



The Hon. Carrie Lam Cheng Yuet-ngor, GBM, GBS
Chief Executive
Hong Kong Special Administrative Region
Tamar, Hong Kong

Dear Chief Executive,

Submission on the 2021 Policy Address Public Consultation

Since 1983, Friends of the Earth (HK) (“FoE (HK)”) has led the environmental dialogue by engaging government, business and community with equitable solutions to protect our local and regional environment. With the vision to promote a healthy and sustainable environment for all, we are pleased to enclose our submission on this term’s last policy address.

The most recent UN climate change report (AR6) in August gave a grim reminder that human activity is driving global warming and the window of opportunity to avoid severe consequences of inactions is rapidly closing. AR6 specifically states that we must reduce carbon emissions by 50% by 2030 to avoid irreversible climate change. It is past the time for consultations or soft measures; it is now time to take action.

In addition to climate change, Hong Kong is also beset by air pollution and waste. The government must play a leadership role in tackling these looming environmental crises. Our submission is as attached and makes overarching recommendations on the aspects of policy implementation, city planning, research and development, and green finance.

We welcome the opportunity to continue working closely with all government bureaux and departments. If there are any queries on the submission, please contact me at jeffreyhung@foe.org.hk.

Yours Sincerely,

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Decarbonisation

Climate change is accelerating, and its symptoms are now impossible to ignore. The disastrous flood in China's Henan province that have led to 302 deaths is a grim reminder that extreme weather events are more severe and frequent.¹ Hong Kong and the Greater Bay Area are some of the highest risk areas in the world for storm surges. Extreme floods could render many parts of Hong Kong and the Greater Bay Area (GBA) uninhabitable, displacing 86 million people.

Friends of the Earth (HK) highly anticipates the update to the government's long-term decarbonisation strategy. As a founding member of the C40 Cities, the city has to lead in its climate actions. In addition to its 2050 carbon neutrality goal, **Hong Kong must adopt a midterm target to cut its carbon emissions by at least 45% from 2010 levels by 2030.**

The government should consider the following recommendations:

1. Developing Renewable Energy

Decarbonising the electricity grid is the most direct and effective means of carbon reduction, as almost 66% of Hong Kong's local carbon emission comes from electricity generation.² Adopting natural gas however delays the decarbonisation of the energy grid.³

Although the availability of land may preclude utility-scale solar farms, Hong Kong can better realise the RE potential of solar power by maximising the use of available space within the developed environment for installing PV panels (e.g. walkways, sports facilities, warehouses, etc.). This is an economic and immediate term benefit that must be exploited.

The government needs to catch up on wind energy development to exploit on Hong Kong's untapped offshore wind energy potential.⁴ It has to greatly expedite and expand the scale of the current ambitions.⁵ In addition, Hong Kong should establish on-shore wind farms along accessible mountain ridges.

Green hydrogen—made from RE—can support zero-carbon electricity generation and heavy transportation. Both the European Union and Japan have already laid out roadmaps to develop

¹ [Al Jazeera, Death toll in China's Henan floods triples to 302, dozens missing](#)

² [Environment Bureau, Greenhouse Gas Emissions in Hong Kong by Sector](#)

³ [Zhang, X., et al., Climate benefits of natural gas as a bridge fuel and potential delay of near-zero energy systems](#)

⁴ [Gao et al., Analysis of Hong Kong's Wind Energy: Power Potential, Development Constraints, and Experiences from Other Countries for Local Wind Energy Promotion Strategies](#)

⁵ [RTHK, CLP plans to build offshore wind farm](#)

a hydrogen economy to replace natural gas.^{6 7} Hong Kong must have its fully integrated green hydrogen Infrastructure up and running well before 2030.

Hong Kong should invest in its rich RE potential and collaborate with the GBA on RE development.

2. Pursuing Net-Zero Carbon Buildings

The building sector is the largest electricity user—with air conditioning and lighting as the two major end-uses of electricity.⁸ The building design in particular significantly affects the energy efficiency of buildings.⁹ **The Building Energy Code needs to be tightened for new buildings, and building owners should be mandated to retrofit existing buildings via government incentives and green financing.**

3. Promoting Planetary Health Diets

Meat-heavy diets make up for a significant chunk of Hong Kong’s unaccounted-for emission.¹⁰ Pursuing healthier diets can cut livestock-related emissions by almost 70%. **Healthier and more sustainable diets should be promoted as part of the city’s decarbonisation strategy**—with the added benefit of reducing a multitude of health risks commonly associated with heavy meat consumption.

4. Adopting Carbon Pricing

Carbon-emitting activities do not bear their true cost, socialising the negative environmental externalities. It is estimated that fossil fuels are subsidised at US\$5.2 trillion globally.¹¹ Over 40 countries and 30 cities today have implemented some form of carbon pricing scheme.¹² **Hong Kong should have a price on carbon to reflect the polluter pays principle and to drive the adoption of low-carbon solutions.**

5. Setting Up Carbon Sequestration

Reaching net zero carbon is not the final step; there is a need to remove excess atmospheric carbon to mitigate catastrophic climate change. Carbon capture can tackle high-carbon

⁶ [European Commission, Hydrogen Roadmap Europe](#)

⁷ [Ministry of Economy, Trade and Industry, Base Hydrogen Strategy](#)

⁸ [EMSD, Hong Kong Energy End-use Data 2020](#)

⁹ [Yu et al., Revealing the Impacts of Passive Cooling Techniques on Building Energy Performance: A Residential Case in Hong Kong](#)

¹⁰ [Yau et al., Impact of cutting meat intake on hidden greenhouse gas emissions in an import-reliant city](#)

¹¹ [IMF, Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates](#)

¹² [Institute for Climate Economics, Global Carbon Accounts 2020](#)

emitting activities in the near immediate term, such as from burning fossil fuels and sludge treatment plants.

Reforestation all suitable land worldwide can remove two-thirds of carbon emissions emitted from human activities since industrialisation.¹³ Particular attention should be given to restoring mangroves, which are more efficient carbon stores.¹⁴ While this is a long term solution, **the government needs to preserve existing natural environments and restore degraded ecosystems.**

Adaptation

1. Adopting Climate Emergency Preparedness

Hong Kong will be vulnerable to the rising temperatures, urban planning is essential to relieve urban heat island effect by designing with more green and open space and air corridors. The coastal city is also vulnerable to water risks. The government must strengthen flood and coastal resilience and integrate sponge city design to better defend the city against sea level rise and extreme rainfall events.¹⁵ **The government should also develop guidelines for disaster management and post-recovery process and raise public awareness and preparedness for climate adaptation.**

2. Developing More Water Taps

In Hong Kong, most of the fresh water is supplied by the Dongjiang River. However, the city should expand the available local water sources to diversify supply and improve water security. **The government can develop a circular water system—like Singapore’s NEWater¹⁶—to reclaim and reuse wastewater. The government should also tap into desalination as another source of freshwater supply.**

Transportation

Transportation consistently accounted for around 18% of local greenhouse gas emissions in Hong Kong.¹⁷ They are also the reason why the level of roadside air pollutants consistently exceed the Air Quality Objectives (AQOs) adopted by the government.¹⁸

¹³ [Bastin et al., The global tree restoration potential](#)

¹⁴ [Sanderman et al., A global map of mangrove forest soil carbon at 30 m spatial resolution](#)

¹⁵ [LegCo, Management of Typhoon Season Flood Risk](#)

¹⁶ [PUB, NEWater](#)

¹⁷ [Environment Bureau, Greenhouse Gas Emissions in Hong Kong by Sector](#)

¹⁸ [EPD, Air Quality in Hong Kong 2020](#)

The government should adopt the following recommendations:

1. Strengthening and Expediting the EV Roadmap

The electric vehicle (EV) roadmap is long overdue but welcomed.¹⁹ In addition to the proposed measures in the roadmap, **Friends of the Earth (HK) urges the government to tighten its target date and electrify public transport and commercial vehicles—which accounts for over 90% of roadside nitrogen oxide emissions and around 60% of transport energy use^{20 21}—before 2025.** It should expedite piloting and the adoption of viable technologies.

2. Expediting Electronic Road Pricing

The EV roadmap should be supported with financial disincentives to reduce traffic congestion from private cars—electric or not. Congestion pricing schemes in Singapore, London and other cities have cut traffic volumes while increasing traffic speeds.²² **The government has to implement electronic road pricing in central business districts and busy roads to encourage motorists to adopt more sustainable modes of transport.**

3. Enhancing Pedestrianisation

Other complimentary practices such as car-free streets and cycle-to-work schemes can encourage more people to walk and cycle.²³ Pedestrianisation helps to reduce noise and air pollution, enhance pedestrian safety, promote better health, facilitate social, cultural and tourism activities, etc. **The government should enhance pedestrian network linkage to public transportation, so as to promote walking as a viable transport mode in the urban planning.**

4. Developing a Cycling Friendly City

A cycling-friendly Hong Kong also encourages healthier lifestyles and social connectivity among citizens. More bike routes should be created—particularly on Kowloon and Hong Kong Island. The routes should also be completely connected, allowing cyclists to get around the city with just a bicycle and turning cycling into a practical mode of transport for people. **The government can increase of the ease of cycling through its urban planning policies**—such as having proper bike lanes, showering and changing rooms, and parking facilities integrated into the building code.

¹⁹ [Environment Bureau, Hong Kong Roadmap on Popularisation of Electric Vehicles](#)

²⁰ [GovHK, EPD announces 2020 air quality monitoring results](#)

²¹ [EMSD, Hong Kong Energy End-use Data 2020](#)

²² [Tri-State Transportation Campaign, Road Pricing in London, Stockholm and Singapore](#)

²³ [Lauren Rothschild, Global Resilience Institute: Cities experiment with car-free streets](#)

Circular Economy

Failing to reach the waste reduction target set out in the *Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022*, Hong Kong is facing an unprecedented waste crisis. Since 2011, the volume of waste disposed in landfill has been increasing while recycling rate has dropped from 35% to 29%. Waste such as plastic is leaking into the environment. A local research²⁴ indicated that the mean microplastic abundance in Hong Kong was 5595 items/m², which undoubtedly bring adverse impacts to the ecosystem and create potential health risks like disease vectors, cancer and congenital anomalies.²⁵

The government should consider the following recommendations:

1. Expediting the Implementation of Waste Charging

The target of 40-45% waste reduction set in the new *Waste Blueprint for Hong Kong 2035* is again questionable as a concrete timetable is not included. Further, the volume of waste produced cannot be sufficiently digested by the existing and planned facilities such as Y-Park and O-Parks. **The government should establish a legal binding timetable in order to achieve the targets.** Besides, the 18-month delay of the Municipal Waste Charging Scheme is unacceptable and Hong Kong is far behind with neighbouring cities. **We urge the government to implement waste charging as soon as possible.**

2. Expanding Producer Responsibility

We welcome the public consultations on the *Producer Responsibility Scheme on Plastic Beverage Containers* and the *Regulation of Disposable Plastic Tableware*. Yet, it is unfortunate that the proposed scope may be too narrow and the charge too low to be effective. EU has adopted extended producer responsibility to plastic packaging, which has successfully boosted the recycling rate for 20%.²⁶ Beyond plastic and packaging waste, France passed a regulation on food waste in 2016, pushing supermarkets to donate excess edible but unsold products.²⁷ **Thus, the government should expand the scheme to cover more items such as all packaging materials, food waste and textile waste, to catch up with the international trend.**

3. Supporting the Recycling Industry

Recycling is important. Hong Kong cannot rely solely on waste treatment facilities to handle our waste. We need to enhance the recycling industry and the reverse logistics chain to

²⁴ [Fok & Cheung, Hong Kong at the Pearl River Estuary: A hotspot of microplastic pollution](#)

²⁵ [Campanale et al., A Detailed Review Study on Potential Effects of Microplastics and Additives of Concern on Human Health](#)

²⁶ [Filho et al., An overview of the problems posed by plastic products and the role of extended producer responsibility in Europe](#)

²⁷ [Business Insider, France was the first country to ban supermarkets from throwing away unused food — and the world is taking notice](#)

facilitate waste separation at source. More importantly, **the government should collaborate with the GBA on processing recyclables, in order to support the collection logistics and put recycled materials into the value chain again.**

Green Finance

As we enter the second year since COVID-19 was first reported to the WHO in 2019, many green finance initiatives continue to play a major part across different regions. Global green and sustainability themes include calls for greening the insurance industry and sustainability-linked financing broadly throughout the financial system. Hong Kong, in order to become a leader of green and sustainable finance, should consider to incorporate the elements as detailed below and accelerate the development of green insurance.

With the government's commitment to reach carbon neutrality by 2050, the support from finance industry is crucial to ensure corporations can leverage ESG financing to support its initiatives.

Hong Kong's recent budget address continues to lead by example in growing the green bond markets, with HKD 66bn of green bonds to be issued between 2021 to 2025, further enriching the green finance ecosystem in Hong Kong.

1. Embracing international best practices and training on ESG and green finance

With ESG standards and reporting becoming more commonplace, the finance industry need to be upskilled to be able to assess climate risk impact in their investment portfolios. Green finance talents will also be needed to support the expansion of the green bond market in Hong Kong as mentioned in the 2021 budget. We would recommend the government to:

- Review and encourage relevant government subsidy programs (e.g. WAM²⁸) to be more inclusive of green finance and ESG-related courses, as they can be operated by various institutions in this newly developing field.
- Consider recognising international accreditations to build the pipeline for the industry, such as the Certified ESG Analyst (CESGA[®]) accreditation offered by the European Federation of Financial Analysts Societies (EFFAS).

²⁸ [FSTB, WAM Pilot Programme](#)

2. Supporting Impact Underwriting in Insurance

Europe's insurance authority is exploring whether products that contribute to climate adaptation deserve lower capital charges, and if it should incorporate "impact underwriting" concepts in distribution and governance requirements.²⁹ Impact underwriting is referred to as insurers and re-insurers considering measures that contribute to climate change adaptation and/or mitigation in their underwriting strategy. In a report published on 8 July, the European Insurance and Occupational Pensions Authority (EIOPA) set out a definition for impact underwriting.

We would recommend the government and Insurance Authority ("IA") to consider the following ways where insurance impact underwriting could be implemented:

- Risk-based pricing and contractual terms. For example, property premiums could be reduced if the building meets certain construction standards, or motorists could be offered a discount for using greener vehicles.
- Multi-year contracts with a guaranteed price (or price range). EIOPA suggested these could provide greater incentives for the insured to invest in resilience measures. EIOPA noted "development of long-term insurance contracts to deal with climate change could potentially require specific regulatory treatment".
- Products and services as part of the underwriting strategy. For example, pay-as-you-drive insurance policies incentivise motorists to reduce their annual mileage.

3. Supporting the Insurance Linked Market

The risk of extreme climatic events is coming increasingly to the forefront for the insurance market. During the height of sell-off in March 2020 due to the COVID-19 outbreak, the EurekaHedge ILS Advisers Index dropped just 0.7%, compared to the 12.5% fall in the S&P 500.³⁰ Generali sponsors the first green bond in June, using papers issued by the European Bank for Reconstruction and Development (EBRD).³¹ Swiss Re expects rates to continue to harden in the re/insurance market into 2022 because of reduced risk appetite following two successive years of above average losses.³²

²⁹ [European Insurance and Occupational Pensions Authority, EIOPA further contributes to sustainable finance](#)

³⁰ [GlobalCapital, Catastrophe risk: a wake up call for insurers](#)

³¹ [Generali, Lion III Re: First green catastrophe bond sponsored by Generali](#)

³² [Swiss Re, The re/insurance underwriting cycle: hard market conditions go on](#)

The Insurance Authority (“IA”) has already gathered momentum since May, announcing the details of the two-year Pilot Insurance-linked Securities Grant Scheme.³³ The scheme creates incentives for insurers to issue insurance-linked securities (ILS) in Hong Kong. Efforts are made in parallel to develop a new regulatory scheme for Special Purpose Insurers. A green format is simply the next natural step.

4. Supporting UNEP FI’s Principles for Sustainable Insurance and Net Zero Insurance Alliance

Launched at the 2012 UN Conference on Sustainable Development, the UNEP Finance Initiative's Principles for Sustainable Insurance (UN PSI) serve as a global framework for the insurance industry to address environmental, social and governance risks and opportunities.³⁴ Friends of the Earth (HK) became the first UN PSI supporting institution in Hong Kong and China.

The Net Zero Insurance Alliance (NZIA) is an alliance of leading insurers and reinsurers backed by the UN and committed to transition their underwriting portfolios to net-zero greenhouse gas emissions by 2050.³⁵ NZIA members will set science-based targets every five years and report on their progress publicly and annually to contribute to the goals of the Paris Agreement. They also committed to join the Glasgow Financial Alliance for Net Zero (GFANZ).

Hong Kong should align with globally-recognized standards including UN PSI and NZIA when developing its own local green insurance policy goals.

5. Supporting Sustainability Linked Bond Reporting

Launched in June 2020, the Sustainability-Linked Bond Principles (SLBP) have already proven popular in the market and resulted in a boost to key performance indicator (KPI)-linked bonds. According to the Environmental Finance Bond Database, bonds worth more than \$32.5 billion have already been issued using the SLBP in the twelve months since they were launched.

One year after they were first published, the developers of the Sustainability-Linked Bond Principles (SLBP) have provided some illustrative metrics that could be used by issuers amid ongoing concern over the level of ambition and materiality from the instruments. One of the chief challenges of the sustainability-linked market is the lack of comparability between KPIs, making it harder for the market to assess what is 'best practice' with regards to the ambition and materiality of the metrics and targets chosen.

³³ [IA, Details of the Pilot Insurance-linked Securities Grant Scheme announced by the Insurance Authority](#)

³⁴ [UNEP FI, Principles for Sustainable Insurance](#)

³⁵ [UNEP FI, UN-convened Net-Zero Insurance Alliance \(NZIA\)](#)

The HKEx already has laid a solid foundation for green and sustainability reporting. By adopting standardized indication in a more “explicit manner” (aligned to the most popular KPIs), it will allow all Hong Kong-listed entities to benefit from international best practices and find it earlier to tap the sustainability loans and bond markets. Illustration for carbon emissions KPIs as per below:

Sector	KPI
Generic	Carbon intensity and absolute carbon emissions (induced and avoided)
Oil & Gas	Scope 1-3 GHG emissions reduction (in carbon intensity per MJ or absolute); Methane leakage reduction (leakage rate in %)
	Annual avoided Scope 1-3 GHG emissions (in carbon intensity per USD million invested or absolute) if relevant
	Sales mix (share of low-carbon or renewable energy in sales mix)
Heat & Power	Scope 1-2 GHG emissions reduction (in carbon intensity per MWh or absolute),
	Annual avoided GHG emissions (in carbon intensity per USD million invested or absolute) if relevant
	GW of storage capacities installed / newly added
Transport	Scope 1-2 GHG emissions reduction (in carbon intensity per pkm or tkm or absolute)
	Annual avoided GHG emissions (in carbon intensity per USD million invested or absolute) if relevant
Financial	Carbon intensity of portfolio/funds/loan book
	Annual avoided GHG emissions (in carbon intensity per USD million invested or absolute) if relevant
	Balance sheet exposure to solid fossil fuels (in total, evolution in %)