

投放幼鱼先导计划 投放后监察 Fish Restocking Pilot Test Post-release Monitoring



香港机场管理局（机管局）正实行改善海洋生态及渔业提升策略，以助提升北大屿山水域的生态价值及渔业资源。其中一项措施是投放幼鱼先导计划。机管局已在香港国际机场进出口航道区的人工海堤附近投放幼鱼，并进行为期六个月的监察以评估投放计划的效用。机管局采用了不同的监察方法以增加成功追踪幼鱼的机会，包括利用传统的渔业调查方法、诱饵式水下远程摄录系统及声学监察。

Airport Authority Hong Kong (AAHK) is implementing a Marine Ecology and Fisheries Enhancement Strategy to help enhance marine ecology and fisheries resources in North Lantau waters. One initiative is a fish restocking pilot test involving the release of fish fingerlings near the artificial seawall within the Hong Kong International Airport Approach Area and a six-month post-release monitoring exercise to evaluate restocking effectiveness. Different methods of fish monitoring were adopted to ensure the best chance of tracking released fish, including traditional fisheries surveys, a Baited Remote Underwater Video System (BRUVS) and the use of acoustic monitoring.

诱饵式水下远程摄录系统 BRUVS

诱饵式水下远程摄录系统由防水摄录机、水下灯光系统及放置在摄录机前的鱼饵组成。鱼饵会吸引海鱼，令摄录机能近距离监察海鱼以识别海鱼品种。此技术属于非侵略性的方法，适用于能见度较低的水下环境。

BRUVS comprises a waterproof camera, an underwater lighting system and fish bait placed in front of the camera. The bait attracts fish and close-up images allow identification of the fishes attracted to the bait. This technique is a non-invasive method that is well suited to low visibility underwater environments.



诱饵式水下远程摄录系统上设有面包、磷虾及人工饲料的混合鱼饵以吸引海鱼
BRUVS with bait bag containing a mixture of bread, krill and artificial fish feed to attract fish



诱饵式水下远程摄录系统拍摄的影像
Image captured by BRUVS

声学监察 Acoustic Monitoring

声学监察是将声学标签植入部分已投放幼鱼，并以声波接收器记录幼鱼的位置及动态。此方法能有助理解幼鱼投放后的动态及栖息环境。

Acoustic monitoring involves implanting acoustic tags into some of the released fishes and using an acoustic receiver to record the location and movement of released fish over time. This method facilitates a much better understanding of fish movements after release as well as the preferred habitat of the released fishes.

声学标签植入到幼鱼腹腔位置
Acoustic tags are implanted into the peritoneal cavity



声波接收器
Acoustic receiver



渔业调查 Fisheries Survey

以传统手钓及浸笼等的捕获方法有助监察在调查地点是否有已投放幼鱼出没及记录捕获的海鱼大小。所有捕获的海鱼在完成纪录后会放回监察位置以减低对鱼群造成的影响。

Traditional capture methods such as hand-lining and cage-trapping are also used to record the presence or absence of released fish at survey locations and the size of captured fishes is also recorded. All captured fishes are released back to the survey location to minimise disturbance to local fish assemblages.



监察结果显示在投放幼鱼位置、以及在大澳、深屈、礁石湾、沙螺湾的自然海岸和机场岛及东涌的人工海堤附近均发现投放的幼鱼。这结果有助评估投放幼鱼计划的效用，以及进一步研究未来在香港西面水域进行投放幼鱼计划的可行性。

Monitoring results indicated the released fishes were detected near the release location and at natural shores near Tai O, Sham Wat, San Shek Wan, Sha Lo Wan and at artificial seawalls near Airport Island and Tung Chung. The results would be useful to help evaluate the effectiveness of the fish restocking programme and study the feasibility of future fish restocking exercises in the western Hong Kong waters.

- ▲ 投放幼鱼后录得监察信号的位置
Locations of Signal Detected for Released Fish
- 声学监察的位置
Locations for Acoustic Monitoring
- ★ 投放诱饵式水下远程摄录系统及渔业调查的位置
Locations for BRUVS Deployment and Fisheries Surveys

