

## **Sea Turtle Conservation in Hong Kong SAR, China**

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Hong Kong, located in South China, is a cosmopolitan city of approximately 1,100 km<sup>2</sup> and amazingly harbours 260 plus islands in the territory (Fig.1). Out of the seven sea turtles species in the world, five species could be found in Hong Kong. They are green turtle (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), olive ridley (*Lepidochelys olivacea*), loggerhead (*Caretta caretta*) and hawksbill (*Eretmochelys imbricata*). Sea turtles are prevalently encountered in southern to eastern waters of Hong Kong, which may overlay with the distribution of coral and seaweed community in the more oceanic environment providing turtles with food and shelter.

Among the five sea turtle species recorded in Hong Kong, green turtle is the most commonly found and the only species that nests in Hong Kong. The regular nesting site situates at a sandy beach of 0.5 ha called Sham Wan of Lamma Island (22.191°N, 114.139°E) at the southeastern part of Hong Kong (Fig.2). Nesting season of green turtle in Hong Kong lasts from June to October. From 1998 until present, 3-7 clutches of eggs were delivered by female green turtles, each with about 100 eggs laid at an interval of 12 to 14 days in a nesting season.

A number of conservation measures have been in place to conserve the globally endangered sea turtles in Hong Kong and the region.

In Hong Kong, all sea turtle species are protected under local laws: the <Protection of Endangered Species of Animals and Plants Ordinance> and the <Wild Animals Protection Ordinance>. Under the <Protection of Endangered Species of Animals and

Plants Ordinance>, it is an offence to import, export, or possess any part of a sea turtle or its egg. To effectively protect the nesting turtle and its habitat, the nesting beach Sham Wan is designated as a “Restricted Area” under the <Wild Animals Protection Ordinance>, which forbids entry during the green turtle nesting season from June to October.

Before the onset of nesting season each year, management works are carried out at Sham Wan. These include removal of weeds which may hinder turtles coming ashore to nest or hatchlings to march off to the sea, regular monitoring of the site conditions and collection of refuse on the beach, etc. During nesting season, nature wardens of Agriculture, Fisheries and Conservation Department (AFCD) of the HKSAR government regularly conduct day-time and night-time patrol at Sham Wan to safeguard the nesting site and to protect nesting turtle and its eggs.

Green turtle eggs are generally left intact on site when environmental condition is suitable for natural incubation while staff of AFCD closely monitor the natural hatching process. On occasions that green turtle eggs are threatened by external factors in the natural nesting beach, such as inundation due to continuous heavy rainfall, artificial incubation of the eggs in controlled laboratory conditions is performed to enhance the hatching success. Since 1998, over 600 hatchlings from artificial incubation have been released from Sham Wan for their return to the wild.

For the purposes of identifying the migratory routes and movements of green turtles in South China Sea so as to pinpoint their migratory corridors, hotspots and foraging grounds in the region, AFCD has commenced a satellite tracking programme since 2002. According to the satellite tracking record, in 2002, a post-nesting female green

turtle from Hong Kong migrated to its foraging ground at waters off Wanning City of Hainan Island of China, which is about 500km from Hong Kong, in about 20 days (Chan et al., 2003). Another female green turtle migrated to its foraging ground in Dao Bach Long Vi of Vietnam, approximately 700 km from Hong Kong, within a month after nesting at Sham Wan in both 2003 and 2008 (Fig.3). In August 2010, a juvenile green turtle rescued from fishing net, after rehabilitation, was tagged and microchipped for identification, and released with satellite tag. The tracking result showed that the turtle travelled 170 km from the release locality in 54 days to reach and reside in the coastal fringes of Shanwei peninsular of South China (Ng and Wan, 2011) (Fig.4), which confirms the waters off Shanwei peninsular as a foraging ground for sea turtles (Chan et al., 2007).

With a view to better understanding the population structure and biology of sea turtles in the region, morphometric measurements and collection of samples for genetic analysis are conducted on stranded or rescued sea turtles, as well as necropsy of dead turtles to investigate the potential cause of death and threats to the population.

We recognize that the success for conserving sea turtles greatly hinges on public participation. Public reports on sea turtle sightings or strandings can assist the relevant parties in taking appropriate action promptly. Therefore, public engagement in sea turtle conservation work has been promoted and reinforced by AFCDD through educational occasions, such as public seminars and leaflet dissemination.

(words: 799)

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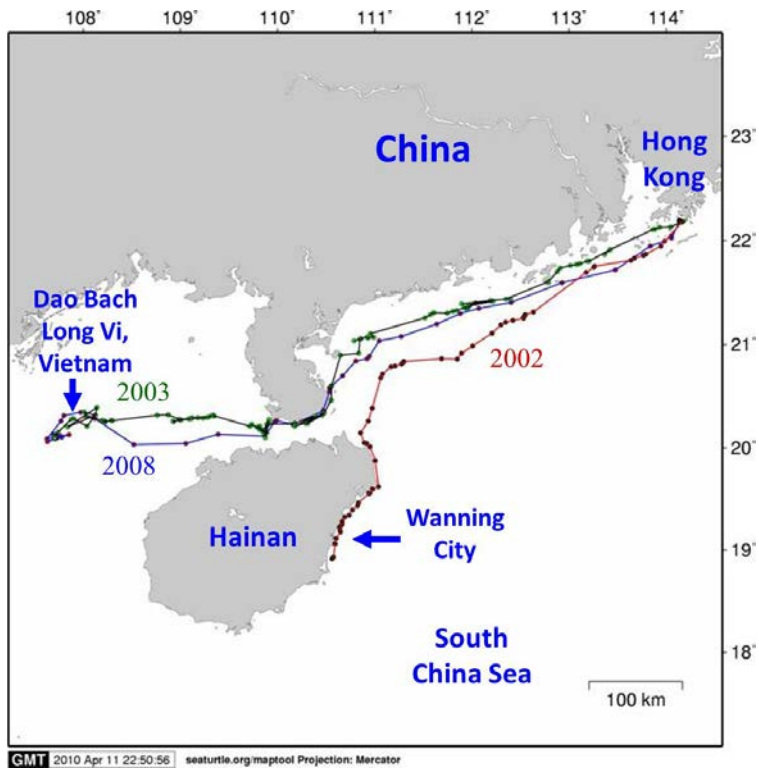
## Figure and Legend



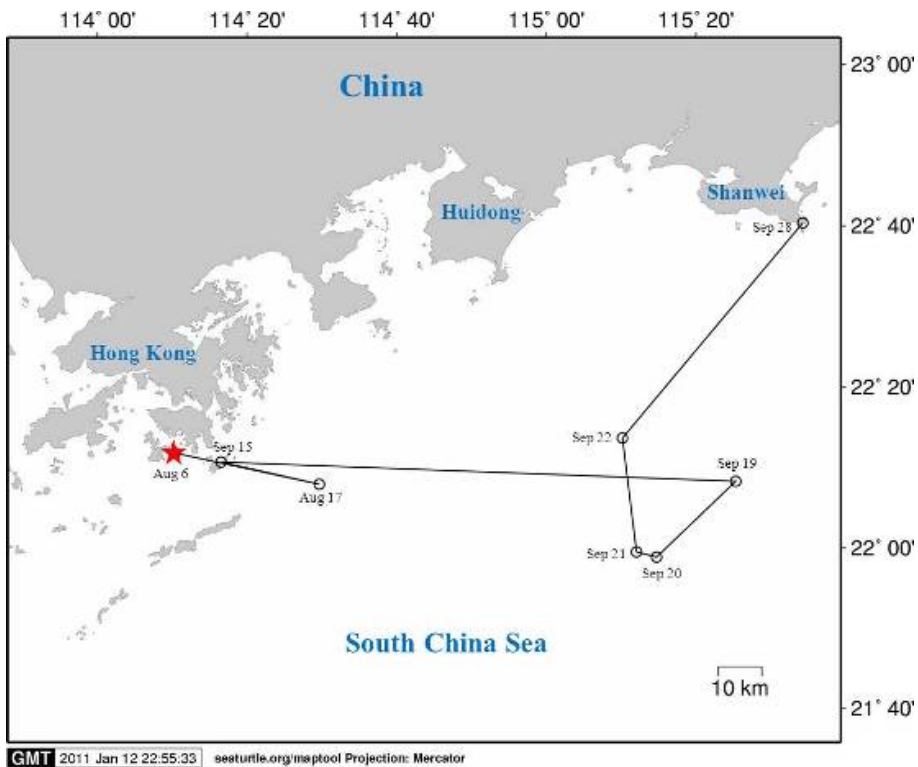
**Fig.1 Hong Kong SAR is located in South China. Star icon denotes the location of green turtle nesting site - Sham Wan at the southeastern part of Hong Kong.**



**Fig.2 Sham Wan, the nesting site of green turtle in Hong Kong.**



**Fig.3 Three post-nesting tracks of green turtles from Sham Wan of Hong Kong in the years 2002, 2003 and 2008.**



**Fig.4 Movement of the juvenile green turtle released from Hong Kong in August 2010. Star icon indicates the release locality.**