

THE ISSUE

The popularity of recreational clam digging in Hong Kong has increased in recent years. Mudflats or sandflats in the city, for example at Pak Nai and Ting Kok in the New Territories and Tung Chung Bay, and Shui Hau Wan on Lantau Island, teem with hundreds of weekend and holiday visitors, primarily looking to collect clams.

Shui Hau Wan faces high levels of disturbance from recreational activities such as paragliding and clam digging on the intertidal mudflats. Unregulated clam digging is a serious concern, can disturb the habitat of the endangered Chinese horseshoe crab and lead to juvenile horseshoe crabs being trampled. It may also change the composition and density of the benthic community structure and the availability of prey (such as polychaete). Large Asiatic hard clam have all but disappeared due to this unregulated activity. The litter left behind by clam diggers pollutes the environment, and increases the chance of animals being entangled and killed. Shui Hau was listed as a marine refuse priority site in 2015.

Despite the ecological consequence, there are no statutory regulations for clam digging in Hong Kong, unless the activity takes place within the boundaries of an existing marine park. Currently only 5% of Hong Kong waters are designated or planned as marine protected areas (MPA) by 2023.

WHAT WE ARE DOING

To reduce anthropogenic impact and encourage sustainable use of marine resources, WWF launched the city's first clam conservation management measures in 2018. WWF worked with academics and Shui Hau residents to develop a self-regulating code of conduct for clam digging and develop a set of tools to reduce its negative impact.

The code of conduct can be applied to all clam digging sites in Hong Kong. They are designed to reduce the ecological impact of clam digging and include:

- Release small clams to give them a chance to grow and reproduce;
- Collect clams only for your own consumption, as overharvesting causes population decline;
- Use less destructive equipment, such as small hand-held shovels;
- Backfill clam holes to help the disturbed substratum to recover more quickly and prevent other organisms that have been dug up from being exposed to predators or heat stress.

To support the first item in the Code of Conduct, WWF has produced clam gauges designed for five of the most commonly harvested clam species at Shui Hau. Clam gauges set a minimum size for harvested clams. They are an effective interim conservation measure and are simple to use. By limiting the size of clams being harvested, clam gauges protect the young clams that are essential for the continued growth of the population. The gauges also contain essential

information on identifying different clam species by their shape and marking. Gauges have been used to regulate clam harvesting in other countries and prevent the exploitation of marine resources.

WWF-Hong Kong will continue to conduct ecological surveys at Shui Hau to monitor changes in clam population and size, and review if the current clam gauge size is adequate. Updated survey data showed that only one *Meretrix* sp. is found in 1m² area, so WWF tightened the recommended minimum harvesting size from 4cm in 2019 to 5cm in 2020, to help the population recover its numbers.

WWF has used questionnaires to investigate clam diggers' behaviour. Most recreational clam diggers have a fairly good understanding of conservation and 90% of them are willing to release immature clams. However, over 80% respondents had a looser definition of "small" than WWF's recommendation. The use of a clam gauge to provides a quick and easy way to check minimum harvesting size.

OUR ASK

Our call to the government to protect and conserve at least 30% of waters in Hong Kong effectively by 2030 includes Shui Hau as an area of top priority for immediate action, considering that the mangroves and intertidal mudflats support high biodiversity and serve as an important spawning and nursery ground for horseshoe crabs.

WWF's suggested conservation measures for Shui Hau are:

- Designate Shui Hau Wan and Pak Nai as Marine Protected Areas with zoning that gives the most ecologically sensitive area strict protection and allows regulated activities in the outer zone;
- Establish a highly-protected area for horseshoe crabs, including a limit on the number of people allowed to enter, regulation on clamming activities, and a regular monitoring and restoration programme;
- Adopt a community-based management approach. As demonstrated in WWF's project, local communities play an important role in educating visitors, ecological monitoring and protecting natural spaces;
- Implement measures to control gleaning (include clamming), including partial closures, a limit on the number of people and licenses or a quota system;
- Develop marine litter source reduction strategies, and arrange weekly clean-ups to ensure the cleanliness of the mangrove and wetland environment.