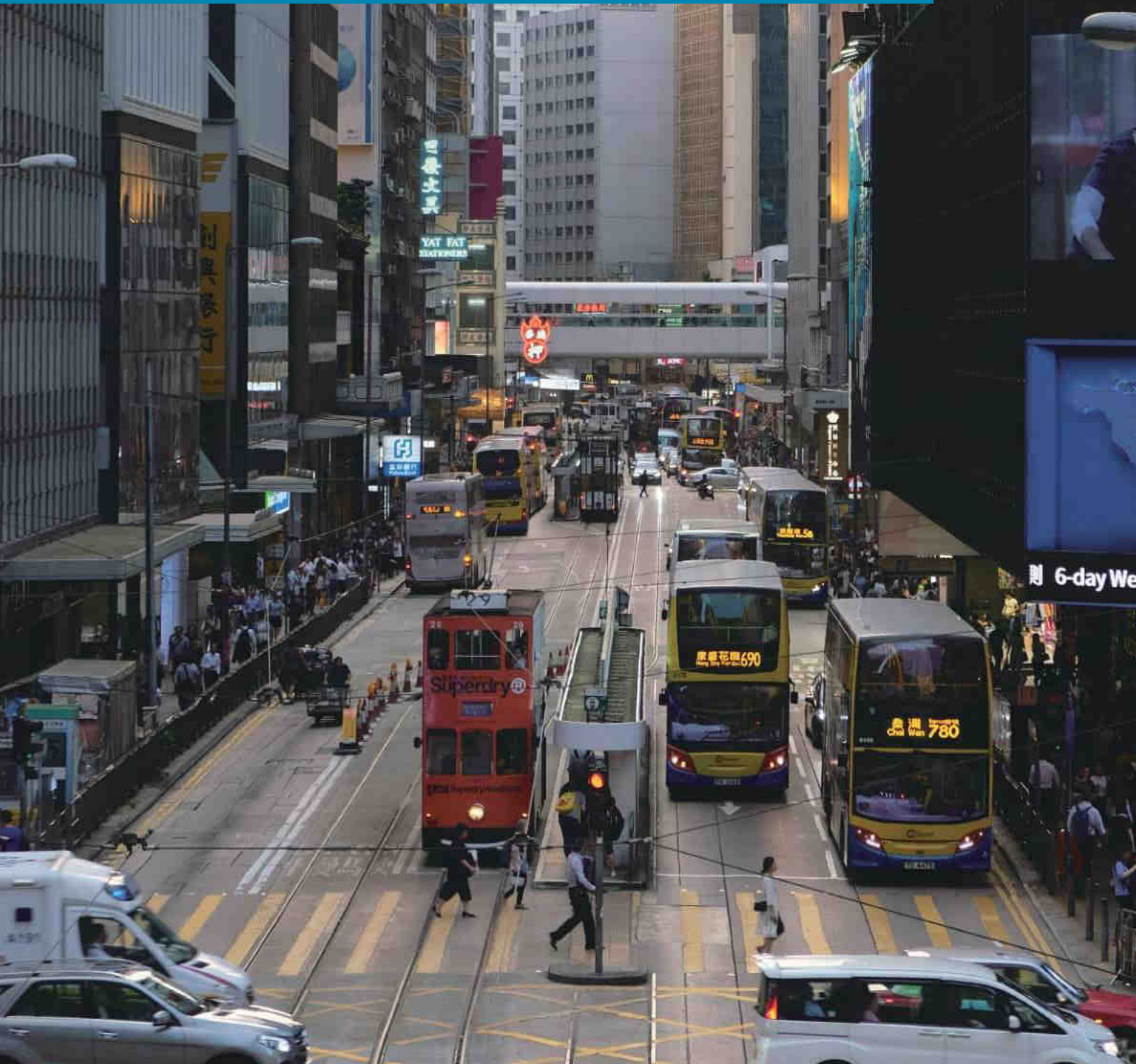


Clean Air Network Annual Report July 2018 - June 2019

Clean Air Network
CAN
健康空氣行動



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Vision

“Our Air, Our Health!”

Clean up Hong Kong’s air until it meets World Health Organization’s recommended safe level in order to protect public health.

To achieve this vision, Clean Air Network is dedicated to driving policy change by building knowledge, collaborating strategically, and advocating solutions in a collaborative approach. Without losing sight of the pollution from regional activities, marine vessels, and power plants, our current primary focus is on roadside pollution.

Our Story

Clean Air Network (CAN) is a non-profit organization with charitable status founded in 2009. We are exclusively dedicated to improving Hong Kong's air quality.

Over a decade, CAN has made great strides, successfully pushing for environmental policy change. Over the last few years (2013-17), Hong Kong's air quality at ambient and roadside level has improved by 30% due to the various emission control measures, including subsidy scheme to phase out diesel commercial vehicles and mandating ocean going vessel to fuel switch at berth.

Despite the significant improvement made, it is expected that roadside air pollution will still exceed WHO's recommended safe level by over 60% in the year 2020 if there is no further intervention.

Public health is still at risk in this international financial center. Every day, dirty air is damaging our health as individuals, the profitability of our companies and our economy as a whole. Primarily caused by roadside and marine emissions and the "street canyons" trapping them around us, it affects us all, especially the most vulnerable in the communities.

By working closely with District Councilors, Legislative Council members, medical professionals, the community, business and student leaders, CAN is spreading its message through numerous channels in the society and forming a coalition to fight for better air in Hong Kong.

Our unified approach has enabled us to achieve systematic change in the way Hong Kong monitors and reports its air quality and also pass landmark legislation, improving the way our public transportation is managed and marine vessels are regulated.

We are delighted to be working with more community partners and student-led initiative to create an effective working model and to open up policy dialogues focused on tackling air pollution. Our strengths are our strategic approach, proven commitment, and established network.



Message from CEO

In 2017-18, Clean Air Network (CAN hereafter) continued to meet important milestones and create positive impact through our advocacy and empowerment projects.

As the Air Pollution Control Ordinance was amended in 2014, it became mandatory to conduct a periodic review of AQOs at least once every five years. CAN took part in the first round of AQO review (between 2016 and 2018) as a member of the official AQO Review Working Group.

Within the Working Group, we advocated more ambitious measures and goal setting with reference to international success stories. We also put forward the suggestion of adding public health gain as another basis for evaluating potential policy measures. Outside of the working group, we continued to use multiple means to attract public attention to the insufficient consideration of public health protection in the Government's proposal for the new AQOs.

Since the establishment of CAN, we have been working towards closing the gap between the level of Hong Kong's AQOs and that suggested by the World Health Organisation. Despite some improvements as a result of the first review, the gap remains. It will take another couple rounds of review before the ideal standard is set. Our work is far from finished.

Meanwhile, it is encouraging to see the further strengthening of our community empowerment efforts, mainly manifested in the Clean Air Neighbourhood trial project in Tuen Mun and the Social Lab - Healthy Street Lab in Sham Shui Po. With a design thinking approach to the projects, we successfully identified air pollution related problems and possible solutions. Both projects have also inspired new ways to develop more environmental education projects that are more relatable to and engaging for local communities.

With our strong commitment to promote clean air for all, environmental justice is another important aspect we work on. The projects took place in relatively low-income districts. We found that residents in low-income neighbourhoods were also ones that were the most at risk of high exposure to air pollution. The latest research conducted by the University of Hong Kong and University of Cambridge also resonates this observation and finds that there is a statistically significant relationship between ambient air pollution (PM_{2.5}) concentration and the Social Deprivation Index in Hong Kong.

Besides the success of our empowerment and advocacy projects, our partners have also made remarkable breakthroughs to democratise the access of information. The launch of HKUST's PRAISE-HK mobile app puts real-time air quality information in your hands. College students from the RCHK also came up with a newer design for handheld air pollution monitoring sensors which will be installed across different school campuses.

With all this progress made, on behalf of the organization, I would like to thank our collaborators for their ongoing support and making all these possible. We look forward to bringing further positive impact with the participation of the wider community.



Yearly Highlights



Air Quality Objectives Review

2018 was a critical year that the first AQOs Review was conducted since amendment of the APCO in 2014 that stipulated the AQOs must be reviewed at least once every five years.

Background of Air Quality Objectives (AQOs)



Problem:

The current review assessed air quality improvements in 2025 and the scope for tightening the AQOs. Since no further recommendations were made for tightening other air pollutants, Hong Kong's AQOs will continue to significantly fall short of the safety standards established by WHO in the coming five years.

It means the citizen's health will continuously be affected by air pollution. Hong Kong's 2025 air quality goals fail to put public health first.

Going Forward

- A three-month public consultation is going to be launched in mid-2019 to solicit public views on the new AQOs proposal.
- The new objectives were expected to come into effect around 2020 .

TIMELINE

- 1 January 2014
The prevailing AQOs came into effect
- **Air Pollution Control Ordinance (APCO):**
stipulates the AQOs must be reviewed at least once every five years
- Mid-2016
The Environment Bureau embarked on a review of the AQOs and formed a AQOs Review Working Group (Working Group) to take forward the work.
- 2018
A review report and proposal to tighten the AQOs was completed after a series of assessments and discussions to evaluate the potential air quality improvement in the coming years

After the Review, the Government eventually put forward a proposal that recommended tightening of two types of pollutants (SO₂ and PM_{2.5}) while relaxing the number of annual allowable exceedance of PM_{2.5} to nearly 3 times more.

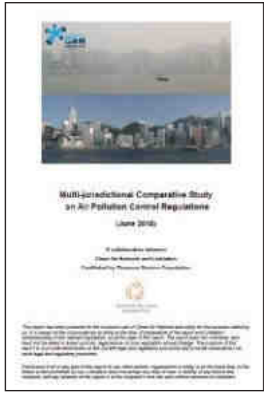
Worse, despite of our continuing effort, the Government made no commitment on a roadmap or definite time range by when Hong Kong's AQOs will be leveled with the most stringent standard of the WHO.

Pollutant	Averaging Time	WHO AQG (µg/m ³)				No. of exceedances allowed in HK's prevailing AQOs
		IT-1	IT-2	IT-3	Ultimate Target	
SO ₂	10-minute	—————			500	3
	24-hour	125 → 50	—	20	3	
PM _{2.5}	annual	35 → 25	15	10	not applicable	
	24-hour	75 → 50	37.5	25	9 → 35	

 Prevailing Hong Kong AQOs
 Proposed new AQOs and no. of allowable exceedances

Campaigns

Legal Research



Multi-jurisdictional Comparative Study on Air Pollution Control Regulations facilitated by Thomson Reuters Foundation. The research project aims to conduct comparative legal research on air pollution among Hong Kong and five other jurisdictions, including UK, US, Japan, Singapore and Canada, to identify the potential legal loophole of Hong Kong's APCO.

Promotion Video

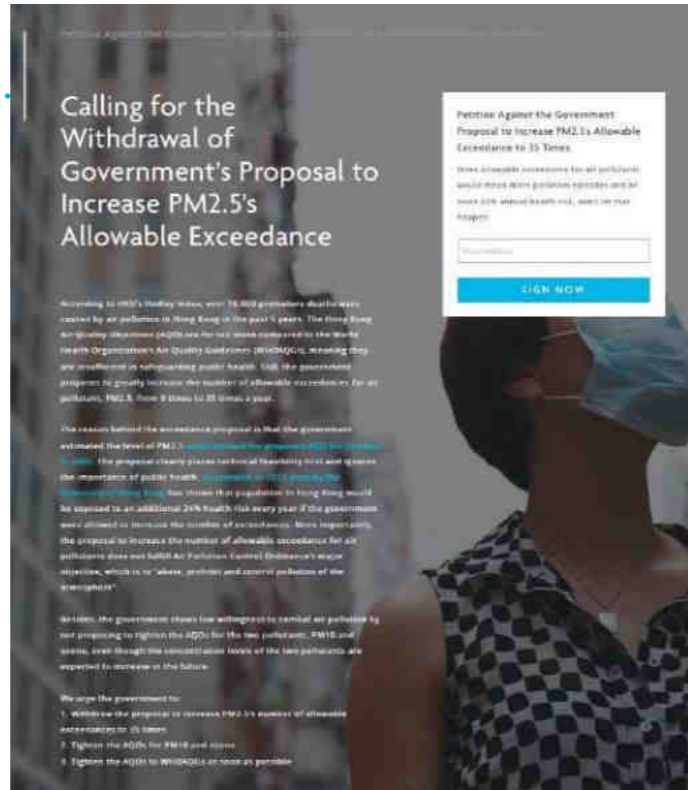
Actors Stephen Au and Renci Yeung were featured in our videos to address the public on the health threats of roadside pollution and the review of AQO. Videos were released in March and April of 2019.



Petition

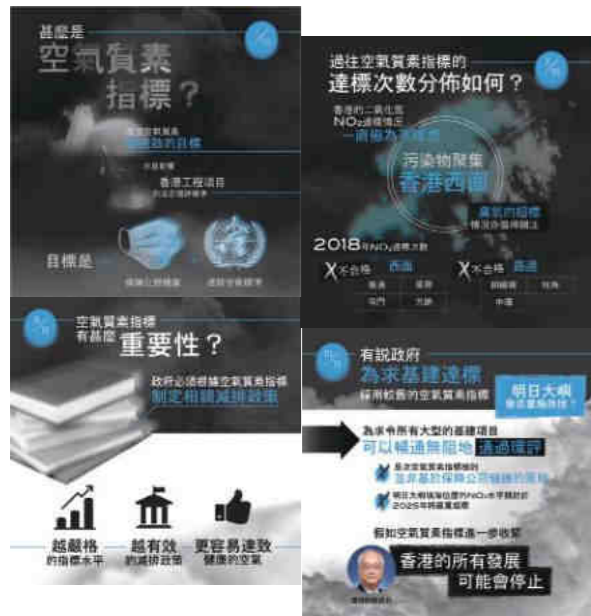
In March 2019, CAN initiated a petition calling for the withdrawal of the Government's proposal to increase PM_{2.5} from WHO's Interim Target 1 to Interim Target 2, but based on a controversial clause to relax its annual number of allowable exceedance from existing 9 to 35 times.

The proposal ignores the importance of public health as research of 2011, done by the University of Hong Kong which shows a **24% increase in the health risks every year if the government is allowed to increase the number of exceedances.**



Infographic

10 Infographic posts were created to illustrate facts and arguments through compelling visuals.



AQOs Review Coalition



The AQO Review Coalition was established in July 2018. The coalition members include environmental groups, medical organizations, Legislative Council members and lawyers. Clean Air Network is one of the pioneer members.

Coalition member includes:

- 350HK
- Barrister Antonio Da Roza
- Blue Skies China
- CHEST Delegation HK & Macau
- Clean Air Network
- Friends of the Earth (HK)
- Greenpeace
- Green Power
- Health in Action
- Hong Kong Doctors Union
- Hong Kong Thoracic Society
- Hong Kong Lung Foundation
- Hong Kong Society of Paediatric Respiriology and Allergy
- LegCo Chu Hoi Dick office
- LegCo Dennis Kwok office
- LegCo Jeremy Tam office
- LegCo Kenneth Leung office
- LegCo Kwok Ka Ki office
- LegCo Tanya Chan office
- LegCo Ted Hui Chi Fung office

The AQO Review Coalition petitions that:

1. The Hong Kong AQO be tightened to WHO standards;
2. The AQO Review be based on the protection of citizens' health, and a more progressive policy framework be established on such basis;
3. Set out more detailed air policies for specific area such as emission control and transport planning, which aims to reduce carbon emission and pollution.

In March 2019, the Coalition sent a written submission to the Legislative Council Panel on Environmental Affairs opposing the government's proposal on relaxing the exceedances allowed for air pollutants.

Actions by Coalition

December 2018

Protest outside the Central Government Office

March 2019

The joint press conference requested the Government to withdraw the proposal to relax the number of exceedances to 35 times a year for PM_{2.5}.



Yearly Highlights



Over 60 Walk leaders and over 2400 participants have joined the Hong Kong Jockey Club "We Are Transport" program since 2017. Dozens of thematic walking activities were held across the city to encourage people to walk instead of taking vehicular transport as a way to reduce their contribution to roadside emission and enhance individual fitness.

Jul – Sep 2018

- Actor George Charles Rivers dog walking and live stream on Facebook
- Hiking enthusiast Wong Wai Kin
- Vivek Mahbubani performed a stand-up comedy about air pollution
- Lam Chiu Ying, former director of the Hong Kong Observatory, held a talk at PMQ



Oct - Dec 2018

- Actress Leila Kong shared her favorite walking route in Sam Mun Tsai, Tai Po on Facebook live
- Art Jamming with Kong Hong Cheun when walking from Kowloon City to Prince Edward by photo taking on our smart phones
- Collaboration with schools and elderly: Senior Leaders acted as walk leaders bringing students and going around Tuen Mun. The elderly shared their own stories and memories about the community



Round-up happenings / activities

- Appreciation parties: to thank all the support from Walk Leaders and a chance for them to share their own experience about the walking tours
- Light project at PMQ, Central: 4 videos showing information about air pollution with lights and images during summer time 2018

We Are Transport

The project is dedicated to promoting a healthy walking lifestyle and the possibilities of walking to improve air quality. "We Are Transport" demonstrates a better attitude towards tackling the air pollution issue to advocate a clean air city.

Funded by:
the Hong Kong Jockey Club Charities Trust

Achievements

Total no. of walking steps of all walks

19 million steps

Average step of Walk Leaders and their followers:

8189 steps

Average daily step for Hong Kong people: **6860** steps

Minimum daily step to maintain good health: **8000** steps
(suggested by health sector)

"Clean air is important for children's health and development."

—Leila Kong
actor and a mother of two kids



Yearly Highlights

Ship Emission Control



CCC Tam Lee Lai Fun Memorial Secondary School invited senior leaders to become Walk Leaders. They were partnering with 16 students to organize walking tours in Tuen Mun.



Leila Kong brought us to visit Tai Po and Sam Mun Tsai



"Shinrin Yoku" - Forest Bathing tour by Amanda



George Charles Rivers joined our Facebook live and addressed the pollution threat to pets



Top left: Stand-up comedy by Vivek Mahubani

Top right: Lam Chiu Ying, the meteorologist, organised a talk at PMQ Central

Left: Appreciation parties and experience sharing for Walk Leaders



Ocean-going vessels are one of the main sources of air pollution in Hong Kong.

Since 2015, CAN has called for further tightening of standard of the fuels use at berthing ships and setting up emission control area in Hong Kong and PRD waters. We also recommended to active the onshore power system vessels especially at Kai Tak Cruise Terminal.

In 2015, Hong Kong became the first port in Asia to mandate ocean-going vessels to switch to cleaner fuel at berth. The measure brought significant reduction in terms of SO₂ and PM₁₀ level by about 60%, showcasing to neighboring cities how ship emission can be controlled.

With relentless effort made by CAN and other experts, a new rule came into effect from January 2019 to expand the scope of clean fuel requirement to whole Hong Kong's water.

Under the new policy, it is expected that air pollution will be further reduced thus safeguarding health of Hong Kong people.



Cap. 311AB Air Pollution Control (Fuel for Vessels) Regulation

All vessels were required to use compliant fuel within Hong Kong waters

Ocean-going vessels (OGVs) that are using heavy fuel oil (with an average sulphur content of 2.6%) must switch to compliant fuel before entering Hong Kong waters. Compliant fuel includes low-sulphur marine fuel with sulphur content not exceeding 0.5%, liquefied natural gas or any other fuel approved by the Director of Environmental Protection.

Annual Air Quality Review 2018



Clean Air Network analyses the 2018 air quality data collected by the air monitoring stations operated by the Environmental Protection Department. Here are the insights of our findings and our recommendations emerged from the review:

Insight 1

If the air quality doesn't get better and we fail to achieve the emission reduction targets in 2020 set by Clean Air Plan:

-- Every year in Hong Kong --

493 premature deaths



90 thousands upper respiratory tract infection cases



542 emergency admissions to hospitals



9 billion Hong Kong dollars direct economic loss



Insight 2

2016-2018 (3 years): The concentration of PM₁₀ and ozone has increased significantly.

Insight 3

The level of PM_{2.5} has generally decreased (2016-2018), except for roadside monitoring stations.



	SO2	NO2	PM2.5	PM10	Ozone
Eastern					
% increase compared to 2017	-24.29%	-2.73%	-7.38%	0.31%	2.71%
% increase compared to 2016	-29.25%	-10.09%	-0.15%	10.49%	22.18%
Western					
% increase compared to 2017	-8.74%	-3.47%	-6.02%	-3.49%	4.72%
% increase compared to 2016	-27.82%	-9.15%	-1.30%	4.03%	23.86%
Roadside					
% increase compared to 2017	2.69%	-3.99%	-2.77%	1.05%	7.41%
% increase compared to 2016	-3.59%	2.08%	1.02%	5.88%	23.09%

Percentage change in the concentration of the 5 air pollutants, comparing 2018 with 2017 & 2016

red cells – increased concentration; green cells – reduced concentration

Insight 4

Figures presented at the Government's AQOs Review Working Group showed that the areas with the exceeding level of NO₂ are highly overlapping with the areas proposed as the reclamation for the Lantau Tomorrow Vision project. The worry is that a waiver will be issued to benchmark future mega infrastructure projects with prevailing and more lax AQOs, instead of the updated and tighter standard.

Projected annual average NO₂ concentration in 2025

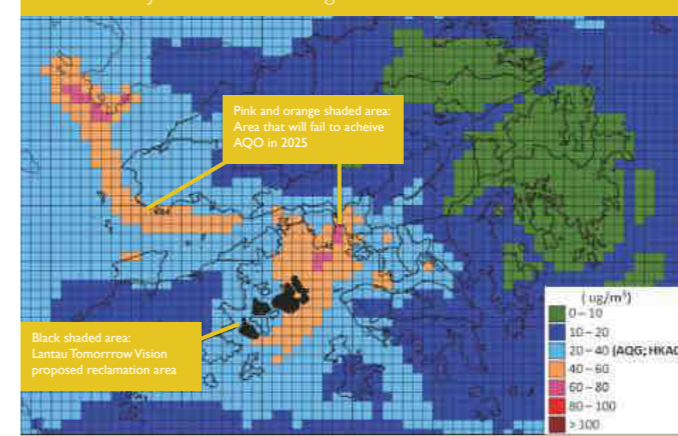


Photo Source: EPD's AQO Review Document

Insight 5

WHO suggests a much stricter guideline regarding the notion of exceedance allowed for air pollutants - allows only 3 exceedances for PM_{2.5} and PM₁₀ per year.

Government's suggestion to relax allowable exceedances for PM_{2.5} under the new AQOs proposal clearly contradicts with WHO's health-first principle and seems to conflict with Hong Kong Air Pollution Control Ordinance's (APCO) interpretation on public interest.



"Street walking in Hong Kong is an unpleasant experience because of narrow streets with high traffic."

—Lam Woon-kwong



Check the full review on CAN official website:



Monitoring Network

Through monitoring and reporting level of air pollution in different places in Hong Kong, CAN voiced out the concern of high level of air pollution and its health impacts on vulnerable population such as kids, students, elderly, commuters and outdoor sport lovers.



Air Data Collection

CAN is developing an equipment that measures NO₂ concentrations in the air. The module can monitor the GPS location of the sensor. The portable device is constantly improving with better accuracy and becoming more user-friendly.

Air pollution is an invisible threat to health and it acts as an invisible burden to all of us. A portable equipment monitoring air quality at anytime can make the air pollution "visible". The "visible" air data helps the public easier to see the full picture of pollution in the community.



Donation support for our devices development:



Bus Terminal in Lam Tin

September 2018

Legislative council member Jeremy Tam collected air data with us in the Lam Tin indoor bus terminal to address the problem of highly polluted environment for passengers waiting for buses.



Workshop with Goldman Sachs

Volunteers from Goldman Sachs got involved in the air monitoring workshop held at Sham Shui Po in December 2018 and they measured the PM_{2.5} level around the school.



PRAISE-HK

Personalised Real-Time Air Quality Informatics System for Exposure - Hong Kong

One of the common goals between CAN and HKUST is to migrate Hong Kong's air quality management system to a new paradigm based on exposure/health risk management as compared to emission-based management.

With technology, it is more possible to track all factors which opens up possibility to better manage exposure beyond managing emission. The PRAISE-HK project is one of the best examples.

Our aspiration is for Hong Kong to become one of the places with the best knowledge of exposure control. By doing so, we will contribute further to exposure science in the world and make an impact on local population.

CAN invited the public to join a user interface (UI) workshop of PRAISE-HK in August 2018. The event included an introduction of the project and app, followed by small group discussions to experience the device prototype and collect user feedback which contributed to the app's final phase development.



Download the app on Apple store or Google Play

Project Matter

Campus network on air monitoring

Project Matter is a student-led initiative started by students from Renaissance College, Ma On Shan and its current project focuses on installation of real-time self-built sensors in different school campuses across the city.

With the purpose of knowledge sharing and experience exchange, over the summer in 2018, CAN and Project Matter co-learned on multiple subjects including sensors technology, equipment calibration and monitoring mechanism.



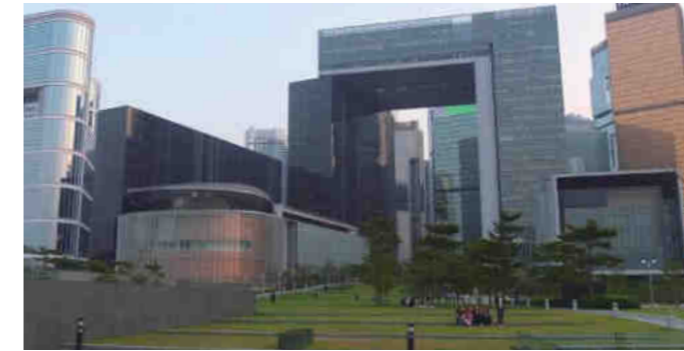
Run for Clean Air

In February 2019, 5 runners helped us monitor the NO₂ concentration along the route of one of the largest marathons held in Hong Kong in the race. Their devices showed the NO₂ levels in the Kwai Chung area and near the entrance of Western Harbour Crossing tunnel would threaten racers' health on that day.

Since 2013, outdoor runners were invited to conduct multiple pollution monitoring exercise across Hong Kong. Being affected constantly by roadside air pollution, they are one of the best persons to voice out the concern on the impact of air pollution on public health.



Green Policies Step Forward



CAN submitted our recommendations to the Government on the 2018 Chief Executive Policy Address

Our recommendations:

- Government to set a timeline to clean air
- Upgrading commercial vehicles
- Enhancing Low Emission Zones
- Publicizing data for public to better monitor effectiveness of the emission control program for LPG vehicles
- Strengthening efforts to manage transport demand to ease traffic congestion
- Strengthening efforts to minimize ship-induced air pollution

Policy Address 2018-2019

- Pilot scheme for local ferries to ascertain the viability of green technologies in the local context
- Phase out Euro IV diesel commercial vehicles by the end of 2023

Budget 2019-2020

Plan to implement the Electronic Road Pricing Scheme Pilot (ERP) to address the city's congestion problem.



Half year air quality & policy review of air pollution control in 2018

July 2018



World Environment Day

June 2019

The theme of this year's United Nations World Environment Day on 5th June was **"Beat Air Pollution"**.

Our Young Advocates along with the CAN team responded to **#BeatAirPollution**. We would urge the general public in Hong Kong to address the problem of air pollution that is threatening human health and the environment.



Young Power - School Strike for Climate

March 2019

An international movement initiated by young students to urge the authorities to take strong action over climate change. Hundreds of young environmentalists also joined the protest in Hong Kong to voice out their concerns while addressing poor air quality and climate change are closely linked.



Community Engagement



Social Lab - Finale Learnings from the Healthy Street Lab

July 2018

Open Class in Sham Shui Po – CAN shared our views on health street approach: How we build a walkable and healthy community



Knowledge Sharing with Octopus' Staff

August 2018



Paediatric Respirioly and Allergy TALK

September 2018

Talk for medical professionals at the General Meeting of Hong Kong Society of Paediatric Respirioly and Allergy.



Education Workshop

Collaborating with Special Educational Needs & Parents Association, CAN held an educational workshop for students and parents from different districts on 20th August 2018 at The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School in Tuen Mun. Around 20 participated and were introduced to the causes and health impacts of air pollution in Hong Kong.



"Beyond the Invisibility" seminar for corporates

June 2019

CAN delivered lunch talks on Air Pollution with the topic "Beyond the Invisibility knowledge sharing with corporates"

The AQOs Review aroused some interest among various sectors on the issue of air pollution in Hong Kong. CAN was privileged to engage with SMEs and multi-national corporates from financial, tourism, utilities sectors, including the likes of Bloomberg, WeWork, Towngas, etc, through informational knowledge sharing sessions. Frequently asked questions ranged from air quality in their office/home locations, impact of air pollution on human health, related regulation and policy measures in Hong Kong.



Airmazing Race with Credit Suisse in Central

December 2018

With 7 checkpoints and 8 teams competing, the participants were seen running frantically in the streets of Central looking for clues and searching for answers with the theme of tackling air pollution.



Participants Feedback:

"Bring my awareness of the air quality control effort"

"Good event to combine awareness and exercise"

"Be more aware of air pollutants and join the effort"

Broadcast program: Cultural Express

Cultural express is a 2-minute program broadcasted at RTHK. Clean Air Network is one of the invited speakers to share valuable information about air pollution and health several times a year.





The pilot project aimed to develop a relatable environmental education model that is able to sustainably enhance overall literacy and participation of the general public of selected neighborhood on air pollution issue.

CAN led a project team comprised of a group of kaifongs, a dozen of senior citizens and secondary students reside and study in Tuen Mun and a group of professional urban planners. We appreciate the participation of the students from The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School and the support from the Hong Kong Institute of Planners.

Throughout a 4-months period, with the fusing of both local and professional knowledge, the project team made its best effort to identify causes and factors contributing to high level of air pollution in the district, and communicate across the neighborhood.

At the final stage, a townhall meeting and data visualization presentation was held to showcase individual efforts which could be a crucial part to clean air.



Townhall meeting in school hall

Action and Impact

- Encourage drivers to stop idling with vehicles on a running engine
- Set up air monitoring devices at a few street shops
- Find suitable locations for expanding cycle parking racks near the campus
- Identify air pollution “hotspot” with health risk problems – Heavy pollution because of high traffic and street canyon effect



Field trip with kaifong, students and urban planners



Visualization of air data presented in a small exhibition



Set up an air sensor at a local store

Acknowledgement

Board & Advisors

Chairman and Treasurer
Stephen Wong

Secretary
Yip Yan-Yan

Board Member
Lindy Lek
Simon Ng
Markus Shaw
Zhao Tong

Advisor
Lisa Genasci
Dr. Anthony Ng

Major Funders

ADM Capital Foundation Limited
RS Group
Social Impact Partners Limited
WYNG Foundation
The Hong Kong Jockey Club Charities Trust

Supporting Partners

China Holiness Church Living Spirit College
CCC Tam Lee Lai Fun Memorial Secondary School
Hong Kong Institute of Planners
MarkerBay

Fundraising Partners

Charitable Choice
Two Presents

We Are Transport

Lam Chiu Ying
Lam Woon Kwong
Leila Kong
Kongkee
Vivek Mahubani
George Charles Rivers
Vessel
Wong Wai Kin

Walk Leaders

Cathy Chan	Edward Lam
Jackal Chan	Swing Lam
Ryan Cheng	Victor Leung
Cheung Chi Hang	Catherine Li
Cheung Wing Chi	Kent Li
Po Chung	Tim Lo
Thomas Choi	Janet Luk
Mary Choy	Winnie Ng
Daniel	Pong Cheuk Ling
Titus Fok	Joe Wong
Kirsten Fu	Mandy Wong
Donald Fung	Tsuki Wong
Andy Hung	Cathy Yeung
Tony Ip	Amanda Yik
Kelvin Ko	Yuen Chi Yan
Lam Sin Ting	Jamie Zhan

In no particular order, thank you for all your continued support.

Tighten Air Quality Targets to International Standard

World Health Organization Air Quality Guidelines (AQG)





- global update 2005 -

NO ₂ (annual)	40
NO ₂ (1-hour)	200
PM _{2.5} (annual)	10
PM _{2.5} (24-hour)	25
PM ₁₀ (annual)	20
PM ₁₀ (24-hour)	50
SO ₂ (10-minute)	500
SO ₂ (24-hour)	20
O ₃ (8-hour)	100
average time	μg/m ³

VS.

HONG KONG Air Quality Objectives (AQO)

- prevailing -

NO ₂ (annual)	40
NO ₂ (1-hour)	200
PM _{2.5} (annual)	 35
PM _{2.5} (24-hour)	 75
PM ₁₀ (annual)	 50
PM ₁₀ (24-hour)	 100
SO ₂ (10-minute)	500
SO ₂ (24-hour)	 125
O ₃ (8-hour)	 160
average time	μg/m ³

Sustainable Development Goals (SDGs)

SDG has been adopted by all United Nations Member States in 2015 as the blueprint to achieve a better and more sustainable future for all by the year 2030.

All 17 SDGs are intergrated but 4 of them can dominantly serve as a review and an assessment to combat air pollution:



More about SDGs:
<https://sustainabledevelopment.un.org/>

World Health Organization Air Quality Guidelines (WHO AQGs)

The 2005 update of AQGs represent the most current assesment of air pollution health effects, based on expert evaluation of the scientific evidence. The guidelines offer recommended exposure level of SO₂, NO₂, PM_{2.5}, PM₁₀ and O₃, as well as a set of interim targets to encourage a progressive improvement in air quality.

The summary of WHOAQG is available at:
<https://www.who.int/airpollution/publications/aqg2005/en/>

Hedley Environmental Index (HEI)

<http://hedleyindex.hku.hk/>

An environmental air pollution related health index quantifies the public health, monetary and social cost of air pollution in Hong Kong. HEI is developed by the School of Public Health at the University of Hong Kong.

Air Quality Health Index (AQHI)

<https://www.aqhi.gov.hk>

A health risk-based air pollution index estimates the additional short-term health risk caused by heart and respiratory diseases from air pollution that leads to hospital admission. AQHI is issued by Environmental Protection Department and the index is updated hourly on the basis of data recorded by the general monitoring stations and roadside monitoring stations in various districts.

Air Quality Objectives (AQOs)

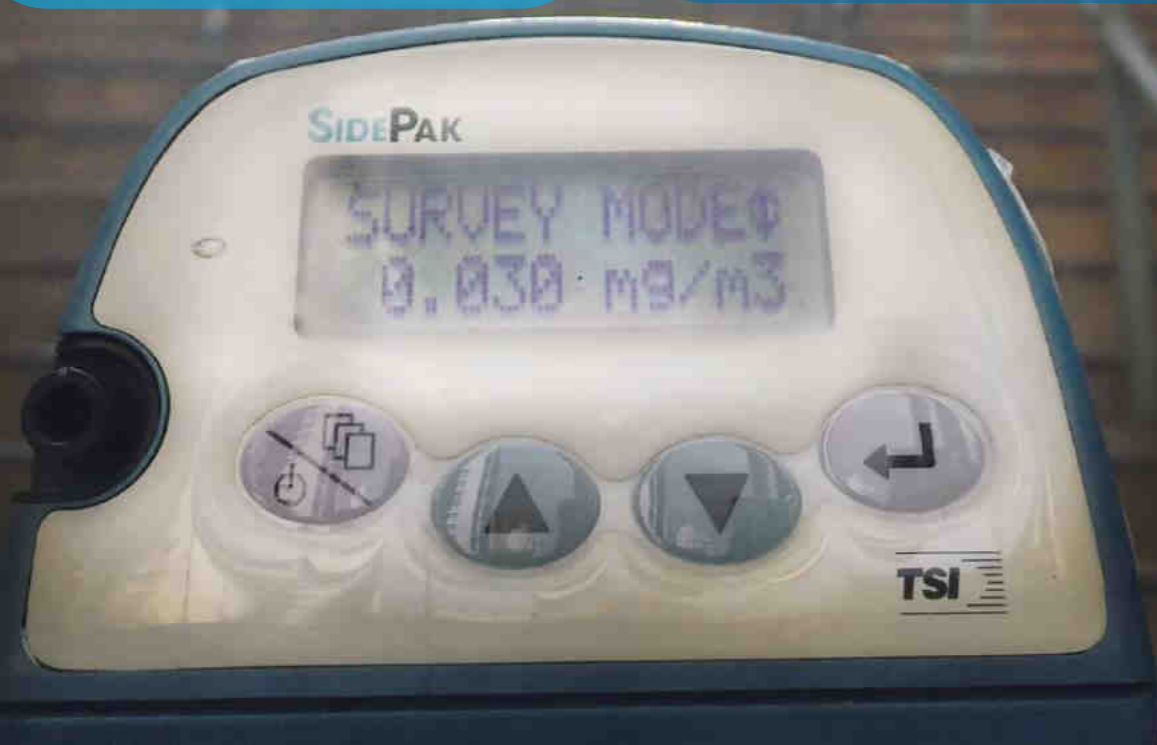
The current AQOs comprise seven key pollutants (SO₂, NO₂, PM_{2.5}, PM₁₀, O₃, Carbon monoxide, and Lead) and are benchmarked against a combination of interim and ultimate targets under the WHOAQGs.

AQOs are not merely a set of air quality goals, but also the benchmark for the issuance of environmental permits for designated projects under the Environmental Impact Assessment Ordinance (EIAO).

The Hong Kong's prevailing AQOs are less stringent than those of the WHO. But there is a statutory obligation for the Secretary for the Environment to review the AQO at least once in every five years and submit to the Advisory Council on Environment a report of the review.

Air Pollution Control Ordinance (APCO)

The APCO (Chapter 311) stipulates a set of AQO that the Authority shall aim to achieve as soon as it is reasonably practicable and thereafter to maintain the air quality so achieved in order to promote the conservation and best use of air in the public interest.





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