



**Friends of the Earth (HK) Submission on the
Air Quality Objectives Review 2030 Public Consultation**

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Preface

Air pollution is one of the leading causes of death, claiming millions of lives each year and placing a heavy burden on the healthcare system with numerous clinic and hospital visits. Long-term exposure is also shown to negatively impact childhood development and increasingly associated with cognitive impairment, dementia, and Alzheimer's disease. Unfortunately, the currently proposed air quality objectives (AQOs) fall considerably short of the World Health Organization's (WHO) final air quality guidelines (AQGs), putting economic interests ahead of wellbeing. To truly strive towards becoming a liveable world-class city, Hong Kong must demonstrate greater ambition and set more robust AQOs.

- Hong Kong's air quality has been continuously improving, with major air pollutants reduced by more than 40% to 60% over the past ten years, and the number of hours of reduced visibility gradually decreased from the peak of 1 570 hours in 2004 to 401 hours last year (a decrease of 74%). Are you aware of the above improvements?**

We acknowledge the progress made in improving Hong Kong's air quality, however it is still far from satisfactory. Nitrogen dioxide (NO₂) and ozone (O₃) still remain at a high level. Last year, NO₂ concentration exceeded the limit 56 times in Causeway Bay and 46 times in Mong Kok, significantly surpassing the allowable exceedance threshold.¹ Additionally, the O₃ concentration at roadside air quality monitoring stations has increased 143% from 2013 to 2022.²

Pollutant: Nitrogen Dioxide (1-hour limit value = 200 µg/m³ ; allowable no. of exceedance of limit value = 18)

| Station | No. of exceedance of limit value | 1st High | 2nd High | 3rd High | 4th High | 5th High | 6th High | 7th High | 8th High | 9th High | 10th High | 11th High | 12th High | 13th High | 14th High | 15th High | 16th High | 17th High | 18th High | 19th High |
|-----------------|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Central/Western | 0 | 189 | 185 | 169 | 165 | 162 | 162 | 156 | 156 | 155 | 155 | 153 | 152 | 151 | 149 | 148 | 147 | 145 | 143 | 142 |
| Southern | 0 | 134 | 125 | 122 | 119 | 116 | 114 | 114 | 112 | 112 | 110 | 108 | 108 | 108 | 107 | 106 | 106 | 106 | 105 | 105 |
| Eastern | 0 | 143 | 126 | 125 | 124 | 118 | 117 | 115 | 114 | 113 | 111 | 111 | 109 | 105 | 103 | 103 | 102 | 101 | 100 | 99 |
| Kwun Tong | 2 | 213 | 204 | 181 | 180 | 175 | 173 | 172 | 171 | 170 | 162 | 157 | 156 | 156 | 150 | 148 | 147 | 147 | 146 | 145 |
| Sham Shui Po | 4 | 216 | 209 | 207 | 206 | 195 | 192 | 191 | 185 | 184 | 182 | 179 | 175 | 170 | 169 | 165 | 163 | 160 | 160 | 158 |
| Kwai Chung | 5 | 240 | 237 | 221 | 218 | 209 | 197 | 189 | 187 | 187 | 186 | 182 | 181 | 180 | 178 | 177 | 171 | 169 | 168 | 168 |
| Tsuen Wan | 1 | 201 | 195 | 173 | 165 | 157 | 154 | 154 | 153 | 152 | 152 | 152 | 149 | 149 | 148 | 143 | 143 | 141 | 140 | 140 |
| Tseung Kwan O | 0 | 190 | 167 | 155 | 150 | 146 | 144 | 142 | 135 | 130 | 121 | 117 | 116 | 115 | 114 | 114 | 114 | 113 | 111 | 110 |
| Yuen Long | 0 | 149 | 147 | 137 | 136 | 136 | 135 | 135 | 133 | 130 | 129 | 128 | 127 | 127 | 126 | 124 | 123 | 122 | 122 | 122 |
| Tuen Mun | 0 | 162 | 161 | 158 | 155 | 152 | 149 | 146 | 143 | 142 | 142 | 140 | 138 | 137 | 137 | 134 | 133 | 131 | 131 | 128 |
| Tung Chung | 0 | 121 | 120 | 119 | 116 | 114 | 113 | 113 | 113 | 109 | 106 | 105 | 102 | 100 | 98 | 95 | 95 | 95 | 95 | 94 |
| Tai Po | 0 | 117 | 116 | 113 | 112 | 111 | 106 | 105 | 105 | 103 | 101 | 100 | 98 | 98 | 98 | 98 | 97 | 95 | 93 | 93 |
| Sha Tin | 0 | 158 | 145 | 142 | 137 | 131 | 129 | 128 | 127 | 127 | 126 | 124 | 122 | 121 | 120 | 115 | 114 | 114 | 113 | 112 |
| North | 0 | 144 | 134 | 134 | 129 | 128 | 123 | 123 | 121 | 119 | 119 | 119 | 118 | 117 | 117 | 117 | 117 | 117 | 116 | 115 |
| Tap Mun | 0 | 64 | 58 | 56 | 51 | 47 | 44 | 44 | 44 | 43 | 42 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 39 | 39 |
| Causeway Bay | 56 | 285 | 283 | 282 | 282 | 276 | 275 | 271 | 262 | 262 | 262 | 261 | 260 | 260 | 260 | 260 | 260 | 254 | 251 | 249 |
| Central | 42 | 290 | 285 | 281 | 273 | 265 | 264 | 260 | 249 | 247 | 245 | 245 | 244 | 242 | 240 | 239 | 239 | 235 | 232 | 224 |
| Mong Kok | 46 | 289 | 289 | 266 | 264 | 261 | 255 | 240 | 240 | 239 | 238 | 235 | 234 | 234 | 233 | 232 | 231 | 226 | 225 | 224 |

Exceedance of short-term nitrogen dioxide in 2022 (Air Quality in Hong Kong 2022 Statistical Summary)

¹ [Environmental Protection Department – Air Quality in Hong Kong 2022 Statistical Summary](#)

² [Environment and Ecology Bureau – Air Quality Objectives Review 2030 Public Consultation](#)

Furthermore, although the concentrations of respirable suspended particulates (PM₁₀) and fine suspended particulates (PM_{2.5}) may not have exceeded the allowable limits set by the current AQOs, it is important to note that these targets only represent interim targets of the AQG recommended by WHO.

2. The WHO recommends governments to consider their local conditions before adopting the suggested levels as legal air quality standards, including considerations on scientific evidence, public health, technological development, economic benefits and sociopolitical aspects. Do you agree with this approach?

We disagree with this approach. High air pollutant concentrations have been linked to a wide range of cardiovascular and respiratory diseases. For instance, NO₂ can damage our respiratory tracts and increase asthma risk.³ Particulate matter is known to cause health problems by reducing lung function and exacerbating respiratory symptoms.⁴ Additionally, O₃ pollution can lead to breathing difficulties such as shortness of breath, wheezing and coughing.⁵

It is important to note that technological developments and economic benefits do not change the impact of air pollution on our health. There is no justification for the government to adopt a wait-and-see approach in implementing more stringent AQO levels. On the contrary, the government should set a higher levels and develop policies and measures that effectively achieve the established targets.

3. What are your views on the proposed tightening of five prevailing AQOs and introducing three new AQOs in the current review?

We strongly believe that the government should set more ambitious AQOs in order to expedite air quality improvements. Despite current efforts, NO₂ concentration remains high and there is even an upward trend in O₃ concentration. However, the government is demonstrating minimal ambition in curbing air pollutants. With the exception of the 1-hour NO₂ limit, the proposed limits of both NO₂ and O₃ are set at WHO's lowest interim targets (IT-1). Furthermore, the concentration limits of PM₁₀ and PM_{2.5} are only being tightened from IT-2 to IT-3.

As mentioned in our response to Q2, the government's ability to meet the proposed air

³ [Queensland Government – Nitrogen oxides](#)

⁴ [United States Environmental Protection Agency – Health and Environmental Effects of Particulate Matter \(PM\)](#)

⁵ [American Lung Association - Ozone](#)

quality standards should not be hindered by technological or economic constraints. The government should aim to establish the strictest air quality standards and make every effort to rapidly reduce air pollution, ensuring a liveable city for its residents.

4. Do you have any suggestions for the next AQOs review?

Air pollution is a significant contributor to mortality, causing millions of death annually and burdening the healthcare system. In fact, the current standards established by the government are easily achievable. However, in order to effectively safeguard public health and enhance air quality, the government must set more ambitious AQOs targets and implement decisive measures to reduce pollution levels.

1. Hong Kong must accelerate the electrification of public and commercial vehicles while continuing to prioritise public transport and discourage reliance on private cars as a long-term transportation management strategy.
2. The transition to electric vehicle should be supported by financial disincentives and measures to address traffic congestion caused by both electric and internal combustion engine private vehicles. It is crucial for Hong Kong to establish Electronic Road Pricing in central business districts and busy roads to encourage motorists to adopt sustainable modes of transportation.
3. Given the significant carbon and air pollutant emissions from the transport sector, Hong Kong must invest in the development of walking and cycling infrastructure to facilitate low-carbon and sustainable transportation modes.
4. Hong Kong needs to enhance collaboration with the Greater Bay Area to address air pollution through joint efforts on monitoring and control measures, innovation in new energy vehicles, and the development of renewable energy sources.