THE CHINESE UNIVERSITY OF HONG KONG

FACULTY OF LAW

Research Paper No. 2017-10

Climate Change Mitigation in the Hong Kong Special Administrative Region

Benoit Mayer

Climate Change Mitigation in the Hong Kong Special Administrative Region[1]

Benoit Mayer
Assistant Professor, Chinese University of Hong Kong Faculty of Law
http://www.benoitmayer.com
bmayer@cuhk.edu.hk

This article will be published in the journal *Climate Law*. Recommended citation: Benoit Mayer, "Climate Change Mitigation in the Hong Kong Special Administrative Region" (2017) 7(2-3) *Climate Law* (forthcoming)

Abstract

Hong Kong enjoys a high degree of autonomy as a Special Administrative Region of China. Unlike China itself, Hong Kong is not a party to international climate change agreements. While China has declared that the Paris Agreement and other climate change agreements apply to Hong Kong, the implementation measures for Mainland China in fact do not apply to Hong Kong. Its unique position under the 'one country, two systems' principle has frequently led to Hong Kong being left out of international cooperation on climate change mitigation. Nevertheless, as this article recounts, the government of Hong Kong has shown increasing interest in promoting climate change mitigation—or at least in being seen to do so. In January 2017, Hong Kong adopted the 'Climate Action Plan 2030+', which is, in essence, a regionally determined contribution to mitigation.

Keywords

China; Hong Kong Special Administrative Region; 'one country, two systems' principle; Climate Action Plan 2030+; regionally determined climate change mitigation.

1. Introduction

China has become one of the most prominent actors in international cooperation on climate change mitigation. By contrast, international negotiations have often neglected to consider the unusual circumstances of certain autonomous subnational entities, such as China's Special Administrative Region of Hong Kong.[2] International conventions and their Conferences of the Parties generally take it for granted that to each state corresponds one government with an exclusive jurisdiction over its territory and population. After all, it is a general principle of international law that a party to a treaty 'may not invoke the provisions of its internal law as justification for its failure to perform a treaty'.[3] In accordance with the principle of the

[1] Thanks to Alexander Zahar and to four anonymous peer-reviewers for precious comments and advise. Any mistake remains the author's sole responsibility.
[2] There is a similar oversight of Hong Kong in the secondary literature on climate change mitigation, with the notable exception of Zhao Yuhong, 'Responding to the Global Challenge of Climate Change: Hong Kong and "One Country, Two Systems"', 1 *Carbon and Climate Law Review* 70 (2011). Special thanks are due to Roger Suen for research assistance with this paper.
[3] *Vienna Convention on the Law of Treaties*, 29 May 1969, 1155 UNTS 331, article 27.

'sovereignty of States in international cooperation to address climate change',[4] it is left to each state to decide how to coordinate its various local governments or administrations in order to achieve national mitigation commitments, sometimes through the allocation of targets to sub-territorial entities.

Such allocation, however, cannot readily be imposed under the 'one country, two systems' principle which defines the relations between Mainland China and Hong Kong and which recognizes 'a high degree of autonomy'[5] to the latter. Because Hong Kong is not a party to the international agreements on climate change, it is under no treaty obligation to take any particular measures on climate change mitigation. Moreover, there does not appear to be any formal agreement between Hong Kong and the Mainland on the modalities of their cooperation in this regard. Therefore, as far as action on climate change mitigation is concerned, Hong Kong is drifting somewhere between the continent of international law—the direct application of treaty obligations to sovereign states—and the continent of administrative law—the hierarchical imposition of national policies on lower administrative entities.

No reference is made to Hong Kong in China's Intended Nationally Determined Contribution submitted pursuant to the UNFCCC/Paris Agreement process.[6] While Hong Kong could seek to implement some of the INDC's general objectives (e.g. peaking CO_2 emissions around 2030),[7] these may not adequately reflect its ability to pursue more ambitious targets. Other objectives spelled out in China's INDC, such as a significant expansion of forest coverage, promoting hydroelectricity, or implementing a nationwide emission-trading scheme,[8] may not readily apply to Hong Kong due to its size and developmental or other circumstances. Clearly, China's INDC was designed to apply to the Mainland, not to Hong Kong.[9]

Hong Kong's government has recognized a duty to act 'in light of' international climate change agreements,[10] and has taken some measures to mitigate climate change, as detailed in this article. Yet, Hong Kong has not exercised the kind of regional leadership that would be expected of a high-income financial center. Generally speaking, it has followed in the steps of other countries without seeking to exercise leadership.

This article tells the story of two kinds of mutually reinforcing neglect: the neglect by international climate negotiations of autonomous subnational entities such as Hong Kong; and the neglect of ambition in the Hong Kong government's climate change mitigation objectives. It is also the story of an opportunity missed by a regional government to use its leverage as an

---

[4] UNFCCC, recital 10.

[5] *Joint Declaration of the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the People's Republic of China on the Question of Hong Kong*, 19 December 1984, Annex, part I, second paragraph.

[6] NDCs are to be communicated by national governments in accordance with Paris Agreement article 3. See also the Intended Nationally Determined Contribution of the People's Republic of China, 30 June 2015, <www4.unfccc.int/submissions/INDC/Published%20Documents/China/1/China's%20INDC%20-%20on%2030%20June%202015.pdf>.

[7] See China's INDC, *supra* note 6, at 5.

[8] Ibid.

[9] Nor was China's INDC designed to apply to Macau (another special administrative region) or to Taiwan (which the Chinese government considers an integral part of China despite its lack of effective control).

[10] See for instance infra note 77.

economic, financial, technological, educational, cultural, and transport hub on the frontier of the Western world to pioneer and promote climate change mitigation in the world's largest economy.

A more positive story is also told herein: it is about the indirect beneficial impact of international climate change agreements through civil-society organizations, the media, and foreign partners, and the moral compulsion they exercise on political leaders. While Hong Kong's government has not done as much to mitigate climate change as it could, or arguably should, have done, it has—despite being under no direct legal obligation to do so—developed relevant regulatory frameworks and taken climate change into consideration in significant infrastructure investments.

The next section provides an overview of Hong Kong's particular status, by way of introduction to a detailed review of Hong Kong's timid involvement in international climate change cooperation, both prior to and since the Paris Agreement. Section 3 documents the relative indifference of Hong Kong to climate change mitigation through to 2007. Section 4 discusses the Hong Kong government's progressive awakening to climate change mitigation in the following years, through to 2015. Section 5 explores the application of the Paris Agreement to the special administrative region. The article concludes with a discussion of the role that Hong Kong could play in the coming years, either through a stronger cooperation with Mainland China, or through a more direct participation in international climate change negotiations.

2. Status of the Hong Kong Special Administrative Region

Hong Kong enjoys a reputation for being a rich and bustling economy. Despite significant income inequalities[11] and an economic slowdown in recent years,[12] the territory continues to stand out as a strong regional and global financial and economic center. Hong Kong's per-capita economic output is comparable to that of many developed countries.[13] Services represent more than 90 per cent of the territory's economic output.[14] Hong Kong's location on the border with China's giant market has contributed to its development as a business-friendly jurisdiction.[15] Its economic power has far-reaching implications, not only for its greenhouse gas emissions, but also for its potential role in promoting climate change mitigation.

Greenhouse gas emissions from activities in Hong Kong's territory—estimated at 43.176 Mt CO_2 eq. in 2012 excluding LULUCF—represent slightly less than 0.1 per cent of global

[11] Hong Kong's Gini coefficient in 2011 was 0.53, significantly higher than China's (0.42 in 2012) or the United States' (0.41 in 2013): Hong Kong Legislative Council Secretariat, 'Fact sheet: Hong Kong in Figures', 31 March 2016; and data from the World Bank, available at <http://data.worldbank.org>.
[12] See, e.g., Nikki Sun, 'Hong Kong economy set for tough year in 2017, economists warn', *South China Morning Post*, 4 January 2017, <www.scmp.com/news/hong-kong/economy/article/2059331/hong-kong-economy-set-tough-year-2017-economists-warn>.
[13] Hong Kong's GDP per capita in 2015 was US$42,300, compared with US$56,000 in the United States and US$32,000 in the European Union. By contrast, China's GDP per capita was US$8,000: see World Bank, <http://data.worldbank.org>. Thus, the World Bank considers Hong Kong as a high-income economy.
[14] Hong Kong Government, 'The Facts: Trade and Industry' (July 2016), <www.gov.hk/en/about/abouthk/factsheets/docs/trade%26industry.pdf>.
[15] See, generally, Steve Tsang, *A Modern History of Hong Kong: 1841-1997* (I. B. Tauris and Co., 2004).

greenhouse gas emissions.[16] The amount is comparable to that of some small developed states, such as Norway or Slovakia.[17] (The population of Hong Kong, at 7.34 million in 2016,[18] is larger than that of Norway and Slovakia.) The territory's per-capita emissions, which stood at 5.9 t CO_2 eq. in 2012,[19] are slightly below the global average,[20] and below all but five Annex I countries.[21] Energy-related emissions account for 90 per cent of Hong Kong's greenhouse gas emissions; they are followed by waste (5 per cent) and industrial-process emissions (4 per cent); agriculture contributes only a marginal share.[22] Power generation accounts for two-thirds of total emissions, and transportation for one-sixth.[23]

Taken in isolation, Hong Kong's per-capita emissions would suggest a rather positive assessment of the territory's management of its contribution to global emissions. Thus it might be said that, despite its booming economy, Hong Kong has been able to limit its impact on the global climate system.

However, such an assessment fails to take into account Hong Kong's particular circumstances. As Lee Yu-tao noted in 1999, Hong Kong's relatively low per-capita emissions are largely due to 'social conditions like dense population, low working and living space per capita, short commuting trips, and small-scale industry and agriculture'.[24] Another factor is the territory's strong reliance on greenhouse-gas-intensive activities taking place beyond its borders. As a service economy, Hong Kong relies on the importation of industrial and agricultural products, whose production is associated with significant amounts of greenhouse gas emissions. Most of the freshwater used in Hong Kong, for instance, is conveyed through an 83-kilometer-long system of canals and pumps, from the Dong River in Guangdong Province in Mainland China, causing substantial energy consumption outside the territory.[25]

---

[16] People's Republic of China, *First Biennial Update Report on Climate Change* (December 2016), at 140. See also World Resources Institute, CAIT Climate Data Explorer, <http://cait.wri.org>, estimating global greenhouse gas emissions, excluding LULUCF, at 44,534.64 Mt CO_2 eq. in 2012.

[17] Norway and Slovakia emitted respectively 46 and 40 Mt CO_2 eq. in 2012, according to World Resources Institute, CAIT Climate Data Explorer, available at <http://cait.wri.org> ('Total GHG emissions excluding land-use change and forestry: 2012').

[18] See Hong Kong SAR, *Census and Statistics Department, 2016 Population By-census: Summary Results* (February 2017), <www.bycensus2016.gov.hk/data/16bc-summary-results.pdf>, at 5 (Hong Kong resident population in mid-2016).

[19] China's First Biennial Update Report, supra note 16, at 138 and 140.

[20] The world's average per-capita GHG emissions is 6.28 t CO_2 eq., according to the World Resources Institute, supra note 17.

[21] Only Croatia, Hungary, Romania, Sweden, and Turkey had per-capita GHG emissions below 6 t CO_2 eq., according to World Resources Institute, supra note 17. The average per-capita emissions of Annex I countries was of 12.69 t CO_2 eq., according to the same source.

[22] China's First Biennial Update Report, supra note 16, at 140. These percentages are based on GHG emissions excluding LULUCF.

[23] Legislative Council Panel on Environmental Affairs, 'Latest Developments on the Work on Combating Climate Change' (23 May 2016), document CB(1)928/15-16(03).

[24] Lee Yu-tao, 'A Study on Greenhouse Gases in Hong Kong: Sources and Mitigation' (Dissertation in partial fulfilment of the requirements for the Master of Science Degree in Environmental Management, University of Hong Kong, 1999), at 73.

[25] See Hong Kong Water Supplies Department, 'Annual Report 2015/16: Water Security and Climate Resilient Development' (2016), <www.wsd.gov.hk/filemanager/common/annual_report/2015_16/common/pdf/wsd_annual_report2015-2016.pdf>.

In addition to the above, Hong Kong has thrived for having a harbour and an airport of strategic regional and international importance. The related emissions—from international aviation and bunker fuels—are not included in its (or in China's) emission totals. (This is in accordance with the IPCC's 2006 Guidelines on National Greenhouse Gas Inventories.[26]) Likewise, emissions from fuels used in 'regional' transport between Hong Kong and Mainland China are entirely attributed to Mainland China, rather than to Hong Kong, in China's greenhouse gas inventory.[27] Aviation and bunker fuels sold in Hong Kong for international and 'regional' transport released an estimated 40.8 Mt CO_2 in 2012 (Table 1), almost as much as Hong Kong's total reported greenhouse gas emissions (43.2 Mt CO_2 eq.) in the same year.

Table 1. CO_2 emissions from aviation and bunker fuels used in international and 'regional' transportation in Hong Kong in 2012 (Mt CO_2).[28]

Emission sources	**Maritime transport**	**Civil aviation**	**Total**
Regional transport (between Hong Kong and Mainland China)	9.697	1.746	**11.443**
International transport	16.798	12.608	**29.406**
Total	**26.495**	**14.354**	**40.849**

The problem of how to fully attribute greenhouse gas emissions to a territory is not unique to Hong Kong,[29] but it assumes a particular importance in light of Hong Kong's tiny territory and its strong reliance on extraterritorial activities. The narrow territorial basis used for the greenhouse gas inventory excludes from consideration many activities essential to the well-being of Hong Kong's residents which occur outside its territory. This raises not only ethical questions, but also pragmatic ones. To omit the extra-territorial emissions embodied in Hong Kong's way of life is to understate the responsibility of Hong Kong and the power of is government to curb greenhouse gas emissions outside its territory through laws and policies of territorial application.

The changing, unique status of Hong Kong has allowed it to delay or curtail its action on climate change mitigation in a context of relative international indifference. Until 1 July 1997, Hong Kong was under colonial rule by the United Kingdom, which remained generally in charge of the territory's international relations. The United Kingdom ratified the UNFCCC on 8 December 1993, but it did not extend its application to Hong Kong. Because the United Kingdom is an Annex I and Annex II party, extension of the Framework Convention to Hong Kong would have caused the territory to shoulder the relatively onerous commitment to 'take the lead in combating climate change and the effects thereof'[30] and provide assistance to developing states,[31] not only

[26] Intergovernmental Panel on Climate Change, *2006 Guidelines on National Greenhouse Gas Inventories*, vol. 1: 'General Guidance and Reporting' (2006), <www.ipcc-nggip.iges.or.jp/public/2006gl/vol1.html>, section 8.2.1.
[27] China's First Biennial Update Report, supra note 16, at 141, note 5.
[28] Ibid. at 141.
[29] See, e.g., Glen P. Peters and Edgar G. Hertwich, 'Post-Kyoto Greenhouse Gas Inventories: Production versus Consumption', 86 *Climatic Change* 51 (2008); and David Satterthwaite, 'Cities' Contribution to Global Warming: Notes on the Allocation of Greenhouse Gas Emissions', 20 *Environment and Urbanization* 539 (2008).
[30] UNFCCC, art. 3.1.
[31] Ibid., art. 4(3)-(10). See the statements of Tony Eason, the then Secretary for Planning, Environment and Lands, reported in Kathy Griffin et al., 'Doubts over green pacts', *South China Morning Post*, 3 December 1992. See also discussions in Zhao, supra note 2.

under the Convention but possibly also under a subsequent protocol. No such obligations constrained the other three 'Asian tigers'.[32] Yet, unlike Singapore and South Korea, which joined the UNFCCC as non-Annex I parties, Hong Kong remained entirely unbound by the 1992 convention on climate change.

The Sino-British Joint Declaration of 19 December 1984 set out the terms of the transfer of the colony of Hong Kong to China, with effect on 1 July 1997.[33] In particular, the Joint Declaration laid the foundations of what would become known as the 'one country, two systems' principle. For a period of fifty years, the Central People's Government (China's government) was to provide 'a high degree of autonomy'[34] to Hong Kong as a Special Administrative Region. The territory would 'enjoy executive, legislative and independent judicial power,'[35] and 'the previous capitalist system and way of life [would] remain unchanged for 50 years.'[36] Yet, the Central Government would nevertheless have a strong role in the conduct of Hong Kong's international relations.[37] According to article 153(1) of the Basic Law of Hong Kong, the Central Government was to decide, 'after seeking the views of the government of the Region', whether a treaty to which China is a party should apply to Hong Kong.[38] Nevertheless, Hong Kong was to conduct relations with overseas entities "in the appropriate fields, including the economic, trade, financial and monetary, shipping, communications, tourism, cultural and sports fields."[39]

The Central Government did not immediately extend the application of the UNFCCC to Hong Kong. It was only several years later, in April 2003, after China had ratified the Kyoto Protocol, that a declaration was registered with the UN Secretary-General to extend the application of both the UNFCCC and the Kyoto Protocol to Hong Kong.[40] This took effect on 5 May 2003, about a decade after the United Kingdom's own ratification of the UNFCCC.

On 10 December 2004, soon after the extension of China's treaty obligations to Hong Kong, China transmitted its first National Communication to the UNFCCC Secretariat: it did not cover Hong Kong.[41] Eight years later, in its second National Communication, China added an entire

---

[32] The four 'Asian Tigers' are Hong Kong, Singapore, South Korea, and Taiwan. Starting in the 1960s, they experienced rapid economic growth.

[33] *Joint Declaration*, supra note 5, section 3.2.

[34] Ibid., Annex, part I, second paragraph.

[35] See *Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China*, 4 April 1990, <www.basiclaw.gov.hk/en/basiclawtext/images/basiclaw_full_text_en.pdf>, art. 2.

[36] Ibid. art. 5.

[37] Ibid. art. 13.

[38] This decision must be made 'in accordance with the circumstances and needs of the Region, and after seeking the views of the government of the Region.' See ibid., article 153(1). For further discussion of the limited international legal personality of Hong Kong, see, e.g., Sun Zhichao, 'International Legal Personality of the Hong Kong Special Administrative Region', 7 *Chinese Journal of International Law* 339 (2008); and Roda Mushkat, 'Hong Kong's Exercise of External Autonomy: A Multi-Faceted Appraisal' 55 *International and Comparative Law Quarterly* 945 (2006).

[39] *Basic Law*, supra note 35, art. 151.

[40] People's Republic of China, Communication in respect of the Hong Kong Special Administrative Region, 8 April 2003, 2213 UNTS 268 (A-30822).

[41] People's Republic of China, Initial National Communication on Climate Change (10 December 2004), <http://unfccc.int/resource/docs/natc/chnnc1e.pdf>. Under the UNFCCC, arts. 4(1) and 12(1), developing states are to communicate national inventories of greenhouse gas emissions, a description of steps taken to implement the convention, and any other relevant information on a regular basis.

chapter on the circumstances and inventory of Hong Kong, as well as on the mitigation and adaptation measures taken by Hong Kong's government.[42] China's first Biennial Update Report under the Cancun Agreements, dated 12 January 2017, likewise included a section on 'Basic Information of Hong Kong SAR [Special Administrative Region] on Addressing Climate Change'.[43]

Unlike the UNFCCC, the Paris Agreement applies to Hong Kong from its entry into force onwards, in accordance with a declaration deposited by China, together with its instrument of ratification of the treaty, on 3 September 2016.[44] Because obligations imposed by the Paris Agreement imply aggregate joint action by the Mainland and Hong Kong, the Central Government and Hong Kong's government are arguably expected to act in concert to further China's obligations under the Agreement. Yet, Hong Kong is not mentioned at all in China's INDC.[45] The territory, not being a party to the Paris Agreement, is unable to communicate its own NDC. While Hong Kong has recognized the need to act 'in light of' the Agreement and China's INDC,[46] its role under the Agreement is likely to remain that of follower rather than of a leader, as I argue below.

3. Hong Kong's Indifference to Global Environmental Issues, 1992-2007

Even as the United Kingdom increasingly supported international cooperation on climate change mitigation, Hong Kong's colonial government expressed very little interest in any aspect of international environmental law. No representative of the colony attended the 1992 Earth Summit.[47] The colonial government stated that it 'generally endorsed the objectives of reducing greenhouse gas emissions'.[48] The Kyoto summit, soon after the transfer of sovereignty, was also unattended by Hong Kong.[49] Well into the 2000s, the government of Hong Kong adopted no concrete measures dedicated to climate change mitigation.

In his Annual Address to Hong Kong's Legislative Council in September 1992, British Governor Chris Patten highlighted the colony's 'environmental priorities', but made no allusion to the Earth Summit, which had been concluded in Rio three months earlier, or to any of its themes (climate change, biodiversity, sustainable development, etc.). Instead, the territory's 'environmental priorities' would be to tackle local air and water pollution. Patten emphasized Hong Kong's capacity to act on these priorities:

---

[42] People's Republic of China, Second National Communication on Climate Change (8 November 2012), available at <http://unfccc.int/resource/docs/natc/chnnc2e.pdf>, at 161-184.
[43] China's First Biennial Update Report, supra note 16, at 135-163.
[44] China's Communication in respect of the Hong Kong Special Administrative Region, 3 September 2016, treaty registration number 54113, <https://treaties.un.org/Pages/showActionDetails.aspx?objid=080000028047bf86>.
[45] Action by the CPG is naturally going to be more important than action by Hong Kong's government. In 2012, 11,896 Mt CO_2 eq. were estimated to have been emitted in Mainland China, 43 Mt CO_2 eq. in Hong Kong, and 9 Mt CO_2 eq. in Macau: China's First Biennial Update Report, supra note 16, at 22, 140, and 170.
[46] See for instance infra note 77.
[47] Kathy Griffin, 'Plea on Earth Summit policies', *South China Morning Post*, 7 August 1992.
[48] Statements by Toney Eason, reported in Kathy Griffin et al., 'Doubts over green pacts', *South China Morning Post*, 3 December 1992.
[49] Elizabeth Tacey, 'Absent SAR "indifferent" to climate change issues', *South China Morning Post*, 6 December 1997.

for a city like Hong Kong it is hardly overwhelming. We have the technology to act. We have the resources required. We can make a big difference, and swiftly, if we choose. And then, when we have cleaned up Hong Kong, we will have a new product for export. Environmental technology is going to be a 'growth area' for many years to come.[50]

Seen in its international context, this statement manifests a glaring contradiction between Hong Kong's financial and technological capacity (not to mention its economic interest in developing its environmental-protection industry for export), on the one hand, and its government's indifference toward global environmental issues, such as climate change, on the other.

The transfer of sovereignty on 1 July 1997 did not fundamentally change this outlook. The Annual Address delivered later that same year by Hong Kong's new Chief Executive, Tung Chee-hwa, epitomizes an approach to environmental protection which treats it as an instrument to promote a 'business friendly environment',[51] rather than incorporating any sense of global citizenship or environmental trusteeship. Tung highlighted the need for the government to tackle 'waste and environmental degradation' as 'inefficiencies that are costly to our health, our businesses and our community [and] our competitiveness'.[52] While claiming that 'Keeping Hong Kong clean is everyone's responsibility',[53] the Chief Executive neglected to mention Hong Kong's own responsibility to respond to global environmental issues. There was a manifest contradiction between his call on individuals to act responsibly and the government's disregard for global environmental challenges.

While the need to protect Hong Kong's environment was increasingly emphasized throughout the 1990s and early 2000s, the rationale remained unmistakably utilitarian, focusing on the attractiveness of the territory to foreign investors and 'talented' foreign workers, as well as (somewhat as an afterthought) public health.[54] This rationale did not exclude supporting an international agreement on climate change from which Hong Kong could benefit. Thus Hong Kong's government supported the Central Government's decision to apply the UNFCCC and the

---

[50] Legislative Council, Official Record of Proceedings, 7 October 1992 (pm), <www.legco.gov.hk/yr92-93/english/lc_sitg/hanSARd/h921007.pdf>, para. 66.

[51] Policy Address of Chief Executive Tung Chee-hwa to the Legislative Council, 8 October 1997, <www.policyaddress.gov.hk/pa97/english/patext.htm>, paras. 17-21.

[52] Ibid., para. 73.

[53] Ibid., para. 77. See also the 2005-2006 Policy Address: Strong Governance for the People, 12 October 2005, <www.policyaddress.gov.hk/05-06/eng/pdf/speech.pdf>, para. 59, where Chief Executive Donald Tsang noted that 'It is the whole community's responsibility to protect the environment.'

[54] See, e.g., the 1998 Policy Address of Chief Executive Tung Chee-hwa to the Legislative Council, 7 October 1998, <www.policyaddress.gov.hk/pa98/english/speech2.htm>, para. 114, mentioning the need to protect the environment 'to enable our people to enjoy a better and healthier quality of life' and to 'help enhance our reputation as a pleasant destination for tourists and for international business travelers' and 'make Hong Kong a more attractive place for highly-skilled professionals to live in': 1999 Policy Address of Chief Executive Tung Chee-hwa to the Legislative Council, 6 October 1999, <www.policyaddress.gov.hk/pa99/english/espeech.pdf>, para. 86, endorsing the objective of 'making Hong Kong an ideal home'; 2001 Policy Address of Chief Executive Tung Chee-hwa, 'Building on our Strengths Investing in Our Future', 10 October 2001, <www.policyaddress.gov.hk/pa01/speech_e.pdf>, para. 88, highlighting the need for quality living environment to 'attract more business investment, more talents and more tourists.'

Kyoto Protocol to the territory as of 5 May 2003.[55] These treaties did not entail any substantial mitigation obligations for Hong Kong, which was now part of a non-Annex I country. Even the commitments applicable to 'all parties' in UNFCCC Article 4(1) did not readily imply any concrete duty for an autonomous subnational entity on the international plane.[56] On the other hand, subject to arrangements with the Central Government, Hong Kong could benefit from any financial or technological support available to developing parties under the Convention and Protocol, in particular emission-reduction projects under the Clean Development Mechanism.[57] The Convention-Protocol package was, for Hong Kong, a potential source of new finance and technology, at no cost of commitment.

The application of the UNFCCC and Kyoto Protocol to Hong Kong did, however, fuel debates on the role that the territory should play in climate change mitigation. These started to percolate into the mainstream political discourse in late 2004, when British Deputy Consul-General Greg Dorey called on Hong Kong to 'volunteer to sign up to developed-country targets to serve as a good example to polluters in the Pearl River Delta'.[58] A similar view was expressed by environmental NGOs. For instance, Edwin Lau Che-feng, assistant director of Friends of the Earth, emphasized the moral obligation for Hong Kong to 'take a bigger role in cutting greenhouse [gas] emissions and help China achieve more reductions',[59] while Robin Oakley, campaign manager at Greenpeace China, argued:

> With a gross domestic product that puts it firmly into developed country status, and comparable emissions to several European Union nations, Hong Kong is in a unique position. Instead of hiding behind mainland China's developing-country status, it could play a powerful role. A commitment to binding targets and heavy investment in renewable energy sources could play a vital part in moving the whole of China forward with its sustainable development ambitions.[60]

Hong Kong's government responded to such comments by hiding behind legalistic language: 'As with other developing countries, China (including HKSAR [Hong Kong Special Administrative Region]) is not required to set an emission target under the Kyoto Protocol.'[61] Opportunistically stressing the first element in the 'one country, two systems' principle whilst eliding the second, Hong Kong's government could delay any substantial action on climate change mitigation until such time as China itself would agree to specific mitigation targets.

---

[55] See Legislative Council Secretariat, 'Kyoto Protocol to the United Nations Framework Convention on Climate Change: Information Note' (2003), document IN13/02-03, <www.legco.gov.hk/yr02-03/english/sec/library/0203in13e.pdf>, para. 7.3. See also supra note 40.

[56] The obligation to adopt and implement measures to mitigate climate change under the UNFCCC, art. 4(1)(b), does not require that such measures are applied to the whole territory. Inasmuch as such measures are adopted by the CPG, it could be argued that China has complied with its international obligation, even in the absence of any measures applicable to Hong Kong.

[57] Kyoto Protocol, art. 12.

[58] Cheung Chi-fai, 'City poised to join partnership on renewable energy; Inclusion will give greater access to latest technologies', *South China Morning Post*, 25 January 2005.

[59] Ibid.

[60] Robin Oakley, 'Kyoto is only the beginning', *South China Morning Post*, 19 February 2005. See also Paul Harris, 'Hong Kong's climate responsibility', *South China Morning Post*, 9 April 2007 ('even though Hong Kong's pollution of the global atmosphere does not violate treaties, it is arguably immoral—and downright callous of us—to continue anything resembling business as usual').

[61] Legislative Council Panel on Environmental Affairs, 'Greenhouse gas emissions and their effects on global warming, Summary of views', 14 June 2007, LegCo document CB(1)2202/06-07(01), at 3.

Hong Kong's government did show an intermittent interest in the concept of 'sustainable development', though initially not for its scope to cover global environmental issues. The concept was referred to, in Chief Executive Tung's 1999 Annual Address, as a 'way ... to increase prosperity and improve the quality of life while reducing overall pollution and waste'.[62] A Council for Sustainable Development was established, holding its first meeting in December 2003.[63] The Council carried out consultations focused on its three chosen aspects of sustainable development, namely solid-waste management, renewable energy, and urban living space. Over 1,400 people took part in various Council events, while the Council received nearly 2,000 submissions.[64] On this basis, in May 2005, it published the so-called First Sustainable Development Strategy for Hong Kong.[65]

Although this process did not lead to any major policy changes, it represented a first opportunity for various stakeholders to discuss the role that Hong Kong could play in addressing climate change. It also contributed to the awakening of Hong Kong to global environmental issues. The 2005 Strategy highlighted the need to promote renewable energy in Hong Kong, on the grounds of energy security and control of local air pollution, but it also noted that, 'globally, overreliance on burning [fossil] fuels to produce electricity is widely believed to be a factor in climate change'.[66] While characterizing Hong Kong's 'direct contribution to climate change through power generation from fossil fuel' as being 'insignificant in global terms',[67] the Strategy noted that the territory nevertheless had 'a responsibility to act to reduce the overall burden on the planet of our consumption of non-renewable energy resources'.[68] The Strategy suggested that, in order to 'act ... locally on a global issue',[69] Hong Kong's government should set itself the target of increasing renewable energy in electricity supply to a level of 1 or 2 per cent by 2012.[70]

4. Hong Kong's Timid Commitment to Mitigation Targets, 2007-2015

Late 2007 seems, in retrospect, a pivotal moment in Hong Kong's environmental history. It was at this time that the territory's government began to give serious consideration to concrete measures for emission mitigation in Hong Kong. It occurred in the context of the publication of the IPCC's Fourth Assessment Report and the preparations for the UNFCCC's Bali COP—events that contributed to the building of a global momentum for action on climate change.[71]

An important impulse came from Hong Kong's participation in the Asia-Pacific Economic Cooperation (APEC) forum. As mentioned, Hong Kong's Basic Law authorizes it to conduct

---

[62] 1999 Policy Address, supra note 54, para. 86.
[63] See Office of the Chief Secretary for Administration Sustainable Development Unit, 'A First Sustainable Development Strategy for Hong Kong' (December 2003), <www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/waste/prob_solutions/files/1stSDStrategyE.pdf>, at 5 (para. 4).
[64] Ibid., para. 6.
[65] Ibid. To date, there has been no 'Second' sustainable development strategy.
[66] Ibid., para. 12.
[67] Ibid., para. 13.
[68] Ibid., para. 13.
[69] Ibid., para. 12.
[70] Ibid., para. 22.
[71] See UNFCCC, Decision 1/CP.13, 'Bali Action Plan', 14-15 December 2007.

relations and conclude agreements 'in the appropriate fields, including the economic, trade, financial and monetary, shipping, communications, tourism, cultural and sports fields'.[72] Hong Kong had joined APEC in November 1991, when it was still under British rule, as a way to advance its economic and trade interests in the region. It maintained its membership after the transfer of sovereignty.

Although APEC is primarily an economic forum, climate change has intermittently been on its agenda.[73] The Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development, of 9 September 2007, announced 'a forward program of practical, co-operative actions and initiatives'.[74] The forum's twenty-one Member Economies committed to 'working towards achieving an APEC-wide regional aspirational goal of reduction in energy intensity of at least 25 per cent by 2030 (with 2005 as the base year)'.[75] While this did not impose a specific obligation on any Member Economy, and while only a few concrete measures were approved (they related to joint research, development, and transfer of technology), the Declaration appears to have built momentum for action by Hong Kong's government. For the first time, the Declaration led the Government of Hong Kong to recognize that it had a role to play.

A month after the APEC meeting, Hong Kong Chief Executive Donald Tsang, in his Annual Address to the Legislative Council, recognized that the territory had a role to play in addressing 'the crisis of global warming':[76]

> Global warming has become a challenge to the international community. In light of their own economic, social and environmental characteristics, governments around the world have to formulate measures to strike a balance between economic development and the reduction of greenhouse gas emissions, with a view to achieving sustainable development. In the same vein, we should do our part to improve the regional environment.[77]

Tsang also announced that, 'As an APEC member, Hong Kong will honour its pledge and seek to achieve a reduction in energy intensity of at least 25% by 2030 (with 2005 as the base year)'.[78] He outlined several new measures that the government would take, which would promote climate change mitigation, including public consultations on the mandatory implementation of a Building Energy Code and an Energy Efficiency Labelling Scheme.[79] Although such measures represented the continuation of the government's efforts to curb local air pollution by reducing

---

[72] *Basic Law*, supra note 35, article 151. See discussion supra note 39 and accompanying text.
[73] See, in particular, 1997 Leaders' Declaration, Vancouver, 25 November 1997, <www.apec.org/Meeting-Papers/Leaders-Declarations/1997/1997_aelm>, para. 18 ; 2005 Leaders' Declaration, Busan, 18 November 2005, <www.apec.org/Meeting-Papers/Leaders-Declarations/2005/2005_aelm>; and 2006 Leaders' Declaration, Ha Noi, 18 November 2006, <www.apec.org/Meeting-Papers/Leaders-Declarations/2006/2006_aelm, part 2>.
[74] Sydney APEL Leaders' Declaration on Climate Change, Energy Security and Clean Development, Sydney, 9 September 2007, <www.apec.org/Meeting-Papers/Leaders-Declarations/2007/2007_aelm/aelm_climatechange>.
[75] Ibid.
[76] 2007-08 Policy Address of Chief Executive Donald Tsang to the Legislative Council, 'A New Direction for Hong Kong', 10 October 2007, <www.policyaddress.gov.hk/07-08/eng/docs/policy.pdf>, para. 38.
[77] Ibid., para. 37.
[78] Ibid., para. 38.
[79] Ibid., para. 38.

energy intensity, their rebranding as climate change mitigation measures indicated a shift in emphasis from local to global environmental protection.

At around the same time, consultations were held between China's National Development and Reform Commission and Hong Kong's Environmental Protection Department to enable Hong Kong to host CDM projects. On 6 June 2008, the two administrative bodies adopted the Arrangements for the Implementation of Clean Development Mechanism Projects in the Hong Kong Special Administrative Region (the 2008 Arrangements).[80] No CDM project has been established in Hong Kong itself, but subsequent consultations allowed Hong Kong companies to receive CDM funding for projects they implemented in Mainland China.[81] By December 2016, 48 CDM projects had been established in the Mainland by Hong Kong companies.[82]

Outside the CDM, there was increasing awareness of the need for Hong Kong's government to cooperate with the Central Government on climate change mitigation. The 2008 Arrangements recognized in general terms that 'Under the Convention and the Protocol, HKSAR is required to work jointly with the Mainland to fulfil the obligations imposed upon Parties not included in Annex I to the Convention'.[83] This approach was also endorsed in a briefing note, dated 2 November 2009, of the Environmental Protection Department of Hong Kong for discussion by the Legislative Council in preparation for the UNFCCC's Copenhagen summit. The note stated that, 'Under the Convention and the Protocol, Hong Kong is required to work jointly with the Mainland to fulfill the obligations imposed upon China as for other non-Annex I Parties'.[84] It also affirmed that 'Hong Kong is committed to working closely with the international community to combat climate change'.[85]

Indeed, Hong Kong's government sought to engage in international negotiations on climate change. The Basic Law authorizes representatives of Hong Kong's government to participate as members of Chinese delegations in international conferences normally limited to states, subject to the Central Government's permission, and to express their views, using the name 'Hong Kong, China'.[86] In 2005, for the first time, two officials from Hong Kong's Environmental Protection Department and one from the Hong Kong Observatory joined China's delegation to COP 11 (Montreal).[87] From 2007 onwards, at least one Hong Kong official from the Environmental Protection Department joined China's COP delegations. Hong Kong's 'sub-delegations' to COP 15 and COP 16 were led by the Secretary for the Environment, Yau Tang-wah; another Secretary for the Environment, Wong Kam-sing, led the sub-delegation to COP 21.[88]

---

[80] *Arrangements for the Implementation of Clean Development Mechanism Projects in the Hong Kong Special Administrative Region*, 6 June 2008, <www.epd.gov.hk/epd/sites/default/files/epd/english/climate_change/files/cdm_eng.pdf>.

[81] See Supplementary Notes on the Implementation of Projects under the Clean Development Mechanism (CDM) by Hong Kong Enterprises on the Mainland, <www.climateready.gov.hk/page.php?id=121>.

[82] China's First Biennial Update Report, supra note 16, at 155.

[83] Arrangements for the Implementation of Clean Development Mechanism Projects, supra note 80, art. 1.

[84] Legislative Council Panel on Environmental Affairs, 'Hong Kong Government's Preparation for the United Nations Climate Change Conference 2009' (November 2009), para. 4.

[85] Ibid., para. 5.

[86] *Basic Law*, supra note 35, article 152(1).

[87] See UNFCCC Secretariat, 'List of Participants', 9 December 2005, document FCCC/CP/2005/INF.2 (Part 1).

[88] Information drawn from the List of Participants compiled by the UNFCCC Secretariat for each COP session.

In response to civil-society pressure,[89] Hong Kong's government, on 2 November 2007, joined the C40 Large Cities Climate Leadership Group.[90] This is a network of large cities committed to addressing climate change. Since 2007, Hong Kong government officials, including the Secretary for the Environment, have attended the C40's summits,[91] and a summit was organized in Hong Kong itself just prior to COP 21.[92] However, Hong Kong has gone through none of the four phases—commitment, inventory, target, and plan—that C40 members are invited to complete.[93]

Lastly, Hong Kong's government has explored ways to promote regional cooperation with provincial administrations. The Hong Kong/Guangdong Co-operation Joint Conference was established soon after the transfer of sovereignty to explore cooperation in areas of mutual interest, including environmental protection. In 2011, the Conference agreed to establish the Hong Kong/Guangdong Joint Liaison Group on Combating Climate Change 'With a view to controlling greenhouse gas emissions and actively promoting the development of a low-carbon economy in the region'.[94] The Joint Liaison Group has carried out various activities to promote scientific exchange, joint projects, and regulatory adjustments between Hong Kong and Guangdong Province. The US-China Joint Announcement on Climate Change, on 12 November 2014, led the Hong Kong government to renew its commitment to effective consultation and cooperation.[95]

This increasing readiness of Hong Kong's government to promote climate change mitigation, or at least to promote its image as a 'smart' city to the world, certainly had something to do with the increasing pressure for China and other emerging economies to commit to ambitious mitigation targets. Doing nothing would have imposed a high reputational cost on a small territory in need of international openness. In addition, as discussed, Hong Kong potentially benefitted from international financial support, in particular by cooperating with Mainland China on CDM implementation. Nonetheless, the government's basic position remained unchanged: Hong Kong was not the main culprit as it was 'a relatively small emitter of GHG'.[96]

Hong Kong's government established an Inter-departmental Working Group on Climate Change in 2007 to coordinate the actions of different departments 'to fulfill the HKSAR's obligations under the UNFCCC'.[97] The Working Group's terms of reference acknowledge 'the obligations of the Hong Kong Special Administrative Region ... under the United Nations Framework

---

[89] See, e.g., Douglas Woodring, 'Our leaders are asleep at the wheel again on pollution fight', *South China Morning Post*, 19 May 2007.
[90] 'In Brief', *South China Morning Post*, 2 November 2007.
[91] See e.g. 'In Brief', *South China Morning Post*, 19 May 2009.
[92] See Bernice Chan, 'Green for go at environment exhibition', *South China Morning Post*, 2 November 2010.
[93] See Hong Kong city snapshot on the website of the C40 Large Cities Climate Leadership Group, <www.c40.org/cities/hong-kong>.
[94] See Hong Kong SAR Constitutional and Mainland Affairs Bureau, 'Fourteenth Plenary of the Hong Kong/Guangdong Co-operation Joint Conference held in Hong Kong', press release on 23 August 2011, <www.cmab.gov.hk/en/press/press_2798.htm>.
[95] See Hong Kong Government, 'LCQ16: Hong Kong's Climate Change Strategy and Action', Press Release on 3 December 2014, <www.info.gov.hk/gia/general/201412/03/P201412030482.htm>.
[96] LegCo Panel on Environmental Affairs, 'Government Efforts in Addressing Climate Change', 28 January 2008, <www.legco.gov.hk/yr07-08/english/panels/ea/papers/ea0128cb1-647-18-e.pdf>, para. 5.
[97] Ibid., Annex II, at 24.

Convention on Climate Change ... and its Kyoto Protocol'.[98] The following year, an associated consultancy study was commissioned.[99] In his 2008 Annual Address, Chief Executive Tsang affirmed the objective of 'mak[ing] early preparations to meet the challenge of climate change',[100] although he did not provide a concrete plan.[101] The output of the Working Group and the consultancy led to the development of Hong Kong's Climate Change Strategy and Action Agenda, which was opened for public consultations on 3 September 2010.[102]

The draft Climate Change Strategy and Action Agenda was in response to the Central Government's announcement, on 26 November 2009, of a national target to reduce carbon intensity by 40-45 per cent by 2020 against a 2005 baseline.[103] The Agenda affirmed Hong Kong's own 'determination to maximize the room for controlling GHG emissions ... stand[ing] as one with the CPG [Central People's Government] in combating climate change'.[104] The Agenda recognized Hong Kong's 'capacity to adopt a more aggressive carbon intensity reduction target and contribute to the nation's efforts in tackling climate change'.[105] In order to 'position ... Hong Kong ... as the greenest region in China',[106] the Agenda went to public consultation with a target of 50-60 per cent reduction in carbon intensity by 2020 (from a 2005 baseline).[107]

To meet this target, the Agenda proposes a series of measures to increase energy efficiency through building standards, to implement a pilot project on district cooling, to promote mass-transport systems and more efficient vehicles, and to reform waste disposal by developing waste-to-energy infrastructure. The Agenda relies heavily on one set of measures to reduce the carbon intensity of the power sector: a shift from coal to gas and the development of non-fossil-fuel energy generation. The Agenda proposes a target of 3-4 per cent renewable energy and 50 per cent nuclear energy in the sources of electricity by 2020.[108]

Since the early 1990s, Hong Kong's power utility, CLP Group, had been in a joint venture with the Mainland's China General Nuclear Power to operate the Daya Bay nuclear power plant in Guangdong Province. About two-thirds of the electricity produced at Daya Bay goes to Hong

---

[98] Ibid.
[99] HK Environmental Protection Department, 'Government Efforts in Addressing Climate Change', supra note 96, paras. 21-22. See also HK Environmental Protection Department, 'Consultancy Report: A Study of Climate Change in Hong Kong', December 2010, available at <http://library.legco.gov.hk:1080/articles/1130360.188274/1.PDF>.
[100] 2008-09 Policy Address of Chief Executive Donal Tsang to the Legislative Council: 'Embracing New Challenges', 15 October 2008, <www.policyaddress.gov.hk/08-09/eng/docs/policy.pdf>, para. 95.
[101] See, for example, ibid. 97, mentioning that the use of clean energy would gradually increase 'by, for example, increasing the proportion of natural gas for local electricity generation to 50%.'
[102] Hong Kong SAR Environment Bureau, 'Hong Kong's Climate Change Strategy and Action Agenda: Consultation Document', 3 September 2010, <www.epd.gov.hk/epd/english/climate_change/files/Climate_Change_Booklet_E.pdf>.
[103] See UNFCCC Secretariat, 'Compilation of information on nationally appropriate mitigation actions to be implemented by developing country Parties', 19 January 2015, document FCCC/SBI/2013/INF.12/Rev.3, <http://unfccc.int/resource/docs/2013/sbi/eng/inf12r03.pdf>, para. 65.
[104] 'Climate Change Strategy and Action Agenda', supra note 102, para. 4.9.
[105] Ibid. para. 4.10.
[106] Ibid. para. 1.2.
[107] Ibid. para. 1.12.
[108] Ibid. para. 5.45.

Kong, representing about a quarter of Hong Kong's electricity needs.[109] The 2010 Agenda's proposal that Hong Kong increase its nuclear-power consumption so that it meets half of its growing energy needs by 2020 implies that new investments in nuclear energy must be made in Mainland China.[110]

The idea of expanding nuclear-power generation proved controversial.[111] A few months after the Copenhagen COP in December 2009, the Fukushima nuclear accident persuaded the Hong Kong government to abandon the idea of an increased reliance on nuclear energy. As the government explored other options, causing a delay in important investment decisions, it appeared that it would be increasingly difficult for Hong Kong to achieve its target of 50-60 per cent reduction in carbon intensity by 2020. Marking a low point in the political discourse, none of Chief Executive Leung Chun-ying's Annual Addresses between 2013 and 2015 mentioned climate change; instead, they were dominated by a utilitarian approach to environmental protection, similar to that which characterized the political discourse prior to 2007.[112]

The Report of Public Consultation on the 2010 Climate Change Strategy and Action Agenda was released in April 2014;[113] it contained no clear plan for the energy sector. A new consultation process, on the 'future fuel mix for electricity generation in Hong Kong', was organized to take place from March to June 2014.[114] The corresponding consultation document, prepared by the Environment Bureau, proposed two alternative options. The first consisted of purchasing up to 30 per cent of Hong Kong's electricity from Mainland power-generation companies, while at the same time increasing the use of natural gas over coal for indigenous power generation. The second option was to drastically increase power generation from natural gas, from 22 per cent of Hong Kong's electricity in 2012 to 60 per cent by 2023.[115] The public consultation revealed little public support for a massive purchase of electricity from Mainland China, due among other things to concerns about the reliability and environmental impact of such imports, including the further displacement of greenhouse gas emissions from Hong Kong to the Mainland.[116] Thus,

---

[109] See generally HKNIC and CLP, *Daya Bay Nuclear Power Station: A fusion of efforts, a yield of achievements* (n.d.), <www.hknuclear.com/HKNIC/publications/Documents/Daya%20Bay%20brochure_eng.pdf>.
[110] 'Climate Change Strategy and Action Agenda', supra note 102, paras. 5.39-5.43.
[111] See, e.g., Gloria Chang, 'Increasing reliance on nuclear energy is not the answer for HK', *South China Morning Post*, 4 November 2010.
[112] See 2013 Policy Address of Chief Executive Leung Chun-ying to the Legislative Council, 'See Change, Maintain Stability, Serve the People with Pragmatism', 16 January 2013, <www.policyaddress.gov.hk/2013/eng/pdf/PA2013.pdf>; 2014 Policy Address of Chief Executive Leung Chun-ying to the Legislative Council, 'Support the Needy, Let Youth Flourish, Unleash Hong Kong's Potential', 15 January 2014, <www.policyaddress.gov.hk/2014/eng/pdf/PA2014.pdf>; and 2015 Policy Address of Chief Executive Leung Chun-ying to the Legislative Council, 'Uphold the Rule of Law, Seize the Opportunities, Make the Right Choices', 14 January 2015, <www.policyaddress.gov.hk/2015/eng/pdf/PA2015.pdf>.
[113] Environment Bureau, 'Report of Public Consultation on Hong Kong's Climate Change Strategy and Action Agenda', note for information to the Panel on Environmental Affairs of the Legislative Council, 18 April 2014, document CB(1)1292/13-14(06), <http://library.legco.gov.hk:1080/articles/1166032.243102/1.PDF>.
[114] Environment Bureau, 'Future Fuel Mix for Electricity Generation: Consultancy Document', March 2014, <www.enb.gov.hk/sites/default/files/en/node2605/Consultation%20Document.pdf>.
[115] Ibid. at 31.
[116] Environment Bureau, 'Report on the Public Consultation on Future Fuel Mix for Electricity Generation in Hong Kong', March 2015, <www.enb.gov.hk/sites/default/files/en/node2605/Report_on_the_Public_Consultationon_e.pdf>, at 3-5.

despite the greater cost, strong support was expressed for a drastic increase in indigenous gas-based power generation.

Additional public consultations on the development of the electricity market took place from March to June 2015. In the corresponding consultation document, the government announced a plan to increase the use of natural gas to meet about 50 per cent of Hong Kong's electricity needs by 2020 and to enhance efforts to promote energy saving. The government also stated that it was considering further supporting renewable energy, noting however that this would involve significant expenditure. In light of this, input was invited from the public on whether Hong Kong should 'further promote renewable energy despite its higher tariff implications'.[117] The response was split, with about half of the respondents indicating a willingness to pay up to 5-10 per cent more for electricity sourced to a greater proportion of renewable energy.[118] Comments also emphasized the geographical constraints of Hong Kong, with relatively little space available for solar or wind energy and no significant hydropower potential.[119]

Parallel efforts were made to promote government action on energy saving. In May 2015, Hong Kong's Environment Bureau, in collaboration with the Development Bureau and the Transport and Housing Bureau, released the Energy Saving Plan for Hong Kong's Built Environment 2015-2025+.[120] The Plan listed a series of measures that Hong Kong's government had been taking over about two decades to reduce energy intensity, through public education, financial incentives, government leadership, and legislation.[121] The Plan announced a continuation of effort toward a target of a 40 per cent reduction in energy intensity by 2025 (2005 baseline) through a progressive reinforcement of existing policies and law.[122] This energy intensity target was short of a comprehensive mitigation objective because greenhouse gas emissions cannot be deducted from energy intensity alone.

Lastly, on 6 November 2015, Hong Kong's government released the Hong Kong Climate Change Report 2015. It represents a synthesis of its efforts to tackle climate change. The report reaffirmed Hong Kong's commitment to a 50-60 per cent reduction in carbon intensity by 2020 and a 40 per cent reduction in energy intensity by 2025.[123] Key measures mentioned included changes in the fuel mix for power generation, measures to promote energy saving in buildings,

---

[117] Environment Bureau, 'Public Consultation on the Future Development of the Electricity Market', March 2015, <www.enb.gov.hk/sites/default/files/en/node3428/EMR_condoc_e.pdf>, at 56.
[118] Environment Bureau, 'Future Development of the Electricity Market', note for information of the Panel on Economic Development of the Legislative Council on 23 November 2015, document CB(4)217-15-16(03), <www.legco.gov.hk/yr15-16/english/panels/edev/papers/edev20151123cb4-217-3-e.pdf>, para. 29.
[119] Ibid., para. 31.
[120] Environment Bureau (in collaboration with Development Bureau and Transport and Housing Bureau), 'Energy Saving Plan for Hong Kong's Built Environment 2015~2015+', May 2015, <www.enb.gov.hk/sites/default/files/pdf/EnergySavingPlanEn.pdf>.
[121] Three main regulatory instruments were adopted: the Buildings Energy Efficiency Ordinance (Cap. 610), the Building (Energy Efficiency) Regulation (Cap. 123M), and the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598).
[122] 'Energy Saving Plan for Hong Kong's Built Environment 2015-2015+', supra note 120, at 5.
[123] Environment Bureau (in collaboration with Development Bureau, Transport and House Bureau, Commerce and Economic Development Bureau, Food and Health Bureau and Security Bureau), 'Hong Kong Climate Change Report 2015', November 2015, <www.enb.gov.hk/sites/default/files/pdf/ClimateChangeEng.pdf>, at 6-7.

investments in public transportation, and improvements in waste management.[124] Most importantly, the Climate Change Report 2015 represents the Hong Kong government's first discussion of Hong Kong's climate action beyond 2020.

In the run-up to the Paris Conference, most UNFCCC parties communicated their mitigation targets for 2025 or 2030 through their INDCs.[125] On 12 November 2014, the US-China Joint Announcement on Climate Change revealed that China's Central Government intended 'to achieve the peaking of CO2 emissions around 2030' and 'to increase the share of non-fossil fuels in primary energy consumption to around 20% by 2030'.[126] In its INDC, China reaffirmed these two objectives and further committed to a 60-65 per cent reduction in carbon intensity by 2030 and to an increase in forest-stock volume of around 4.5 billion cubic meters compared with 2005 levels.[127] China's INDC also listed a series of very specific policies and measures which would be implemented to achieve the country's commitments.[128]

More than four months later and just a few weeks before the start of the Paris Conference, the Hong Kong Climate Change Report 2015 noted the commitments made by the Central Government and announced that Hong Kong's government would use the national carbon-intensity reduction commitment as a 'reference to continue to shape [its] mitigation plans'.[129] It acknowledged that Hong Kong 'would need to continue to reduce [its] carbon intensity beyond 2020'.[130] Yet the Report contains no specific target applicable to Hong Kong beyond 2020 and no concrete plan of action for its government to implement on climate change mitigation. Instead, the Report only briefly mentions that the government would 'consider how to replace the electricity from local coal-fired generation by then, as Hong Kong's coal plants are retired'.[131]

5. Responding to the Paris Agreement, 2016 and Onward

The Paris Agreement was adopted on 12 December 2015. China ratified it on 3 September 2016, with application to Hong Kong.[132] The Agreement entered into force on 4 November 2016. These developments raised questions with regard to the role of Hong Kong's government and its actual commitment. The failure of Hong Kong's government to present any post-2020 mitigation commitments at the Paris Summit was criticized by some stakeholders, who called on the government to take much more ambitious steps towards climate change mitigation.[133]

---

[124] Ibid. at 7.
[125] See UNFFCCC Decision 1/CP.19, 'Further advancing the Durban Platform', 26 November 2013, para. 2(b). See also UNFCCC Secretariat, 'Synthesis report on the aggregate effect of the intended nationally determined contributions', 30 October 2015, document FCCC/CP/2015/7, <https://unfccc.int/resource/docs/2015/cop21/eng/07.pdf>.
[126] *U.S.-China Joint Announcement on Climate Change*, Beijing, 12 November 2014, <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>, para. 2.
[127] China's INDC, *supra* note 6, at 5.
[128] Ibid., section II (pages 5-16).
[129] 'Climate Change Report 2015', supra note 123, at 6.
[130] Ibid., at 40.
[131] Ibid., at 30.
[132] See *supra* note 44.
[133] See e.g. Ernest Kao, 'Hong Kong must achieve carbon neutrality, says veteran environmental scientist', *South China Morning Post*, 19 April 2016.

The Paris Agreement does not readily leave room for an autonomous subnational entity to prepare and communicate mitigation commitments. While China's INDC is a national commitment applicable to the whole of China, the targets and measures it provides are not fine-tuned to reflect the specific circumstances or the capacity of an autonomous subnational entity. For instance, given the dearth of open land available in Hong Kong, China's commitment to expand forests or achieve 20 per cent of renewable energy in power generation by 2030 could be difficult to achieve in the territory. At the same time, as an advanced economy with a low level of economic growth compared with emerging economies, Hong Kong is likely to achieve peaking in its greenhouse gas emissions well before 2030. To comply with the spirit of the Paris Agreement, Hong Kong's government must take account of the territory's own circumstances in determining its contribution to climate change mitigation.

Following the adoption of the Paris Agreement and before its ratification by China and its entry into force, Hong Kong's government affirmed that it would apply the spirit of the Paris Agreement through a territory-wide mitigation commitment and implementation measures developed and updated on a rolling basis. On 6 January 2016, Secretary for the Environment Wong Kam-sing responded to a question of a member of the Legislative Council regarding the implications of the Paris Agreement for Hong Kong: 'Welcom[ing] the adoption of the Paris Agreement', Wong said that the government would review its action on climate change 'In light of the outcome of the Paris Agreement, the latest development worldwide in addressing climate change and the up-to-date projection of future climate change'.[134] In his 2016 Policy Address a week later, Chief Executive Chun-ying Leung indicated that a series of measures would be taken to 'take forward mitigation measures proactively',[135] in particular in the energy and transportation sectors. He announced the creation of an interdepartmental steering committee, chaired by the Chief Secretary for Administration,[136] to consider feasible climate change action.[137]

The Interdepartmental Steering Committee on Climate Change was initially composed of representatives of a dozen governmental institutions, but it was also open to others.[138] Its terms of reference emphasized the need to 'steer the overall direction of the HKSAR Government in combating climate change ... having regard to the United Nations Framework Convention on Climate Change and the Paris Agreement'.[139] Convening for the first time on 7 April 2016, the Committee drafted Hong Kong's Climate Action Plan 2030+, which was published by the

---

[134] Hong Kong SAR Government, 'LCQ6: Addressing climate change', Press Release on 6 January 2016, <www.info.gov.hk/gia/general/201601/06/P201601060638.htm>.
[135] 2016 Policy Address of Chief Executive Leung Chun-ying to the Legislative Council, 'Innovate for the Economy, Improve Livelihood, Foster Harmony, Share Prosperity', 13 January 2016, <www.policyaddress.gov.hk/2016/eng/pdf/PA2016.pdf>, para. 201.
[136] The Chief Secretary for Administration is the second highest official in Hong Kong Government.
[137] 2016 Policy Address, supra note 135, para. 201.
[138] These included the Secretaries for Commerce and Economic Development, for Development, for Education, for the Environment, for Financial Services and the Treasury, for Food and Health, for Home Affairs, for Innovation and Technology, for Security, and for Transport and Housing, as well as the Director of Information Services, the Government Economist, the Director of Hong Kong Observatory, or their representatives. See Hong Kong SAR, 'Steering Committee on Climate Change convenes its first meeting', Press release on 7 April 2016, <www.info.gov.hk/gia/general/201604/07/P201604070814.htm>.
[139] Ibid.

Environment Bureau on 20 January 2017, a few days after some of its key measures had been unveiled by Chief Executive Chun-ying Leung in his 2017 Policy Address.[140] This document, containing a target as well as a list of measures to achieve it, aims to initiate 'a kind of pattern similar to the Paris Agreement'[141]—in essence, a regionally determined contribution to national and global responses to climate change.

Hong Kong's Climate Action Plan 2030+ defines a carbon-intensity-reduction target of 65-70 per cent by 2030 from a 2005 baseline.[142] This is slightly more ambitious than the Central Government's commitment to reducing its carbon intensity by 60-65 per cent over the same period.[143] The Action Plan 2030+ also announces that, after several years of stagnation, Hong Kong's greenhouse gas emissions would peak by 2020.[144] Like previous policies, the plan relies heavily on reforms in the energy sector to reduce emissions. In particular, it envisages coal in the fuel mix being reduced to about 10-15 per cent by 2030, balanced by an increased reliance on natural gas and (to a much lesser extent) investments in renewable energy.[145] The plan sees 3-4 per cent of Hong Kong's electricity by 2030 coming from 'renewable energy', including 1.5 per cent from a new waste incinerator—which, strictly speaking, is not a 'renewable' source, considering that non-renewable plastics, for instance, would form part of the fuel mix—and a combination of offshore wind generators and/or solar panels.[146] The plan emphasizes that energy efficiency and mitigation of transport emissions must also be improved.[147]

The Action Plan 2030+ also announced that Hong Kong's climate action would be reviewed and updated every five years. The first comprehensive review is expected to be initiated in 2019, leading to an update of the Action Plan in 2020.[148] This review could be the occasion for Hong Kong's government to increase the ambition of its mitigation action towards 2030, based on a more advanced understanding of feasible efforts.[149] If this timeline is respected, it would in principle be possible for Hong Kong's targets and action plans to be included in the future updates of China's NDC.[150]

---

[140] The 2017 Policy Address of Chief Executive Leung Chun-ying to the Legislative Council, 'Make Best Use of Opportunities, Development the Economy, Improve People's Livelihood, Build an Inclusive Society', 18 January 2017, www.policyaddress.gov.hk/2017/eng/pdf/PA2017.pdf>, paras. 132-135.

[141] Reported in Ernest Kao, 'Action plan aims to slash carbon emissions by 2030', *South China Morning Post*, 21 January 2017.

[142] Environment Bureau (in collaboration with members of the Steering Committee on Climate Change), 'Hong Kong's Climate Action Plan 2030+', 20 January 2017, <www.climateready.gov.hk/files/report/en/HK_Climate_Action_Plan_2030+_booklet_En.pdf>, at 15.

[143] See supra notes 126 and 127.

[144] 'Climate Action Plan 2030+', supra note 142, at 16.

[145] Ibid., at 20.

[146] Ibid., at 22-31.

[147] Ibid., at 32-61.

[148] Ibid., at 13.

[149] See the Confirmed Minutes of the 220th Meeting of the Advisory Council on the Environment held on 13 February 2017 at 2:30 pm, <www.epd.gov.hk/epd/sites/default/files/epd/english/boards/advisory_council/files/ACE-220-minutes-web.pdf>, para. 8, noting that, 'Given that the Paris Agreement required participating economies to conduct review every five years, it was expected that the next term of the Government would continue to strengthen the measures in the Action Plan.'

[150] UNFCCC parties are invited to present or update their 2030 commitments by 2020 and to do the same every five years thereafter. See Decision 1/CP.21, 'Adoption of the Paris Agreement', 12 December 2015, paras. 23-24.

As of now, however, Hong Kong's 2030 mitigation target appears rather unambitious. In 2012, carbon intensity had been reduced by 20 per cent against 2005 levels.[151] A significant reduction is to be achieved by the replacement of coal-fired by gas-fired power plants, which the government is willing to do anyway to tackle air pollution.[152] Even a further reduction to 65-70 per cent by 2030 would not fundamentally change Hong Kong's primary reliance on fossil fuels for power generation or its minimal investment in renewable energy.[153] The waste-to-energy facility, which is heralded as making up a significant portion of the 'renewable energy' target, is also an essential element of a new waste-disposal strategy to reduce the use of landfills and save space in the tiny territory.[154]

Hong Kong's government has been keen to highlight the unique difficulties faced by the territory in developing alternative energy, in particular the lack of space. Such difficulties, though real, have not prevented Hong Kong from developing into a bustling economy. Throughout its modern history, Hong Kong has relied on innovative solutions to optimize space management. Ingenious arrangements have been found, for instance, for Hong Kong to import large quantities of natural gas through the offshore development of a Floating Storage and Regasification Unit.[155] In cooperation with Guangdong Province, a nuclear plant was built to provide Hong Kong with a source of power.[156] As also noted earlier, most of Hong Kong's freshwater is imported from the Dong River through an 83-kilometer-long system of canals and tunnels.[157] Other such innovative options could be explored to develop a substantial share of renewable energy for Hong Kong, either through financing established renewable-energy projects on the Mainland, or through innovative exploitation of solar and wind energy, or even wave energy or tidal power around Hong Kong.[158] At present, such possibilities seem to have been less than fully explored.

6. Conclusion

Two conclusions may be drawn from this story. In one perspective, the Hong Kong government's commitment to climate change mitigation appears to be 'too little, too late'. Table 2 gives an overview of the steps taken by China's government and by Hong Kong's government on climate change mitigation. It will be seen that there is a consistent time lag, ranging from one

[151] Statement by the Deputy Secretary for the Environment in response to a question by Dr LO Wai-kwok and Mr Christopher Chung, in Legislative Council Panel on Environmental Affairs, Minutes of meeting held on Monday 23 May 2016 afternoon, LC Paper No. CB(1)1150/15-16, para. 7.
[152] Ibid.
[153] See *supra* note 146.
[154] See Environment Bureau, 'Hong Kong Blueprint for Sustainable Use of Resources 2013-2022', May 2013, <www.enb.gov.hk/en/files/WastePlan-E.pdf>.
[155] CLP, 'Hong Kong Offshore LNG Terminal: Project Profile', May 2016, <www.epd.gov.hk/eia/register/profile/latest/esb292/esb292.pdf>.
[156] See supra note 109.
[157] See supra note 25.
[158] It is noteworthy that CLP, one of the two electricity companies in Hong Kong with significant investments in Mainland China and abroad, has been investing in renewable energies overseas and aims to achieve 20% of renewable and 30% of non-carbon (including nuclear) energy in its global electricity production by 2020. See CLP, *2016 Annual Report* (February 2017), at 85. Such investments are not a policy of Hong Kong and they are not intended to supply power to Hong Kong.

to eight years, between China's actions and Hong Kong's corresponding steps.[159] That the targets are stronger in Hong Kong than in the Mainland is to be expected, given Hong Kong's greater financial capacity. As a high-income economy, Hong Kong ought to adopt absolute emission-reduction targets instead of carbon-intensity targets. Most of its measures implemented to date have had substantial co-benefits (air quality, waste disposal, etc.), and at least some of them appear to have been opportunistically rebranded as climate change mitigation action.[160] China's massive investment in wind and solar energy contrasts sharply with Hong Kong's reluctance to deploy such technologies, on the pretext of financial and technological constraints.[161] A city with the level of income and capacity of Hong Kong should be a leader of innovation in climate action. Instead, Hong Kong lags behind the Mainland and many other jurisdictions in the timing and ambition of its action. That its peaking in CO_2 emissions is likely to occur a decade earlier than in the Mainland tells us more about the difference in the respective degree of development of the two economies than about their engagement in climate change mitigation.

Table 2. Commitments on climate change mitigation in Hong Kong and Mainland China. (The relevant baseline for all figures is 2005.)

Action	**China**	**Hong Kong**
First reporting to the UNFCCC Secretariat	10 December 2004[162]	8 November 2012[163]
2020 mitigation commitment	26 November 2009[164] *40-45% reduction in carbon intensity*	3 September 2010[165] *50-60% reduction in carbon intensity*
2030 mitigation commitment	30 June 2015[166] *60-65% reduction in carbon intensity*	20 January 2017[167] *65-70% reduction in carbon intensity*
Peaking CO_2 emissions	12 November 2014[168] *Around 2030*	20 January 2017[169] *By 2020*

From another perspective, however, Hong Kong's government has at least committed itself to make an effort to reduce its greenhouse gas emissions. The endorsement of a renewable energy

[159] This was also highlighted, ironically, in relation to the publication of the Climate Action Plan 2030+ more than a year after the Paris Conference, in the press release of the WWF on the first meeting of the Steering Committee on Climate Change: 'Be Determined and Never Too Late', 8 April 2016, <www.wwf.org.hk/en/?15440/WWF>.
[160] For instance, the shift from coal to gas as a source of electricity aims to tackle air pollution. See the 'Summary of existing GHG reduction measures in Hong Kong' in Annex C of 'Government Efforts in Addressing Climate Change', supra note 96, at 26.
[161] 'Climate Action Plan 2030+', supra note 142, at 24, noting, as a 'challenge to the deployment of renewable energy', that 'they are still more expensive than conventional power,' and further that intermittent power generation raises technological challenges.
[162] China's Initial National Communication, supra note 41.
[163] China's Second National Communication, supra note 42, at 161-184.
[164] UNFCCC Subsidiary Body for Implementation, 'Compilation of information on nationally appropriate mitigation actions to be implemented by developing country Parties', 19 January 2015, document FCCC/SBI/2013/INF.12/Rev.3, <http://unfccc.int/resource/docs/2013/sbi/eng/inf12r03.pdf>, para. 65.
[165] 'Climate Change Strategy and Action Agenda', supra note 102, at 7.
[166] China's INDC, supra note 6, at 5.
[167] 'Climate Action Plan 2030+', supra note 142, at 15.
[168] *U.S.-China Joint Announcement on Climate Change*, supra note 126, para. 3
[169] 'Climate Action Plan 2030+', supra note 142, at 16.

target in the Action Plan 2030+[170] suggests that, in the coming decade, Hong Kong's government may be willing to pursue climate change mitigation beyond measures delivering with strong co-benefits. The Legislative Council of Hong Kong
Thus the story told here should perhaps not be about a lack of action on the part of Hong Kong's government, but about its surprising willingness to do something when it could have got away, legally, with doing nothing. After all, quite apart from its non-party status in the international climate change agreements, it has no special mitigation arrangements with the Mainland. Still, in the Action Plan 2030+, Hong Kong committed itself to a process similar to that of the Paris Agreement, by reviewing and updating what is, in essence, a regionally determined contribution to national and global responses to climate change. Instead of being legalistic in its outlook, the Hong Kong government came to recognize that it should 'operationalize the Paris Agreement' within its territory.[171]

To some extent, mitigation action in Hong Kong is certainly a response to international and regional naming-and-shaming, in a jurisdiction where the media and NGOs are particularly active. There is also certainly an element of territorial marketing, as reflected in the words of Chief Executive Chun-ying Leung, justifying the Climate Action Plan 2030+ as a way 'to make Hong Kong a better and smarter place to live and work [in]'.[172] Reputation matters, particularly in a territory that relies strongly on international investment and a foreign professional workforce. Beyond these pragmatic considerations, there may also exist a genuine sense of good global citizenship in Hong Kong, not only among members of the public, but also among the territory's political elite.

Hong Kong's Climate Action Plan 2030+ should be seen not as the endpoint but as the starting point of a growing engagement of the territory's government with climate change mitigation. It is vital that the 2030 targets are revised as soon as possible, based on thorough feasibility studies. Their ambition should be increased to appropriately reflect Hong Kong's capacity. There could be investment in extraterritorial projects. The Climate Action Plan 2030+ contains no measures on extraterritorial cooperation or finance. By contrast, China's Central Government has committed itself to promote international cooperation, in particular South-South cooperation, on climate change.[173]

The revision of China's NDC in 2020 could serve to introduce a section endorsing Hong Kong's mitigation commitment, thus allowing the UNFCCC and the international community to keep track of Hong Kong's contribution. Outside the intergovernmental arena, however, Hong Kong could play a role by cooperating with other subnational governments. This could be through regional cooperation with Guangdong Province. The Hong Kong/Guangdong Joint Liaison Group on Combating Climate Change is currently encouraging exchanges 'in the light of the upcoming establishing of the National Carbon Market',[174] with the possibility that Hong Kong

[170] Ibid., at 22-31.
[171] Speech by Ms Christine Lo Kong Wai, Acting Secretary for the Environment, on 21 April 2017, in a keynote lecture at the 4th International Conference on Climate Change: Post Paris Agreement, Time to Act, in Hong Kong.
[172] 'Message from the Chief Executive' in 'Climate Change Strategy and Action Agenda', supra note 102, at 2.
[173] See the China's INDC, *supra* note 6, at 15-16 (section II.O),
[174] Hong Kong Government, 'Fifth meeting of Hong Kong/Guangdong Joint Liaison Group on Combating Climate Change held in Guangzhou', Press release on 27 September 2016, <www.info.gov.hk/gia/general/201609/27/P2016092700653.htm>.

could be integrated into this market at a later date.[175] In addition, it would be desirable that Hong Kong's government becomes more actively involved in transnational cooperation mechanisms, such as the C40 Large Cities Climate Leadership Group. It could also join the World Mayors' Council on Climate Change, among other initiatives. In this manner, it would promote the exchange of good practice and contribute to raising political momentum for genuine efforts to mitigate climate change at all levels of governance.

[175] This, however, would raise multiple issues, in particular given the limited number of major GHG emitters in Hong Kong. For a critical discussion of an aborted regional emission-trading scheme on local air pollutants, see Jolene Lin, 'Creating a Market for Clean Air: The Air Pollution Control (Amendment) Ordinance 2008', 39 *Hong Kong Law Journal* 269 (2009).