

# 珊瑚移種研究

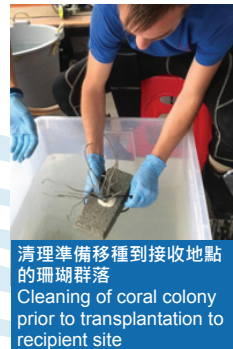
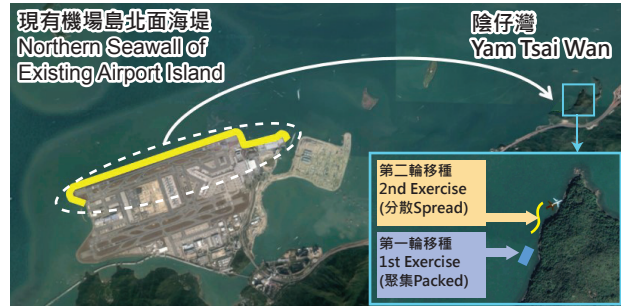
## Coral Transplantation Study

三跑道系統項目的環評報告估計，填海工程將會影響現有機場島北面海堤的柳珊瑚群落。根據環境許可證的要求，香港機場管理局（機管局）承諾進行珊瑚移種，並將附著在可移動石塊上的珊瑚移至北大嶼山的接收地點——陰仔灣。

The Environmental Impact Assessment for the Three-Runway System project anticipated that gorgonian coral communities (*Guaiaogorgia* sp.) at the northern seawall of the existing Airport Island would be impacted by the reclamation works. According to Environmental Permit requirements, Airport Authority Hong Kong (AAHK) is committed to carrying out coral translocation, in which corals attached to moveable boulders were translocated to a recipient site at Yam Tsai Wan (YTW) on North Lantau.

機管局在環境許可證的法定要求外，進一步完成了全港首項大型柳珊瑚移種計劃。研究人員取下附著在不可移動石塊上的珊瑚，並分兩階段共移種超過1,000個珊瑚群落及珊瑚斷片至陰仔灣。

As a "beyond statutory requirements" initiative, AAHK completed the first ever large scale gorgonian coral transplantation in Hong Kong. Researchers removed corals from the immovable boulders and transplanted them to YTW. Two rounds of transplantation were conducted for the study with a total of over 1,000 coral colonies and fragments transplanted.



### 第一輪珊瑚移種

#### First round of coral transplantation

時間 Time	2017年初 Early 2017
珊瑚移種規模 Scale of transplantation	約50個珊瑚群落及450個珊瑚斷片 Some 50 coral colonies and 450 coral fragments
結果 Result	3個受監察的珊瑚群落存活 Three monitored colonies survived
汲取經驗 Lessons learned	<ul style="list-style-type: none"> <li>珊瑚群落比珊瑚斷片存活較好 Colonies survived better than fragments</li> <li>移種珊瑚的高死亡率及脫落情況受不利的環境因素相互影響，包括移種位置的高沉積率、颱風和極端的季節性水溫 High mortality and detachment rate of transplanted corals resulted from an interplay of particularly adverse environmental factors, including high sedimentation rates, typhoon disturbance and extreme seasonal water temperatures at the recipient location</li> <li>移種珊瑚及對照（現有）珊瑚均發現有高死亡率的狀況 High mortality rate was observed in both transplanted and control (naturally existing) corals</li> </ul>

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### 第二輪珊瑚移種

#### Second round of coral transplantation

時間 Time	2018年初 Early 2018
珊瑚移種規模 Scale of transplantation	超過500個珊瑚群落 Over 500 coral colonies
結果 Result	<p>98%受監察的珊瑚群落在移種16個月後仍然健康存活</p> <p>98% of the monitored transplanted colonies were healthy with high live tissue coverage after 16 months of the transplantation</p>
汲取經驗 Lessons learned	<ul style="list-style-type: none"> <li>移種到陰仔灣其他位置，儘量減少不利的環境因素 Transplanted in an alternative location in YTW minimises adverse environmental factors</li> <li>珊瑚群落沿海岸移種，位於水流較大且沉積物較少的區域，有助珊瑚生存 Transplanted colonies spread along the coast in an area exposed to higher current flow and less sedimentation to help the survival of corals</li> </ul>

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整體而言，珊瑚移種研究取得成果，並為在香港水域成功進行柳珊瑚移種提供了非常有用的資料。

Overall, the coral transplantation study was fruitful and provided very useful information for a successful gorgonian coral transplantation in Hong Kong waters.

#### 監察過程中在移種後的珊瑚上及其周圍觀察到的海洋動物 Marine fauna observed on and around the transplanted corals during monitoring

