

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2022-120
Project Title:	Environment and Conservation Fund - Reconstruction of Food Web in the Southern Marine Waters of Hong Kong using Gut Content Metabarcoding
Principal Investigator:	Dr Chiu Man Ying, Department of Biology, Hong Kong Baptist University
Total Approved Grant:	\$500,000
Duration:	1/9/2023 to 31/12/2024
Project Status/Remarks:	On-going
Project Scope:	Information on the food web and trophic relationships is critical to inform policy decisions on marine conservation and fisheries management. The project proposes to conduct fish gut content DNA metabarcoding to unravel the trophic relationships and reconstruct a food web in the marine environment of southern Hong Kong waters. While recent advances in DNA metabarcoding have revolutionised the analysis of animal diets, this method requires large sample sizes and lethal sampling of consumers and prey as well as a comprehensive prey DNA dataset. This study proposes to tap into the samples (collected in 2022) and the corresponding DNA dataset (to be generated in 2023) in another project team's funded project (Project title: Diversity, abundance and distribution of epifauna from southern Hong Kong waters; Funding scheme: Lantau Conservation Fund; Start date: December 2021). This study will identify functionally important species and taxa groups whose subsistence directly favours ecosystem health and integrity of the Hong Kong marine environment. From a management perspective, the results of the proposed study can help monitor and predict ecosystem-level responses in face of anthropogenic stressors. The project is also in line with the Hong Kong Government's Biodiversity Strategy and Action Plan.
Summary of the Findings/ Outcomes:	To be available upon completion of the project