HONG KONG OFFSHORE LNG TERMINAL PROJECT
MARINE CONSERVATION ENHANCEMENT FUND / FISHERIES ENHANCEMENT FUND
COMPLETION REPORT

Funding Scheme:	**Seasonal monitoring of beach litter in western and southern waters of Hong Kong using aerial drone – a prerequisite for setting up marine conservation strategy**			
Project Number:	MCEF20011			
Project Title:	Seasonal monitoring of beach litter in western and southern waters of Hong Kong using aerial drone – a prerequisite for setting up marine conservation strategy			
Name of Organisation:	Hong Kong Metropolitan University			
Project Period:	From:	1 Jan 22	To:	31 Dec 23
Date of Report Submission:	21 Feb 2024			

I certify that this report and statement of account are correct and that the goods and services purchased and acquired are necessary for the activities of the project and that the prices are fair and reasonable.

Note:
This report shall be completed and signed by the Principal Investigator of the project as stated in the application form submitted.

Information of the Principal Investigator *For reasons of confidentiality, the information remains undisclosed

Name:	CHEN JIANLIN
Position Held:	*Assistant Professor*
Signature:	
Official Chop of Organisation:	

1. Project schedule

Commencement Date		Completion Date	
Original	Actual	Original	Expected / Actual
1 Jan 22	1 Jan 22	31 Dec 23	31 Dec 23

2. Executive summary

This research report on beach litter in Hong Kong utilized aerial drones to conduct comprehensive surveys across ecologically significant sites, providing key findings and implications for addressing this pervasive environmental challenge.

The study specifically focused on the western and southern waters of Hong Kong, which are particularly vulnerable to marine debris, especially during the wet season. By employing commercial aerial drones, the researchers were able to accurately quantify beach litter across 12 strategically chosen sites, spanning from the northwestern New Territories to the southern reaches of Hong Kong Island.

The findings of the study revealed valuable insights into the extent and nature of beach litter in Hong Kong. The researchers assessed the accuracy of drone surveys in comparison to manual surveys, demonstrating the reliability of the drone-based approach. Additionally, the research examined the distribution of litter during both wet and dry seasons, shedding light on the temporal variation of beach litter accumulation. Furthermore, the study evaluated site cleanliness, providing valuable information for future marine conservation and litter mitigation efforts.

The implications of this research are significant. The methodology developed through this study offers a practical and reliable approach to beach litter monitoring, which can be disseminated to interested public or organizational entities. The insights gained from this research contribute to a deeper understanding of utilizing drones for seasonal beach litter monitoring in the Hong Kong region. This understanding can facilitate the development of waste management strategies, ecological conservation efforts, and the preservation of marine environments. By informing decision-making processes and enabling proactive measures, this research supports the effective addressing of the pressing environmental issue of beach litter in Hong Kong.

The total data collection covered period of 18 months, ranging from wet to dry season in Hong Kong. Based on the result, each site has be ranked according its cleanliness. It was found that the distribution of marine debris can be significantly affected by the seasons, which can be an indicator of the source of marine debris in Hong Kong waters.

Overall, the research report on beach litter in Hong Kong, utilizing aerial drones for comprehensive surveys, provides valuable findings and implications for marine conservation strategies and the preservation of the marine environment.