

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2021-19
Project Title:	Diversity of phytoplankton species in Hong Kong coastal waters
Principal Investigator:	Professor Liu Hongbin, Department of Ocean Science, The Hong Kong University of Science and Technology
Total Approved Grant:	\$492,000
Duration:	1/4/2022 to 31/3/2024
Project Status/Remarks:	On-going
Project Scope:	<p>Phytoplankton are the primary producers and the base of the food chain in marine ecosystems. Hong Kong coastal waters are a hotspot of biodiversity for phytoplankton due to the influence of the Pearl River discharge, the oceanic water of the South China Sea, and the China Coastal Current that flows from north. However, detailed records of phytoplankton species and their spatial and temporal distribution pattern in Hong Kong waters are lacking. Meanwhile, the rapid development in the Pearl River Delta region has had a great impact in the environments, as large amounts of inorganic and organic nutrients and pollutants are discharged to the Pearl River estuary and adjacent waters, resulting in eutrophication and harmful algal bloom. In this study, we will attempt to provide a detailed checklist of phytoplankton species in Hong Kong coastal waters by sampling four representative sites monthly for a year. The species diversity of three major genera of diatoms that account for the majority of phytoplankton biomass in Hong Kong waters but are difficult to classify to species level using traditional optical microscope will be solved using molecular approaches. An illustration book covering 150-200 common phytoplankton species of Hong Kong waters will be published.</p>
Summary of the Findings/Outcomes:	To be available upon completion of the project