



### **CAN's response to the Environmental Assessment of the Third Runway**

The Airport Authority Hong Kong (AA) has released Environmental Impact Assessment (EIA) Report on their Third Runway project recently. CAN found the assessments too optimistic as it claimed that residents and air quality would not be highly affected. According to their estimates for year 2031, there will be “relatively insignificant changes” to the concentration of accumulated NO<sub>2</sub> and particulates (including PM<sub>10</sub> and PM<sub>2.5</sub>) emitted by Three Runway System in the surrounding areas, which concluded that “operation of the project will not result in adverse residual air quality impacts”.

#### **Over optimistic on reaching Hong Kong's air quality objectives**

The report compared the assessment on the Three Runway System and the Two Runway System, it stated that the growth rate of pollutants (such as NO<sub>2</sub>, PM and SO<sub>2</sub>) in affected areas is less than 3%, and both short-term and long-term health risk are ‘considered acceptable’.

CAN finds the report unacceptable as the assumption that “the level of air pollution’s hazard to human life is acceptable” is based on the prediction that all pollutants will be within the current “Air Quality Objectives (AQO) by then. However, our current air quality has not even reached our own “Air Quality Objectives”, let alone reaching the World Health Organization (WHO)’s ultimate guidelines, which are the safe levels. Take SO<sub>2</sub> as an example, local AQO level is now updated WHO’s interim Target 1 (125µg), which is far from WHO’s ultimate standard of 20µg. The report chose a much lax AQOs as the index of health risk assessment and it cannot reflect the true hazard to public health.

#### **Ignore the fact that current AQOs will be updated**

Also, the report simulated the peak in aviation industry in 2031 with current AQOs. Due to the difference between current AQOs and WHO standards, the report did not take into consideration that the current AQOs will be evaluated every five year. There are at least three opportunities (in 2018, 2023, 2028) to modify AQOs before 2031. The report only compared their simulated air quality with the current AQOs.

#### **Ozone is not regulated**

Moreover, the Third Runway EIA Report has not mentioned about the impacts of the Third Runway on ozone concentration.

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In point 5.1.3.31, the report quoted from HKUST 2010 Airport Operational Air Quality Study Findings and stated *“The Table suggests that the high ozone in Tung Chung is due to regional contribution. Moreover, the decrease in O<sub>3</sub> across the PH1 Station to TC Station is due to the reaction of ozone by the NO<sub>x</sub> emission generated from the airport related activities.”*

And from point 5.1.3.14, *“NO emissions from the HKIA may slightly reduce the O<sub>3</sub> concentration at nearby receptors, including Tung Chung, through photochemical processes.”*

However, the report failed to mention the complicated interactions among ozone, nitrogen oxides (NO<sub>x</sub>) and Volatile Organic Compounds (VOC). Under some circumstances, ozone will be produced by NO<sub>x</sub> and VOC through photosynthesis, thus, the more the NO<sub>x</sub> that airport activities produce, the higher the concentration of ozone could result.

Ozone consists of high irritancy; human health will be affected through excessive inhalation, such as irritating eyes, and damages to the respiratory system, lung and central nervous system. Tung Chung residents are already suffering from the high concentration of ozone due to the regional influence; the Third Runway System will definitely worsen the situation.

Furthermore, NO<sub>x</sub> and VOC are not standardized by AQOs, it is doubtful that if the concentration exceeds the limit. Thus, CAN requests to consider ozone in the Third Runway EIA Report, and set limits for unstandardized pollutants, especially NO<sub>x</sub> and VOC.

#### Accumulated impacts of the projects in Lantau

The Hong Kong Airport Authority refused to consider other upcoming construction works on the Lantau Island and nearby islands, which led to the lack of assessment in accumulated constructional and operational effects. In the first six months of 2014, Tung Chung ranks third in terms of hours reaching serious level (10+) in Air Quality Health Index. Consider the development of Hong Kong-Zhuhai-Macao Bridge and artificial island in the future. The Environmental Protection Department indicated that construction is the main reason for increase of pollutants earlier this year, but the Third Runway EIA Report only addressed a few simple mitigation measures, which are obviously insufficient.

According to the Hedley Environmental Index by the University of Hong Kong, there are more than 3000 pre-mature deaths and HKD 400 billion economic losses per year.

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CAN hopes the Hong Kong Airport Authority, as a statutory organization, be responsible and conduct a comprehensive assessment, including consideration of environment, society and public health, not just focusing on the economic growth and ignoring the social costs.

We urge the Hong Kong Airport Authority to provide more raw data on the situation and propose effective mitigation measures.

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