

CarbonCare InnoLab's Submission in Response to Call for Inputs:

Title: Call for Inputs by the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI)

Mandate: In annex II to decisions 4/CP.25, 4/CMP.15 and 4/CMA.2, inputs from experts, practitioners and relevant organizations are mandated as modalities for implementing some activities in the work plan of the forum on the impact of the implementation of response measures and its KCI;

CarbonCare InnoLab (CCIL) welcomes the opportunity to provide inputs with respect to the guiding questions as below, related to activity 11 of the work plan of the forum and its KCI, "Facilitate, exchange and share experience and best practices in the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies".

1. Which climate change policy(ies) and actions, informed by the best available science, were assessed for environmental, social and economic co-benefits and what were the co-benefits identified from your assessment?

The Intergovernmental Panel on Climate Change (IPCC) recommends that in order to limit the rise in average global temperature to well below 2°C, preferably 1.5°C, carbon emissions need to be reduced by 45% from 2010 levels by 2030, reaching net zero by 2050.¹ Meanwhile, cities' share of global emissions is increasing, according to the IPCC Working Group 3's latest Sixth Assessment Report (AR6). In 2015, cities' carbon emissions accounted for about 62% of the world's total, and rising to 67%-72% in 2020.

With this in mind, cities play a key role in reducing greenhouse gas emissions. CCIL has identified climate action plans of six East Asian cities, including Hong Kong, Seoul, Tokyo, Singapore, Shenzhen and Guangzhou under the framework of the Paris Watch Project,² and has been tracking the decarbonisation and climate action performance of these cities since 2018, in line with the goals of the Paris Agreement and the city's climate commitments. These climate action plans cover mitigation, adaptation, and cross-cutting finance and governance issues. Beginning at the 26th United Nations Conference of the Parties on Climate Change (COP26) in 2021, Parties are requesting that the Nationally Determined Contributions (NDCs) be reviewed annually at the COP to review the 2030 carbon reduction targets, just in line with our call that the governments should conduct the review annually.

¹ Intergovernmental Panel on Climate Change (IPCC), "Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments," IPCC, 8 October 2018. <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

² CCIL's Paris Watch Project is designed to push the ambition level of Hong Kong and neighbouring cities for climate actions using comparative research, community engagement and youth advocacy training. The programme measures Hong Kong's performance as a city against the goals of the Paris Agreement. It also encourages dialogue on climate actions through community-level meetings, and build the capacity of young people to participate more effectively in international climate negotiations and sustainability initiatives linking global and local actions.

Through annual cross-city comparisons, we have been creating synergies between these cities, driving higher levels of ambition and accelerating decarbonisation and climate action. Over the years, we have seen cities such as Tokyo, Seoul, Hong Kong and Singapore continue to learn from each other, update their climate actions, and set more ambitious net-zero targets and milestones in carbon reduction, energy conservation and renewable energy. For example, the Hong Kong Climate Action Plan 2050 compares with other world cities and Asian cities in terms of net zero goals and milestones.

2. How such assessment was conducted? Were there any standards used? What are challenges and opportunities, and lessons learnt from these assessments?

We identified three key sectors, namely power generation, building and transport, for tracking, since power generation and transport sectors account for 34% and 15% of direct global emissions respectively and buildings account for 90% of indirect emissions. In the context of cities like Hong Kong, power generation and transport even accounts for 60% and 20% of the city's direct emissions respectively. We also identified their climate change adaptation plans and the cross-cutting climate finance and governance plans in our assessment. Based on these, we then develop into five main research questions:

1. Is Hong Kong on track towards achieving the Paris Agreement?

It requires a year-on-year comparison of current and projected carbon emissions as well as a comparison across the East Asian cities. This relies on quantitative measurement of annual carbon emissions by the environmental authorities of each city. We also track carbon emissions from the key sectors in the East Asian cities.

2. Are we transitioning to a low carbon economy by developing renewable energy?

It requires a year-on-year comparison of the percentage of renewable energy in the energy mix and a yearly comparison across the selected East Asian cities. A comparison of carbon intensity of electricity generation across years and across cities also reveals the actual impact of energy production, especially whether deployment of renewable energy is reducing carbon emissions. This primary data is available from energy authorities of the city governments and electricity generation companies.

3. Are we using energy more efficiently in Hong Kong?

There are two principal areas of energy consumption in East Asian cities, namely buildings and transport. For buildings, we compare the energy consumption per floor area in both commercial and residential buildings on a year-on-year basis and across cities. For the transport sector, we compare the percentage of new energy vehicles, including electric vehicles, hydrogen-fuelled, hybrid-fuelled and Compressed Natural Gas (CNG)-fuelled vehicles, on year-on-year basis and across cities in order to measure the take-up of such vehicles. This primary data is available from the transport authorities of the cities' governments and electricity generation companies.

4. Are we adapting to make Hong Kong a safe and healthy city in the face of global heating?

It requires reporting against a mix of indicators, covering seven key areas we have identified as essential for adaptation to climate change hazards. These comprise: heatwave-induced illness; heat and precipitation related vector-borne diseases; water shortages and drought; increased fire risk; sea level rise, sea flooding and coastal erosion; typhoons, flooding and landslides; and reduced biodiversity and damage to ecosystems. To assess this, we have checked the availability of related research, public engagement activity and monitoring, evaluation and verification systems. We also make reference to rating or ranking of climate adaptation by other research agencies.

5. *Are we developing the right governance and financial systems to tackle climate change?"*

It requires reporting against a mix of indicators, covering five areas of climate governance: political leadership; policies and plans; transparency, accountability, monitoring and evaluation; advancing climate finance; and international cooperation. To evaluate progress, we check the availability of explicit elements of these activities in the cities' climate strategies and action plans.

The data comes from annual government reports and databases. It should be noted that comparisons between selected East Asian cities are also limited by relevant data obtained from official sources in the public domain.

In addition, we invite an expert panel to rate Hong Kong's decarbonisation progress annually, asking a range of issues including greenhouse gas emissions, renewable energy, building energy efficiency, transportation, waste management, health protection, water supply, fire risk, flooding and Landslides, Storm Surge and Sea Level Rise, Biodiversity, Governance, Finance, Technology, and Monitoring, Reporting and Verification. Scores will be compiled into a scorecard report and published annually.

3. What actions were/are/will be taken based on the co-benefit assessment and what specific measures taken to maximise the co-benefits if any?

Based on the above methodology, since 2018, we have compiled and published an annual report and a scorecard report, and distributed them to the public and government departments. We hold press conferences, publish these reports, and write opinion pieces to online and offline media to disseminate findings and recommendations. Scorecard ratings are the most-covered headlines in local media, shaping public perceptions and influencing policymakers to push for more ambitious climate actions. You can find audio, video, media interviews and commentary in the Resources section.

One example is our reports' contribution to the announcement of the 2050 Net Zero target and the 2035 milestone in the Hong Kong Climate Action Plan 2050. We will continue to push for the participation and inclusion of the most vulnerable groups in the policymaking of climate action plan, including the elderly, people with chronic conditions, subdivided flat dwellers, outdoor workers, people with disabilities and mental illness, and women.

Our assessment also provides a basis for engaging these most vulnerable in a series of climate community dialogues between 2020 and 2022, inspired by the concept of the Talanoa Dialogue,³ to explore the impacts of climate change and move towards a low-carbon, just transition in Hong Kong.

Last but not least, through engagement with organizations that focus on those most vulnerable to climate change, their climate impacts are subsequently exposed in the media and brought to the attention and comment of key government officials.⁴ For example, after media reports of heatwaves affecting the health of outdoor workers, the Secretary for Labour and Welfare, Mr. Chris Sun Yuk-han, claimed that he would consider improving the risk assessment of high temperature outdoor work by including the Wet Bulb Temperature (WGBT) index⁵ in the assessment of heat stroke, although this is not mandatory for employers.

References:

The full versions of the earlier Paris Watch Climate Action Reports are, and the 2022 version will be made available in November 2022 on this web page [here](#). The reports of Climate Community Dialogues are available [here](#).

Press Interviews and Commentaries:

Climate LinkUP Spotlight, “Net Zero: Hong Kong Paris Watch,” Climate LinkUP (Podcast), 19 July 2022. Link [here](#).

Li, K., “Asia needs regional multilateral cooperation to achieve a just energy transition,” *illuminem*, 29 April 2022. Link [here](#).

Li, K., “Climate change: what Asia must watch out for as it pursues a just energy transition,” *Letters, South China Morning Post (SCMP)*, 4 May 2022. Link [here](#).

Li, K., “Hong Kong’s July heatwaves highlight the city’s lack of holistic climate governance,” *UNDRR Prevention Web*, 2 August 2022. Link [here](#).

Low, Z., “Hong Kong not living up to its climate commitments under Paris Agreement, new report says,” *SCMP*, 17 December 2021. Link [here](#).

Television Broadcasts Limited (TVB) Pearl Channel, “Money Matters: Windy City,” 20 June 2022. Link [here](#).

Wong, J. and Samantha Butler, “Hong Kong Today: HK graded poorly for climate efforts,” *Radio Television Hong Kong (RTHK) Channel 3*, 17 December 2021. Link [here](#).

³ The Talanoa concept stems from a traditional problem-solving practice in South Pacific Island communities, and was promoted by the United Nations when Fiji was official host of the 2017 COP23 climate summit. Talanoa represents a participatory and transparent discussion process based on story-telling, designed to foster a non-accusatory and supportive way of addressing problems. (Source: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/2018-talanoa-dialogue-platform>)

⁴ Li, K., “Hong Kong’s July heatwaves highlight the city’s lack of holistic climate governance,” *UNDRR Prevention Web*, 2 August 2022. <https://www.preventionweb.net/news/hong-kongs-july-heatwaves-highlight-citys-lack-holistic-climate-governance>

⁵ Wet Bulb Globe Temperature (WBGT) is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle and cloud cover (solar radiation). This differs from the heat index, which takes into consideration temperature and humidity and is calculated for shady areas. (Source: <https://www.weather.gov/car/WBGT>)