



HKUST

Division of Environment

S E M I N A R

The Air Quality Impact of Aviation Emissions

by

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Abstract

The World Health Organization estimates that more than 1,000,000 people die prematurely each year due to (outdoor) air pollution. This is based on epidemiological evidence, which shows a statistically significant association between long-term fine particulate matter (PM) exposure and increased risk of early death due to cardiopulmonary diseases and lung cancer.

Unlike the emissions of other sectors, the aviation-attributable PM_{2.5} has impacts at multiple scales – from the locality of the emissions at airports where local spikes in pollution occur through to changes in global air quality due to aircrafts emissions at cruise level. Recent research has found that the current aircraft-attributable air quality impact could cause ~10,000 global premature mortalities every year, of which ~110 and ~160 premature deaths occur in the vicinity of airports in the UK and US, respectively.

The International Civil Aviation Organization forecasts that the global aviation emissions in 2020 are projected to be ~70% higher than those in 2005. In the US, the aviation has increased in the past three decades and is forecast to grow 5% annually. Similar to the US, the aviations in the UK and Asia are also projected to grow 3-11% and 5-6% every year, respectively. Therefore, the air quality and health impacts due to aviation emissions become increasingly important to be quantified and mitigated.

Date: 2 January 2013 (Wednesday)

Time: 11:00am

Venue: Room 1003, IENV (Lift 4)

~ All are welcome ~