

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2017-66
Project Title:	The application of multiple bioindicators on marine pollution monitoring
Principal Investigator:	Dr James Kar-Hei FANG, Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University
Total Approved Grant:	\$495,000
Duration:	1/7/2018 to 31/03/2021
Project Status/Remarks:	On-going
Project Scope:	<p>This project aims to apply 15 bioindicators of the green-lipped mussels (<i>Perna viridis</i>) on quantifying the pollution levels in Hong Kong waters, and based on their inter-relationships, to develop a suite of cost-effective biological tools that can be routinely used in monitoring programs. The project proposes to use three cellular markers of effect along with five cellular markers of exposure. These cellular responses will be related to three bioindicators of growth capability of the mussels and to their body burdens of four main groups of pollutants using multivariate statistics. This ecotoxicological approach will provide important biological information complementary to the physicochemical data collected for water/sediment quality monitoring. Combining the two data sets will enable the evaluation and prediction of biological consequences resulting from these pollutants. Comparing the results to be obtained in this project with other findings during the period 2004-2012 can detect the changes of the biological effects in the Victoria Harbour.</p>
Summary of the Findings/Outcomes:	To be available upon completion of the project