Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2020-08
Project Title:	Revealing benthic habitats and sessile epibenthic biodiversity in Victoria Harbour - A preliminary study
Principal Investigator:	Dr Chan Lai Leo, Department of Biomedical Sciences and State Key Laboratory of Marine Pollution, City University of Hong Kong
Total Approved Grant:	$699,713
Duration:	1/5/2021 to 30/4/2023
Project Status/Remarks:	Completed
Project Scope:	This study aims to systematically survey and document the sessile epibenthic biodiversity, in particular hard and soft corals, in the Victoria Harbour. The project team will survey selected sites within the harbour, based on selection criteria and results of the trial survey. A three-tier survey design will be implemented to record the sessile benthic biodiversity in each site. Through documentation of the existing coral diversity within the Victoria Harbour, and sharing the information with the general public via multimedia, the project team can promote local marine biodiversity and the benefit of the Harbour Area Treatment Scheme; and support the Biodiversity Strategy and Action Plan. The project team will also provide the baseline data and a standard survey protocol for future quantitative and regular surveys on sessile marine epibenthic biodiversity within the Victoria Harbour.
Summary of the Findings/Outcomes:	This research was a preliminary study on the benthic habitats and coral communities in Victoria Harbour, Hong Kong. We have studied five benthic communities within Victoria Harbour around natural shorelines, including: Green Island, Hong Kong Museum of Coastal Defense, Devil's Peak, Cape Collinson Lighthouse, and Fat Tong Chau. A total of 35 species of sessile epifauna were identified under the taxa groups: black coral, stony corals, and octocorals. Using our mapping protocol, we were able to quantify the area of coral coverage within each site, which ranged from 9.18 ha to 33.14 ha. The result of this study provides a baseline data for coral biodiversity within the area using underwater mapping protocols, as well as an indicator of water quality and liveability for marine organisms. Our data is used to assess the recovery of the benthic ecosystem resulting from the water improvement after the implementation of the Harbour Area Treatment Scheme (HATS) and for future monitoring purposes.