

## Environmental Research, Technology Demonstration and Conference Project

<b>ECF Project:</b>	ECF 2021-78
<b>Project Title:</b>	Establishing ecological redundancy baseline for Hong Kong mangroves
<b>Principal Investigator:</b>	Dr Benoit Thibodeau, School of Life Sciences, The Chinese University of Hong Kong
<b>Total Approved Grant:</b>	\$1,302,050
<b>Duration:</b>	1/6/2022 to 30/11/2024
<b>Project Status/Remarks:</b>	On-going
<b>Project Scope:</b>	<p>A recent study on the ecological redundancy of invertebrate fauna in the mangrove of Tung Chung revealed a much lower ecological redundancy than anticipated. Thus, a modest local loss of invertebrate diversity could have significant negative consequences for this forest, with cascading effects for adjacent ecosystems. These results are in line with a global compilation that highlighted extremely low redundancy in mangrove invertebrate fauna worldwide. Unravelling the pattern of faunal mediated ecosystem functionality is crucial for assessing the vulnerability of mangrove forests to anthropogenic impact and provides a novel approach to planning their effective conservation and restoration in Hong Kong.</p> <p>Therefore, this project aims to establish the ecological redundancy baseline for Hong Kong mangroves using a cutting-edge isotopic approach. This new approach was ground-tested in Tung Chung mangrove and revealed subtle feeding specializations in congeneric, or closely phylogenetically related, species that could not be identified using traditional techniques. This project will deliver novel information crucial to assess the vulnerability to anthropogenic impact of the different mangrove forests in Hong Kong. Even if they are small, Hong Kong mangrove hosts highly diverse invertebrate assemblages, representing true biodiversity reservoir that deserve specific effective conservation strategies.</p>
<b>Summary of the Findings/Outcomes:</b>	To be available upon completion of the project