



RECOMMENDATION FOR 2019 POLICY ADDRESS
CLEAN AIR NETWORK

Globally, urban air pollution has become the leading environmental health risk¹. In Hong Kong, air pollution is threatening the health of the population, documented to be causing severe damage to lungs, heart and blood vessels². With over 1,600 premature deaths caused by air pollution in one year alone (2018)³, 116 thousand hospital bed days and 2.3 million doctor visits, air pollution is a serious threat to public health. Most vulnerable to air pollution are children, the elderly, patients with the chronic respiratory and circulatory disease, and the socially deprived⁴. High quality of life is expected in an affluent city such as Hong Kong, in particular, air that is safe to breathe, but that is clearly not the case.

We believe Hong Kong should sustain its leadership in the PRD and the wider region on the issue of clean air, for example, being the first port in Asia to mandate fuel switch at berth in 2015. As a result of years of working to manage air quality, Hong Kong is equipped with the knowledge and experience in controlling air pollution. With a growing focus on health and quality of life among the public, a strong vision from the Government for clean air should be a priority.

What we have achieved and what is still inadequate

- I. In 2013, The HKSAR Government set out A Clean Air Plan for Hong Kong that mapped out the air quality management strategy with time-bound targets, control measures, and action items until 2020 needed to achieve clean air.
- II. As a result, over the last few years (2013-17), Hong Kong's air pollution, including nitrogen dioxides, sulphur dioxides, particulate matters, at an ambient and roadside level reduced by 30% following various emissions control measures,

¹ YaleNews (2018). *2018 Environmental Performance Index: Air quality top public health threat*. Retrieved from <https://news.yale.edu/2018/01/23/2018-environmental-performance-index-air-quality-top-public-health-threat>

² American Chemical Society. "The when, where and what of air pollutant exposure." ScienceDaily. ScienceDaily, 31 October 2018. <www.sciencedaily.com/releases/2018/10/181031080551.htm>.

³ School of Public Health, the University of Hong Kong (2018). *Hedley Environmental Index*. Retrieved from <http://hedleyindex.hku.hk/historical?lang=en>

⁴ CM, W., & KP, C. (2014). *Social Deprivation, Air pollution and Mortality in Hong Kong*. Retrieved from https://www.legco.gov.hk/yr13-14/english/hc/sub_leg/sc03/papers/sc031126cb1-379-7-e.pdf

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- III. including a subsidy scheme to phase out diesel commercial vehicles, mandating ocean-going vessel to switch to cleaner fuel at berth, etc.
- IV. However, public health is still not adequately protected. Roadside air pollution (Nitrogen Dioxide [NO₂] and Respirable Suspended Particulates [RSP or PM₁₀]) presents major health threats in Hong Kong. Ground-level ozone has hit record highs. According to the Hedley Environmental Index, there were over 1,600 premature deaths and over HKD20 billion in economic losses caused by air pollution, in 2018⁵ alone.
- V. In the first half of 2019, the western part of Hong Kong generally showed a much higher concentration of air pollutants than the eastern part. Of the 18 districts in Hong Kong (except for roadside stations), Kwai Chung(1st) and Shum Shui Po(2nd) had the highest concentration of nitrogen dioxide while Tuen Mun had the highest concentration of PM2.5. These three districts are of particular focus since they also are less advantaged. Underprivileged groups in these districts are thus exposed to higher air pollution and hence more health risk⁶.
- VI. There are signals that the Government should pay attention to. At the roadside, the level of pollution reduction started to diminish after 2016. During 2017-19, the **actual roadside pollution reduction** trend was not on par with the Government's projected trajectory as illustrated in the Clean Air Plan for Hong Kong 2013-17 Progress Report.
- VII. **In order to further improve air quality, new commitment from the Government is needed.** After the Clean Air Plan for Hong Kong was published in 2013, there has been no new blueprint from the Government showing the pathway to clean air beyond 2020. This is unacceptable.
- VIII. Any delay in new commitment from the Government will result in a further decline of public confidence in the quality of life in Hong Kong. The health impact of air pollution is a key concern for all who inhabit and work in the city.

⁵ Hedley Environmental Index, School of Public Health, The University of Hong Kong
<http://hedleyindex.hku.hk/html/en/>

⁶ The Effects of Air Pollution on Mortality in Socially Deprived Urban Areas in Hong Kong, China (CM Wong, 2008)
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2535621/>

A Green New Deal for Hong Kong

To respond to the growing concern and desire for better air quality, a better urban environment, and to combat inequality in environment and well-being, the Government should make a new and strong commitment to clean air.

A significant improvement in air quality will benefit the physical and mental health of the general public but most urgently, specific populations such as the children and parents, senior citizens, the underprivileged, patients with chronic respiratory and circulatory diseases, frequent commuters and roadside workers.

An overarching strategy with time-bound goals, a well-resourced plan, and data-driven implementation details is required to achieve the above vision.

We set out the recommendations for the 2019 Policy Address as follows.

Key Recommendation 1: Clean Air Plan for Hong Kong beyond 2020

1.1 A Clean Air Plan for Hong Kong (2013) which was set out by the Environment Bureau expires in 2020. CAN urges the Environment Bureau to formulate an updated 'Clean Air Plan for Hong Kong beyond 2020' to outline a 10-year strategy with time-bound targets, control measures and action items to clean up Hong Kong's air.

1.2 We urge the Environment Bureau to publish a final report detailing the successes and challenges of 'A Clean Air Plan for Hong Kong 2013' this year in order to facilitate the formulation of 'Clean Air Plan for Hong Kong beyond 2020'.

1.3 CAN urges the Environment Bureau to provide a timetable for Hong Kong's ambient and roadside air quality to comply with the World Health Organization (WHO)'s recommended safe standard no later than 2030. Over 50 cities, including London and Singapore, have pledged to achieve WHO's Air Quality Guidelines (WHAQ, WHO's most stringent level) and halve the number of air pollution-related deaths by 2030.

1.4 CAN also urges the Environment Bureau to provide a timetable for Hong Kong's Air Quality Objectives (AQOs) to be tightened to WHAQ level no later than 2030. Under the Environmental Impact Assessment Ordinance (EIAO), AQOs are considered when granting permits for designated projects. Currently, the HKAQO is not aligned with WHAQ. Projects failing to comply with WHAQ safety standards, but meeting the HKAQO, are still granted permits. In other words, projects are LEGALLY ALLOWED to emit an unsafe (i.e. not WHAQ) level of air pollution that threatens the health and lives of the general public.

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Key Recommendation 2: Electric Bus Fleet

2.1 In order to further reduce roadside air pollution, CAN urges the Environment Bureau to provide a roadmap with time-bound final and interim targets to transform the franchised bus fleet to become electric.

2.2 Since 2009, the Steering Committee on the Promotion of Electric Vehicles, chaired by the Financial Secretary, has established the Pilot Green Transport Fund to test green transport technologies. However, the impact is minimal - up till 2018, fewer than 1% of franchised buses in operation in Hong Kong were Euro VI or electric.

2.3 CAN urges reform of the Steering Committee on the Promotion of Electric Vehicles. An e-bus committee of experts should be formed to be responsible for all technical matters and with the mission of driving the e-bus trial programmes. The new committee should be set up under the current Steering Committee on the Promotion of Electric Vehicles.

2.4 We urge an expansion of the trial to a minimum of 400 e-buses, up from the current 40 electric buses, to ensure viability in terms of employing and training adequate staff and technicians.

2.4 To create the right business environment and collaborations among battery and bus manufacturers, we urge the relevant policy bureaus, in particular, the Transport and Housing Bureau, the Environmental Bureau and Commerce and Economic Development Bureau, to develop a platform with incentives for developing bus models suitable for Hong Kong. This should include incentives for the education and training of professionals and technicians.

Key Recommendation 3: Specific Measures for Highly Affected Districts

3.1 Underprivileged populations generally are exposed to higher levels of air pollution and hence health risk. From academic researches and EPD figures, districts such as Shum Shui Po, Kwai Chung and Tuen Mun are generally associated with a higher number of socially deprived groups exposed to a higher level of air pollutants such as nitrogen dioxide (NO₂) and fine particulate matters (PM_{2.5})⁷.

3.2 Special attention should be paid to these districts. We urge the Government to identify districts highly affected by air pollution, that is, districts with high level of

⁷ Are the Socially Deprived Exposed to More Air Pollution in Hong Kong? HKU-Cambridge CEERP reveals air pollution-induced environmental injustice (HKU, 2018)
<https://www.hku.hk/press/press-releases/detail/17413.html>

roadside air pollution and a high level of social deprivation. Specific policy measures should be implemented to address the urgent needs of highly affected districts.

3.3 Since 2015, the Government has set up franchised bus Low Emission Zones in three sections of streets in Causeway Bay, Central, Mong Kok, in which franchised bus companies are required to deploy low emission buses (i.e. buses meeting Euro IV or more stringent emission standards) to improve roadside air quality. After two years of implementation, the level of roadside air pollution including particulate matters and nitrogen dioxide at the roadside was reportedly reduced.

3.4 To minimize the level of environmental inequality, we urge the Government to extend the Low Emission Zones to cover highly affected districts, such as Sham Shui Po, Kwai Chung and Tuen Mun.

3.5 We urge the Government to tighten the emission standards of Low Emission Zones - allowing only Euro VI, hybrid or electric buses to operate. In parallel, the Government should formulate a plan to regulate other types of commercial vehicles that enter the Low Emission Zones.

Key Recommendation 4: Strengthen Control over Ship Emission

4.1 From 1 July 2015 onwards, HKSAR has operated 'Fuel Switch at Berth' to regulate ocean-going vessels to switch to fuel with maximum 0.5% sulphur content m/m (mass by mass). Subsequently, from 1 January 2019 onwards, HKSAR extended the regulation to cover all HKSAR waters.

4.2 According to the International Maritime Organization (IMO), for ships operating outside designated Emission Control Areas, the IMO has set the same limit for sulphur content in fuel oil of 0.50% - from 1 January 2020.

4.3 As a leader in legislating reductions in ship emissions, and with thousands of people residing and working close to one of busiest container ports and shipping routes in the world, Hong Kong should continue to tighten to protect public health.

4.4 To maximize health gain, CAN urges the HKSAR Government to collaborate with the PRD to set up an Emission Control Area in PRD waters, including Hong Kong waters, with a limit on sulphur content in marine fuel of 0.1 %.

4.5 Since being announced in the October 2018 Policy Address, there has been no update on the progress of purchasing and operating electric vessels locally. We urge the Government to establish the implementation details of the pilot scheme on electric local vessels (green ferry) to further reduce emission from marine transport.

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Key Recommendation 5: Strengthen Control over Ozone

5.1 Ground-level Ozone continues to rise, reaching a 20-year high. This is in part a regional problem yet no regional target has been set to reduce Ozone. In the Guangdong-Hong Kong-Macau Greater Bay Area 2018-2020 Action Plan launched in June 2019, there is only mention of measurable targets for PM2.5.

5.2 Therefore, we urge the HKSAR Government to coordinate with governments across the border to formulate a measurable reduction target for Ozone.

5.3 In parallel, the Environment Bureau should formulate plans to reduce ozone formulation in HKSAR.

5.4 The Volatile Organic Compounds (VOCs), as a precursor for Ozone formation, should be included in the emission inventory in both HKSAR and Pearl River Delta areas.

Key Recommendation 6: Strengthen control over non-road emission source

6.1 In the 2018 Policy Address, the Chief Executive announced a review of the scope of the Pilot Green Transport Fund (PGTF) with a view to facilitating the transport sector's wider use of green transport technologies. This would include both commercial and public electric vehicles.

6.2 'Other combustion' sectors accounted for 19% of fine suspended particulate (FSP/PM2.5) emissions in Hong Kong in 2017. Major contributing sources in this sector are non-road mobile machinery (NRMMs).

6.3 Recognizing the increasing proportion of emissions from NRMMs, CAN urges the Government to expand the scope of the PGTF to cover NRMM and working vehicles used in specified activities and locations including construction sites, container terminals, the airport, designated waste disposal facilities and specified processes. This would accelerate the rate of taking up of electrified NRMM, which otherwise will continue to burn diesel, generating PM2.5 and other emissions.

Key Recommendation 7: Upgrade air monitoring infrastructure and reporting mechanism

7.1 There is a strong desire for the general public to understand the health impacts of air pollution. Currently, there is a lack of community or district-based databases that measure the number of doctor visits or hospital bed days due to respiratory and circulatory disease, for example, COPD, Asthma, Bronchitis, etc. The only available data is via the Hospital Authority which usually lags in time (a two-year gap).

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7.2 Currently, there is also a lack of adequate monitoring stations at roadside/ground level that collects roadside air quality samples as well as relevant systems to report roadside air pollution statistics to community institutions. These include schools, elderly centres, hospitals or medical centres, where large groups of the most vulnerable public live. For example, underprivileged groups in Sham Shui Po must rely on information from the closest roadside monitoring station in Mong Kok to make a decision on whether or not to go outdoors.

7.3 Therefore, CAN urges the HKSAR Government, under the Smart City Blueprint, to upgrade air pollution monitoring infrastructure by setting up at least one roadside monitoring station in each of the 18 districts in Hong Kong. We also urge the HKSAR Government to improve reporting on air pollution, publicizing timely and district-based health information.

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