

Environmental Research, Technology Demonstration and Conference Project

ECF Project:	ECF 2022-107
Project Title:	Environment and Conservation Fund - Assessing and monitoring ecological dynamics of seagrass ecosystems in Hong Kong: Tools for management and restoration efforts
Principal Investigator:	Dr Gaitan Espitia Juan Diego, School of Biological Sciences, The University of Hong Kong
Total Approved Grant:	\$2,307,296
Duration:	On-going
Project Status/Remarks:	To be commenced
Project Scope:	<p>Seagrasses are important keystone species in coastal ecosystems. However, their natural populations are declining globally mainly as a result of Anthropogenic activities. Hong Kong is not the exception to these trends. The five species of seagrasses present in the coastal waters (<i>Zostera japonica</i>, <i>Ruppia maritima</i>, <i>Halophila ovalis</i>, <i>H. minor</i> and <i>H. beccarii</i>) are under major threat from local extinction driven by pollution, rapid coastal development and habitat modifications. The impact of their loss has profound implications for the ecosystem services they provide and the socio-economic well-being of local communities. In order to prevent the extirpation of seagrasses in Hong Kong, it is needed to develop proactive conservation and management programs. However, there is limited information about the ecology of local seagrasses, their spatio-temporal dynamics, health status and adaptive capacity. Lacking this important information hinders the potential for seagrass conservation and management in Hong Kong. This proposal targets this major knowledge gap using an integrative approach, providing fundamental tools and high-resolution information regarding i) distribution & population dynamics (growth, recruitment, mortality); ii) their genetic diversity and adaptive capacity; iii) the associated biodiversity & ecological functions; iv) the impacts of human activities (land reclamation, pollution) on different seagrass species; and finally v) the tools and guidelines for effective seagrass restoration in Hong Kong.</p>
Summary of the Findings/ Outcomes:	To be available upon completion of the project