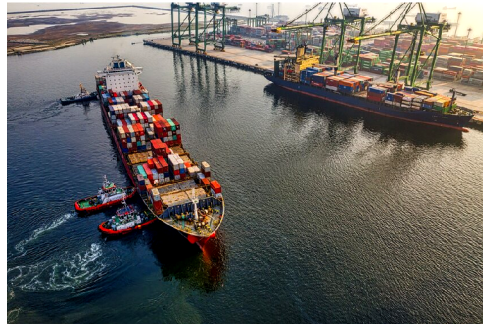


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## Pollutant emissions in seaports likely to have spiked from Covid



Researchers from NTU have modelled that pollutant emissions from the shipping sector increased significantly in major international seaports during the COVID-19 pandemic.

The findings serve as a stark contrast against findings from the NASA Earth Observatory that the freeze in industrial processes and human activity arising from the pandemic resulted in generally lower air pollution.

In Singapore, the NTU research team found that emissions were modelled to have more than doubled (123 per cent), during the pandemic period, while they increased twofold in Los Angeles (100 per cent), almost two-thirds (65 per cent) in Long Beach, California, and over a quarter (27 per cent) in Hamburg, Germany.

The NTU study modelled that ship emissions in all four ports increased by an average of 79 per cent because of the prolonged turnaround time in port, said the researchers, with extended 'hotelling' time at berth and anchorage areas as longer operational times were needed due to pandemic-related delays

The research team's computations of pollutant emissions were from July 2020 to July 2021, which was at the height of the pandemic. The findings were compared to the whole of 2019 which is taken as the baseline year with business-as-usual emissions.

The pollutants studied in the research were carbon dioxide, sulphur oxide, nitrogen oxide, particulate matter, carbon monoxide and methane.

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