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Submission on the Chief Executive's 2021 Policy Address

Views from Clean Air Network (CAN)

Globally, air pollution is the single greatest environmental threat to public health. Many of the causes of air pollution are major contributors to climate change, which also impacts on the population's health.

In Hong Kong, with all improvements made in terms of reduction of roadside and ambient air pollution over the last few years, it is likely that a majority of the population is exposed to roadside air pollution on most days in the year. Severe pollution episodes caused by regional pollutants can still be frequent especially in winter months. Currently, roadside nitrogen dioxide, roadside particulate matters, and ambient level Ozone are the air pollutants causing concern today.

Every year we are paying huge societal costs due to air pollution. Over the past five years, air pollution led to an annual average of 1,600 premature deaths, HKD20 billion economic losses, 100 thousand additional hospital bed days and 2.2 million additional doctor visits in Hong Kong. Air pollution has been linked to cancer, asthma, cardiovascular disease, diabetes, obesity and dementia.

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The effects of air pollution can be lifelong which can start before birth and are shown to have a greater impact on babies, children, young people and elderly. People with chronic health issues, including respiratory and circulatory diseases are especially vulnerable. The more deprived districts experience worse air quality, hence further driving health inequalities.

In order to maximize public health gain, and achieve carbon neutrality by 2050, CAN sets out the below key recommendations for the 2021 Policy Address. The detailed recommendations are highlighted in the following paragraphs.

- A. Accelerate the transition of road transport to zero emission modes
- B. Strengthen regulatory framework of ship vessels operating in GBA waters
- C. Enhance management framework of regional air pollution
- D. Tighten HKSAR AQOs to WHO AQO latest by 2035
- E. Strengthen exposure management
- F. Regulate indoor air quality
- G. Strengthen management of air pollution in school neighbourhoods

Critical roles of Chief Executive

1. In November 2020, the Chief Executive announced in her 2020 Policy Address the goal to achieve carbon neutrality by 2050. Since then, the Government has also unveiled the Hong Kong Roadmap on Popularisation of Electric Vehicles and the Clean Air Plan for Hong Kong 2035, and made progress on Green Finance. It is expected an update of the Climate Action Plan will be released in coming months.
2. It is welcoming to see cross-bureau and cross-border effort in formulation of the above strategies. Successful implementation of these strategies will be critical to achieve the 2050 carbon neutrality and clean air goals. However, without a high-level leadership and coordination, policymaking can still be fragmented, incoherent due to silos in the system.
3. To implement the above strategies effectively, CAN calls for the Chief Executive to serve in a leadership role in accelerating transition of road transport to zero emission modes, strengthening regulatory framework of ship vessels operating in GBA waters, and enhancing management framework of regional air pollution. Please find our elaboration in part A – C. Critical functions to be carried out by the Chief Executive include:
 - to steer policy progress towards the decarbonisation and clean air goals;

- to coordinate efforts from multiple bureaus and departments to resolve long-entrenched issues due to Government silos;
- to initiate dialogue with the GBA authorities to tackle regional matters.

A. Accelerate the transition of road transport to zero emission modes

4. Road Transport accounts for majority of roadside air pollution and 20% of carbon emission in Hong Kong. CAN welcomes the Government announcement of the Hong Kong Roadmap on Popularisation of Electric Vehicles ("The Roadmap"). The Roadmap provides the short, medium and long term strategies of electric vehicles development, including the plan to stop new registration of fuel-propelled private cars by 2035, expansion of charging network, and provision of maintenance services.
5. However, the Roadmap failed to address the long-entrenched, deep-lying issues that hinder the progress of transitioning to new energy vehicles, especially for different types of commercial vehicles. Commercial vehicles ("CV", including all types of freight vehicles and public transport) account for 95% of PM₁₀ and NO_x emissions and 75% of carbon emissions from all vehicles.
6. Some of the issues include the lack of policy direction for phasing out or banning registration for conventional CV, lack of infrastructure development goals to support charging and fuel supplies for CV, lack of support for developing new technological, operation, funding models that are required for operators to transit to use zero emission CV.
7. CAN urges the Government to serve as a leading role to develop directions and priorities to resolve the issues, provide high-level coordination i) among bureaus within the Government and ii) between the Government and industry stakeholders, and adopt a multi-pronged approach in supporting the transition of CV to zero emission modes. The next version of the Roadmap (to be announced in 2025) should outline the strategy for transitioning CV.

B. Strengthen regulatory framework of ship vessels operating in GBA waters

8. As ship vessels continue to be the largest local source of air pollution in Hong Kong and a major pollution source in Greater Bay Area, more has to be done to further limit its health impact on the population and carbon emission.
9. Hong Kong took pride in becoming the first port in Asia to mandate fuel switch at berth in 2015, which limits sulphur content of the fuel to be used by ocean-going vessels at berth at 0.5% mass by mass ("m/m"). The policy change has significantly reduced the level of SO₂ and NO_x emission. The success inspired the establishment of the Domestic Marine Emission Control Area ("DECA") in 2019 which regulated all Pearl River Delta Waters to comply with the 0.5% rule.
10. Since 2020, the International Maritime Organization ("IMO") caught up and set a new rule in effect from 2020 that limits the sulphur in the fuel oil used for OGVs outside Emission Control Areas (ECA) also to 0.5% m/m. In other words, the DECA, where PRD and HKSAR waters are bounded by, is not applying any different regulations from all waters outside ECA.
11. CAN urges the Government to initiate dialogues with the GBA counterparts and formulate plan in order to maintain HKSAR's leadership role in the region. There are at least two options - either to upgrade the emission standard of HKSAR and PRD waters to fulfil the requirement of ECAs under IMO (requiring to limit sulphur content to 0.1% m/m), or to upgrade the standard to "DECA2.0" where HKSAR and PRD waters are bounded by). The DECA2.0 should include regulation of not only sulphur-related pollutants (such as sulphur oxides, SO_x) but also nitrogen-related pollutants (such as nitric oxides, NO_x). By limiting NO_x emissions, it is possible the regional Ozone problems can be mitigated.

C. Enhance management framework of regional air pollution

12. Regional air pollution continues to bring hazardous health impacts to the populations in the GBA region. It is worrying to see the level of regional ozone reached record high in recent years and is still on upward trend. CAN urges the HKSAR Government to take not only evidence-based but also systematic approaches to tackle the issues.
13. One of the key objectives which worth the Governments to look into is to attain an effective air quality management across cities in GBA. Based on the existing foundation of regional collaboration, such as the Cooperation Agreement on Regional Air Pollution Control and Prevention among Guangdong, Hong Kong, and Macao, which came into effect in 2014, CAN

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urges the Chief Executive to lead the discussion with GBA to identify the possibility of institutionalising a regional agency and establishing a regional legal framework.

14. The regional air pollution control agency can serve a dedicated role to be accountable for the achievement of the regional air pollution reduction target. The other possible roles served by the regional air pollution control agency include:

- Policymaking
- Budgeting
- Identifying best practices
- Hub of information and network resources
- Fostering partnership among cities in GBA

15. To further empower such a regional institution, CAN calls for the Governments to explore developing a regional legal framework. The possibility of regional legislation should be explored to identify the responsibilities and the authorities of the regional air pollution control agency, and clarify its relationship with the authorities of Guangdong Province, Macau, and Hong Kong.

D. Tighten HKSAR AQO to WHO AQO latest by 2035

16. Given the various resources committed by national, regional and local Governments to clean air, and that substantial progress has been made both regionally and locally (though more has to be done to safeguard public health), it is frustrating that the HKSAR Government made no commitment or roadmap in the Clean Air Plan for Hong Kong 2035 to tighten HKSAR's Air Quality Objectives ("HKAQOs") to the most stringent standard "Air Quality Guidelines" of the World Health Organisation ("WHOAQGs").

17. CAN urges the HKSAR Government to commence the next round of AQOs Review in 2022, and to commit to tighten the levels of HKAQOs to WHOAQGs latest by 2035. Under Environmental Impact Assessment Ordinance, AQOs are considered when granting permits for designated projects. Currently, HKAQO is not aligned with WHOAQG. Projects failing to comply with WHOAQG safety standards, but meeting the HKAQO, are still granted permits. In other words, projects are legally allowed to emit an unsafe (i.e. not WHOAQG) level of air pollution that threatens the health and lives of individuals. The Government should also commit to develop an open, transparent, independent AQOs review mechanism in the future reviews.

E. Strengthen Exposure Management

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18. CAN acknowledged the Government's Clean Air Plan for Hong Kong 2035 has proposed new initiatives, including cohort study that tracks about 6,000 residents with a view to understand correlation between health risk and long term exposure to air pollution, update methodology for compilation of Air Quality Health Index, installation of smart micro-sensors and integration of air quality monitoring and forecast system with Internet of Things and artificial intelligence.
19. CAN urges the Government to use the above resources with a view to migrate Hong Kong's air quality management system to a new paradigm based on exposure or health risk management. Targeted and evidence based control policies should be used to further lower the risk and impact of sensitive populations exposing to air pollution outdoors and indoors.
20. CAN also urges the Government to explore standardising the protocol to define "exposure hot spots" and consider establish an exposure-based index with forecast function that communicates with the general public on the risk of exposure.

F. Regulate Indoor Air Quality

21. Under the influence of the pandemic, it is expected that more people are staying indoor for a longer time for work, study, entertainment, etc. In other words, they could be in contact with indoor air pollution in longer duration, and hence are exposed to higher health risk than before.
22. Currently, there is a set of voluntary Indoor Air Quality ("IAQ") guidelines, for example, the IAQ Objectives established under the IAQ Certification Scheme for Offices and Public Places. However, as an 2011 Audit Commission report pointed out, there was not even voluntary IAQ guidelines for households, schools, elderly homes or child care centres where a large group of vulnerable population live, study or reside.
23. From public health perspective, CAN urges the Government to develop a timetable for setting mandatory standard for Indoor Air Quality that is to be applied across various types of indoor environments.

G. Strengthen management of air pollution in school neighbourhoods

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24. With congested cityscape, a lot of schools in Hong Kong are located in close proximity to traffic roads. Exposure to toxic exhaust of road transport for several hours per day would bring short-term health impacts on youth and preschool children, imply long-term health consequences in their different stages of life and consequently incur additional public health cost to the society.
25. Other than school campuses, students will also spend considerable time in transportation, leisure and sports facilities. Some of these areas are also close to traffic pollution sources.
26. CAN urges the Government to enhance the schools' air quality through the below policy measures:
- IAQ standard should be made mandatory in all primary and secondary schools (as detailed in paragraphs (21 – 23)
 - the micro sensors monitoring network should be broadened to cover all school neighbourhoods in new and developed districts.
 - Adopt a school-community-based Air Quality Health Index (AQHI) using data collected at schools' monitoring network to better inform school policies
 - Expand the scope of the current Green School 2.0 programme to subsidise schools to purchase air pollution monitoring and mitigation equipments and conduct regular air pollution audit.
 - (NGOs partners including CAN stands ready to mobilise and communicate with stakeholders of the school community)
27. Commuters, including school children and parents, are exposed to a high concentration of air pollution emitted from road vehicles. In a congested streetscape, air pollution is not dispersed easily, and is often compounded by the Street Canyon Effect, which is commonly observed in Hong Kong.
28. CAN urges the Government to look into the adoption of the "Healthy Street" principle in school neighbourhoods under its walkability enhancement programme. The principle expands the purpose of the street to enable not only commuting but also to achieve a number of positive health outcomes. Some of the key indicators of a healthy street include the level cleaner air, noise, safety, and social well-being. With the principle adopted, it is possible to create a healthier and more inclusive school neighbourhood.

29. CAN also urges the Government to maximise usage of road space at school neighbourhood through "Mixed Use" principle. For some of the traffic roads, which are occupied by idling or illegal parking vehicles, can be temporarily opened to pedestrian use to reduce traffic volume and air pollution.
30. A more walkable environment will be helpful to promote the use of non-motorised transport, especially for short trips. Wider use of non-motorised transport will reduce vehicular emission. In December 2017, the Transport Department commenced a 30-month consultancy study on enhancing walkability in Hong Kong, aiming at formulating, planning, and designing standards based on pedestrian-first principles for developing Hong Kong into a more walkable city. CAN urges the Government to publish the study report and explore with the community to enhance walkable environment at schools neighbourhoods and other areas.

Enquiries

For queries related to this submission, please contact myself at patrick@hongkongcan.org.

Regards

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Chief Executive Officer