

## Environmental Research, Technology Demonstration and Conference Project

<b>ECF Project:</b>	ECF 2018-36
<b>Project Title:</b>	Investigation of high-ozone episodes in Southern China due to distant tropical cyclones
<b>Principal Investigator:</b>	Dr Lam Yun Fat, Nicky, Department of Geography, The University of Hong Kong
<b>Total Approved Grant:</b>	\$869,000
<b>Duration:</b>	2/1/2020 to 1/9/2022
<b>Project Status/Remarks:</b>	On-going
<b>Project Scope:</b>	This project will systematically study the effects of increasing tropical cyclones (TC) intensity on the strength of TC subsidence and regional heat wave and ozone air quality. It will first use observational data (both air quality and meteorology) from historical TCs to understand the relationship among the meteorological factors and ozone concentration in the presence of a distant TC. Furthermore, sensitivity simulations using WRF-CMAQ will be used to decipher how TC characteristics (position / intensity) influence local meteorology (temperature / vertical and horizontal winds / solar radiation / relative humidity, etc.) and trigger the formation of a heat wave and a high ozone condition. Success of the proposed research will provide a fundamental understanding on the formation of TC induced high ozone heat-wave episodes so that effective mitigation may become possible.
<b>Summary of the Findings/Outcomes:</b>	To be available upon completion of the project