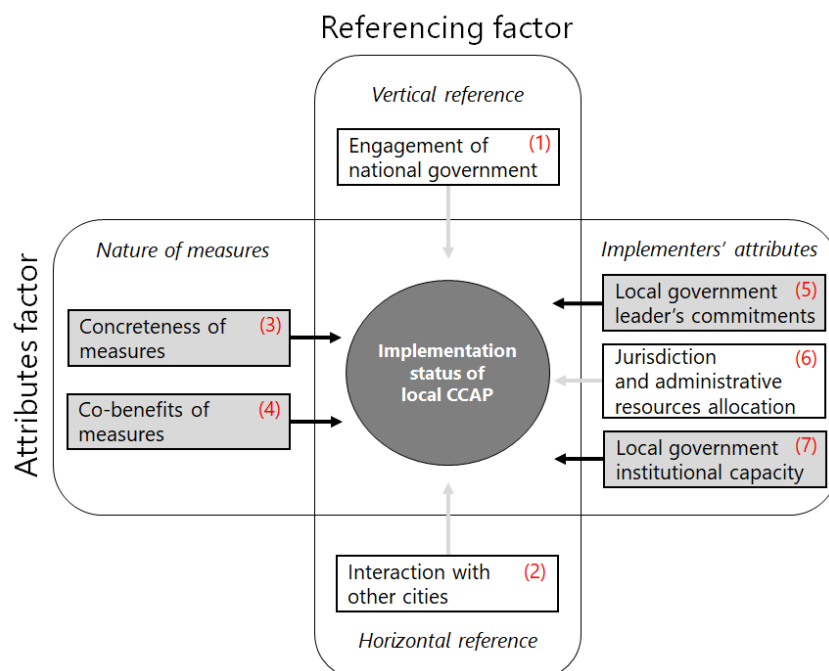


Figure 8: Summary of factors affecting the implementation status of local CCAPs in Vietnam
Note: Factors regarded to influence implementation rates are shown in gray-shaded boxes.
 Source by Authors.

The results lead the authors to infer that those cities that are able to present climate action plans containing a concrete set of measures reflecting city-wide socio-economic priorities, while also displaying operational details over implementation arrangements and clear budget sources and volumes, are likely to transition to and drive implementation more smoothly – the very quality manifested by the four indicators.

4.4 Possible international support and domestic efforts to leverage implementation

Drawing on the findings of the previous section, this section discusses how the four indicators that contributed to divergence in the actual progress of implementation can be further leveraged from the standpoints of international developmental support and domestic arrangements in the Vietnam context. It is critically important to discuss those two elements together. Although international development cooperation is assumed to catalyze and bridge the implementation gap while respecting the ownership of the recipient country (OECD 2005), the intrinsic motivation of the cities that receive external development support is also an indispensable ingredient of the self-led effort to drive implementation.

With respect to the **concreteness of measures specified under the nature of measures**, the assessment reveals the concreteness of the proposed measures. The extent to which budgetary estimation is detailed in the run-up to the approval of the plan is especially evident, as is the acquisition of consensus or buy-in from domestic stakeholders to consolidate implementation arrangements and to manifest the subsequent speed of implementation once promulgated in the form of People's Committee Decisions. International support could play a role in enhancing the quality and concreteness, for example, by reinforcing the analytical side of planning with numerical evidence and other data gained from studies and fact-finding missions. Similarly, international actors can support local authority prepare technical guidance containing concrete case studies from other cities to reference to, preferably coupled with on-site training, for city stakeholders to come up with selection of the best mix of measures. Experience sharing around the setting of targets in the plan and monitoring procedures in order to give the plan a more quantitative orientation, could also be an additional avenue of support. In the meantime, domestic efforts can further leverage the enhancement of concreteness. As discussed in the stakeholder interviews, there is a common dire need for step-by-step technical guidance on how to advance administrative procedures in order to move CCAPs into the implementation phase. While Vietnam's current best practice of granting flexibility or discretion to local authorities to formulate and implement CCAPs tailored to the local context must be commended and preserved, the standardization of approval criteria across

the People's Committees of all localities, especially the inclusion of budgetary estimates for proposed measures, might enhance operational certainty. Provision of administrative services, which can receive day-to-day questions from planners and guide the process may also contribute to the concreteness of measures.

Regarding **co-benefit attributes**, both the elaboration and the quantification of the socio-economic and environmental co-benefits of proposed measures may be one area of international support that could expedite implementation. As the example of urban infrastructure shows, the proposed measure, depending on its type, could reduce air pollution or improve a city's water management system on top of the intended climate impacts; this in turn would contribute to an improved quality of life for residents and wider public acceptance of the validity of measure to be incorporated into the plan (Steg et.al 2022). Hence, forging partnerships with local academics and experts to design a more sophisticated quantification approach and assessment could further add legitimacy to the proposed measures.

When it comes to **the commitment of local leaders**, while the appointment and exercise of political leadership is genuinely a matter of national sovereignty, international actors is best placed to offer sustained support for sensitizing of the city's top management to the importance of being informed about the most recent science, the costs and benefits of engaging in climate actions, updates of requirements, and emerging developments within the global community in order to enable real-time assessment of a city's relative progress level. Offering a platform to facilitate business matching for potential climate-related investment could also be an additional avenue of support. In partnership with the Communist Party of Vietnam (CCOP) and the Ho Chi Minh National Academy of Politics, JICA offers a technical cooperation scheme to train political leaders and managers, including municipal leaders in Vietnam. Such leadership enhancement support could be best harnessed to integrate climate change as the topic for political leadership for more effective sensitization at large. In addition, the city-to-city cooperation framework could also be harnessed to further leverage local leaders' commitment to action.

From the perspective of domestic efforts, such local leader commitments could be manifested in the form of strategic appointment of experienced public officers to handle city-wide cross-institutional coordination and communication to reach consensus on the contents of CCAPs and consolidate implementation arrangements, and domestic resource acquisition and mobilization. International support also has the potential to enhance **local government institutional capacity**, through human capital development, such as

facilitating peer-to-peer learning opportunities for local officials to connect and exchange with different cities, as well as offering future leaders training. This is even more imperative given the fact that climate change is increasingly becoming a long-term, sustained problem and an essential part of the political agenda. Such intervention, however, must be coupled with a municipality’s self-motivated effort to improve staff arrangements. Given the fact that the nature of the climate change agenda is quite different from the management of other conventional environment qualities that local officials have more experience with, staff allocations to handle the climate agenda need to be strategized and carefully arranged to make sure mid-career, experienced public servants are included so as to enable communication and dialogue across institutions. Additionally, stronger coordination and inter-agency communication skills beyond just technical knowledge to address the cross-cutting nature of the agenda are needed for reaching consensus.

While much can be done through international development support, the authors wish to stress the context-driven nature of CCAPs for cities and municipalities. As circumstances surrounding cities and municipalities are so diverse, there is no one-size-fit-all remedy for addressing the enhancement of the above four indicators in an equal manner. It is therefore imperative that the providers of support take a sensible approach to assessing the specific gaps, priority needs, and contexts, and tailor the design of capacity building and support to best fit the needs of the particular city and institutions.

Table 7: Potential areas of international support and domestic efforts to jointly enhance CCAP implementation

Factors affecting to implementation of local CCAPs		Potential engagement areas and actions to enhance implementation
Concreteness of Measures (Indicator 3)	International Support	<ul style="list-style-type: none"> ● Analytical assessments (studies, fact-finding missions) to acquire numerical evidence; ● Technical annex development and on-site training (steps to operationalize plan, case studies) for cities; ● Sharing of experiences of target setting and monitoring procedures.
	Domestic Effort	<ul style="list-style-type: none"> ● Standardization of approval criteria for CCAPs across all municipalities; ● Administrative services to respond to day-to-day questions from planners.
Co-benefits of Measures (Indicator 4)	International Support	<ul style="list-style-type: none"> ● Identification and quantification of socio-economic, environmental co-benefits of proposed measure.
	Domestic Effort	<ul style="list-style-type: none"> ● Connecting with and forging partnerships with local

		academics and experts.
Local Government Leader’s Commitment (Indicator 5)	International Support	<ul style="list-style-type: none"> ● Sustained sensitization; ● Business matching for potential climate-related investment; ● Harnessing city-to-city cooperation frameworks.
	Domestic Effort	<ul style="list-style-type: none"> ● Instructing departments and focal-point agencies on strategic allocations of experienced public officers to handle city-wide cross-institutional coordination and communication; ● Resource acquisition and mobilization.
Local Government Institutional Capacity (Indicator 7)	International Support	<ul style="list-style-type: none"> ● Human capital development – cross city peer-to-peer exchanges. ● Future leaders training.
	Domestic Effort	<ul style="list-style-type: none"> ● Strategic allocation of mid-career, experienced public officials to handle inter-city, cross-sectoral coordination and consensus.

Source by Authors.

5. Conclusion

With the growing recognition of the role that non-state actors play in implementing the Paris Agreement, this study sheds light on climate change action plans for urban cities in developing countries, using two case study cities in Vietnam, namely HCMC and Hai Phong City. The study went beyond the formulation aspects of the plans highlighted in the previous studies and investigated the state of implementation based on the status of budget execution for the measures listed in their CCAPs. As results of the study show the two cities to have significantly different implementation statuses. To identify the factors that brought about such a result, the authors formulated hypotheses based on relevant previous studies and adjusted to the Vietnamese context with reference to the analytical framework of Shirai and Baba (2014). These hypotheses were verified by empirical evidence.

Among the seven possible factors examined, the authors identified the nature of measures expressed by concreteness and co-benefits, commitment of local leaders, and local government institutional capacity as the key factors driving implementation; these factors are all attributable to the deviations observed. The results led the authors to infer that those cities that are able to present climate action plans with concrete sets of measures that integrate city-wide socio-economic priorities, while also displaying numerical clarity over implementation arrangements and clear budget sources and volumes, are likely to transition to and drive implementation more smoothly.

Following these findings, both the potential roles of international support and domestic efforts to enhance implementation were discussed. While further domestic efforts, such as providing enhanced national guidance to provide clarity over the formulation of action plans and approval processes, and the strategic appointment of experienced officials to ensure quality inter-city multi-stakeholder coordination, are indispensable, the multiple avenues for international support to leverage important factors should be identified; such measures include analytical support to provide numerical evidence and identifying the socio-economic benefits of measures to boost the quality of action plans. In addition, sustained efforts to sensitize leadership to the progress of the most up-to-date state of international affairs, as well as facilitating business matching for potential climate-related investment is required.

The study presented following three novelties: (1) examining the implementation status of the local CCAPs with the budgetary measures of each measure positioned in the local CCAPs; (2) identifying factors affecting the implementation status of the local CCAPs with reference to an analytical framework of Shirai and Baba (2014); and (3) presenting a visual graph of the factors influencing implementation to facilitate intuitive understanding. Nonetheless, the study has limitations in terms of coverage of cities and treatment of indicators, which are left to future research for further elaboration.

In order to validate the universality of the factors identified as critical in driving the implementation of CCAPs, the approach adopted in this study could be tested in other cities with different contexts and diverse industry structures. In addition, the scope of the study is not exhaustive due to limitations on access to primary information. Additional aspects such as the impact of the physical size of cities in relation to coordination costs and approaches to formulation, as well as the city's attributes (political epicenter vs commercial epicenter) could also be explored. Moreover, while this study treated each factor with equal weight, the magnitude of each factor influencing implementation may in reality, vary across cities. The approach to differentiated weighting of each factor is therefore left to further analysis. Given the growing role of private sector investment towards decarbonized, climate resilient development, any future research could also shed light on the contribution of that sector to CCAP implementation.

Another aspect that this study did not focus on but that is worth exploring is the monitoring and evaluation process of action plans once they enter into the implementation phase. The progress report displays the importance of securing flexible margins for the city to make necessary adjustments during the implementation of a CCAP. This was exemplified by

modifying operational priority to reflect the implementation status, and changing responsible entities for particular actions and recording of such changes in reporting. This indicates that monitoring with checks and balances is properly facilitating implementation in Hai Phong City. It is therefore suggested that further exploration of the ways that implementation is being monitored and adjusted during the implementation stage is still needed. Additionally, to better align with longer-term carbon neutrality aspirations and the Paris Agreement, assessment of preparedness to add numerical targets to CCAPs or the like, is yet another emerging area for further exploration to support the examination of implementation procedures and their effectiveness.

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Abstract (in Japanese)

要 約

パリ協定の下、気候変動対策の実施主体としてノンステートアクターの役割に対する認識が高まる中、本研究は、開発途上国都市の役割に焦点を当てたものである。本研究では、先行研究がこれまで着目してきた気候変動行動計画の策定プロセスの側面を超えて、都市レベルの同計画の実施を促進する要因を明らかにすることを目的としている。そのため、ベトナムの先駆的な2都市、ホーチミン市とハイフォン市の気候変動行動計画（CCAP）を選定し、CCAPに記載される施策の予算執行状況を中心に実施状況を把握した。その結果、両都市の実施状況は大きく異なることが判明した。この結果をもたらず要因を明らかにするため、関連する先行研究とベトナムの文脈を勘案して策定した仮説を、実証的な証拠をもって検証した。その結果、本研究が同定した7つの要因のうち、施策の具体性やコベネフィットなどで表される施策の性質、首長のコミットメント、地方政府の組織・制度的能力が、計画の実施を促進する重要な要因であることが判明した。この結果を踏まえて、ベトナムにおいて実施ギャップを埋めるための国際的支援や国内対応のあり方を併せて議論した。

キーワード： 都市、都市の気候変動行動計画、実施の推進要因、予算、コベネフィット、実効性、ベトナム、パリ協定