The world out of breath

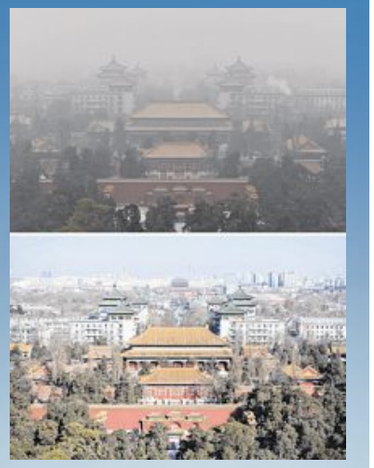
Since the 1980s, air pollution events – worsened by climate patterns such as El Nino – have claimed the lives of about 135 million people. **Elise Wong** highlights some of the recent episodes.

Middle East sandstorms (2022)

- In May 2022, sandstorms hit Middle Eastern countries such as Saudi Arabia, Iraq and Kuwait. By mid-May, about 7,000 Iraq residents were hospitalised due to breathing problems.
- Sandstorms have become more frequent in the region due to factors such as deforestation, overgrazing and the overuse of river water.

Beijing 'air-pocalypse' (2013)

- A thick cloak of smog shrouded Beijing in January, spurring a school to build a purified air dome over sports fields.
- The persistent haze, caused by coal burning and vehicle emissions, was worsened by a lack of wind. A 2017 study linked the "air-pocalypse" to Arctic sea ice loss in late 2012 and heavy snowfall in Siberia, which altered wind patterns.



Canadian wildfires and fiery New York (2023)

- The 2023 wildfire season marked Canada's largest recorded area burned (below). The country's wildfire risk stems from factors such as lightning-induced fires and the greater flammability of dry vegetation, both worsened by climate change.
- Smoke from the wildfires reached New York, turning the city's sky a fiery orange, and causing a surge in asthma-related symptoms. The city's hospitals saw a jump in recorded cases — of 261 per day — up from about 180.

California wildfires (2018)

- Severe drought, caused by global warming, led to destructive fires in California.
- The August 2018 wildfire season was the deadliest one on record in the state, killing more than 85 people.

Delhi smog (2016)

- In November 2016, Delhi experienced severe smog with visibility of as low as 300m, caused by biomass burning and Diwali firecrackers.
- An estimated 15,000 people died prematurely in Delhi from PM2.5 pollution-related illnesses in 2016.

Transboundary South-east Asian haze (2015)

- Historically caused by forest fires in Sumatra, Indonesia, hazy conditions intensified in June to October 2015 due to El Nino.
- It was the region's worst pollution event, causing more than 100,000 premature deaths in Indonesia, Malaysia and Singapore (below).

Australian bushfires (2019–2020)

- Experts suggest climate change and drought contributed to the severity of the Australian bushfires. In December 2019, Monash, a Canberra suburb, had an Air Quality Index reading of more than 25 times the "hazardous" level.
- Bushfire smoke in 2019 caused over 400 deaths, and hospitalised more than 3,000 people for respiratory problems.

Sources: ENVIRONMENTAL RESEARCH LETTERS JOURNAL, LANCET GLOBAL BURDEN OF DISEASE RESOURCE CENTRE, UNIVERSITY OF TASMANIA, NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE, ATMOSPHERIC POLLUTION RESEARCH JOURNAL, PROCESS SAFETY AND ENVIRONMENTAL PROTECTION JOURNAL, YALE UNIVERSITY

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