



**WWF**

**WWF-  
HONG KONG**

**35 YEARS  
OF CONSERVATION**

**REPORT**

**2017**

# WWF-HONG KONG'S MARINE HEALTH CHECK REPORT

# OUR SEA, OUR FUTURE



\*Photo simulation

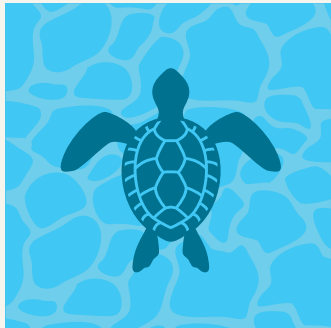


# CREATURE DISCOMFORT

## OUR DISAPPEARING MARINE SPECIES

The seas around Hong Kong are tied closely to its history and development. However, Hong Kong's marine environment is in rapid decline. Marine biodiversity faces a multitude of threats as the city has rapidly grown. Here, we provide a snapshot of five vulnerable ocean species that inhabit local waters and shores. They represent a range of wildlife from different levels of the marine food chain. Their future is currently uncertain but with the right measures we could turn their decline into recovery.

### GREEN TURTLE (*Chelonia mydas*)



Of the seven species of sea turtles found worldwide, the Green Turtle is the only one known to breed locally. The last remaining nesting site in local waters is found in Sham Wan on Lamma Island. Between 1998 and 2003, there were 10 records of nesting turtles. Since 2004, only two sightings were recorded, the last in 2012.

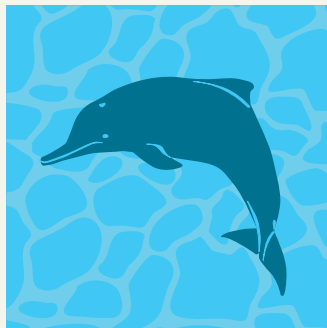


#### Threats:

Light and noise disturbance of nesting beaches; boat collisions; water pollution; entanglement by fishing nets; ingestion of marine litter.

### CHINESE WHITE DOLPHIN (*Sousa chinensis*)

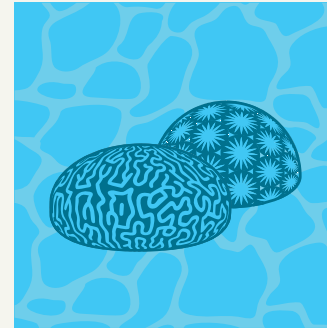
The Chinese White Dolphin is a top predator sensitive to multiple environmental impacts. It is an excellent indicator of the health of the marine ecosystem. Hong Kong is part of the home range for the population of the dolphins in the Pearl River Estuary. Today, just some 60 individuals range in Hong Kong waters – a decline of 60% over last 10 years. Their distribution is also shrinking – waters near Tai O down to the Sokos islands have become their remaining core habitats.



#### Threats:

Permanent and temporary habitat loss from construction and reclamation; disturbance from heavy marine traffic; underwater noise; water pollution; disturbance from dolphin watching activities.

### HARD CORAL



Surveys have shown the Hard Coral cover (> 60%) in major sites was quite stable from 2012 to 2016. However, cases of severe bio-erosion and mortality of coral in eastern waters such as Hoi Ha Wan and Wong Wan Chau have been reported in recent years and have raised concern.



#### Threats:

Anchor damage; water pollution; increased sediment levels from reclamation, dredging and construction; dumping abandoned fishing nets; bio-erosion and climate change; disturbance from recreational diving activities.

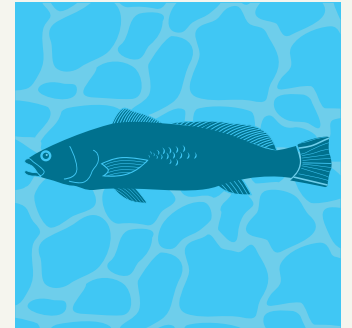
### CHINESE BAHABA (*Bahaba taipingensis*)

This critically endangered giant fish species in Hong Kong has been overfished 99% in the past 70 years mainly because of the high value of its swim bladder in Chinese medicine. Large breeding individuals have become so rare that in 2000/2001, the price of the Chinese Bahaba swim bladder was between US\$20,000 - \$64,000 per kg, 7 times higher than gold.

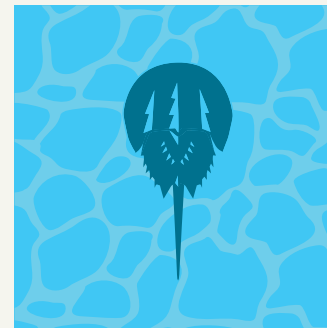


#### Threats:

Overfishing; marine pollution; destruction and deterioration of habitat from reclamation.



### HORSESHOE CRAB



The population of the two species of these "living fossils" – the Chinese Horseshoe Crab (*Tachypleus tridentatus*) and the Mangrove Horseshoe Crab (*Carcinoscorpius rotundicauda*) – once thrived on the sandy and muddy shores – of Hong Kong until the 1980's. Between 1980 – 2001, the number dropped drastically due to habitat destruction and human exploitation of adult horseshoe crabs for food and pharmaceutical use. The juvenile population of horseshoe crabs in Hong Kong is small and discrete. A slow rate of maturity suggests that these populations are fragile and vulnerable to local extirpation.



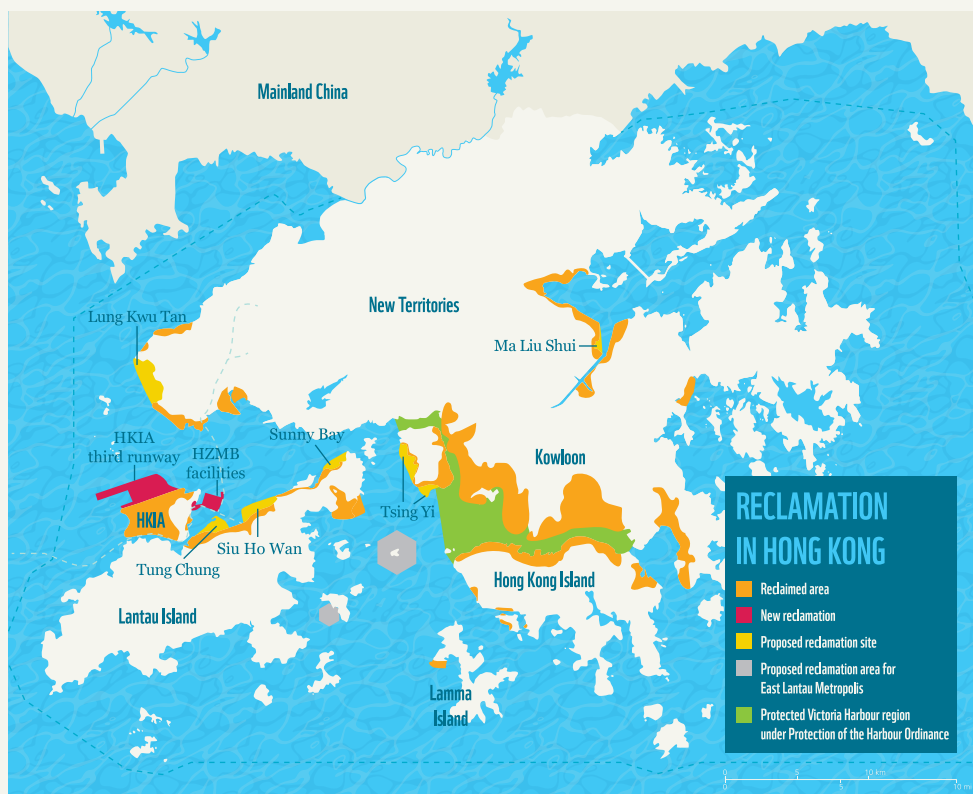
#### Threats:

Habitat destruction by reclamation; water pollution; disturbance from human recreational activities, e.g. sunset viewing, clam digging, razor shell fishing with salt.

# WAVE AFTER WAVE

## MULTIPLE DANGERS, MULTIPLE IMPACTS

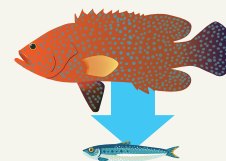
Many of Hong Kong's fish stocks are over-exploited. Increasing marine traffic exposes the Chinese White Dolphins to the risk of collision. The noise from marine traffic interferes with their echolocation and ability to navigate. Coastal habitats face continued development and reclamation, while our once beautiful sea has been polluted and strewn with litter.



## HABITAT DESTRUCTION FROM RECLAMATION AND DEVELOPMENT

About 7% of HK's current land area (7,019 ha out of 110,600 ha, equivalent to 367 Victoria Parks) is a result of reclamation since 1887.

Another 2,000 ha of sea areas are planned for reclamation and development in the decades ahead. Natural shorelines and marine habitats will be destroyed. Water flow will be restricted, inhibiting natural circulation and increasing sedimentation.



## BIG GUY, SMALL FRY

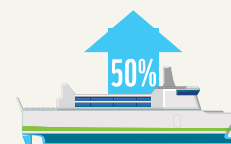
Local catch composition has changed from large, slow-growing, high-value species such as the Hong Kong Grouper to small, fast-growing, low-value species such as sardines.

## OVERFISHING FROM UNREGULATED FISHING PRACTICES

Our local waters once thrived with very rich fishery resources, providing food for the city. However, those resources have been in decline since the introduction of modern fishing fleets in 1980's. The fish catch records - show a gradual decrease from over 75,000 tons in 1980 to 34,000 tons in 2014 (Fish Marketing Organization data) with fishermen having to work much harder to catch ever dwindling stocks.

Current fishing practices contribute to over exploitation. Hong Kong does not have a long-term fisheries monitoring programme. The local fleet has no limit on catch size. There is rampant illegal fishing and weak enforcement. On a positive note, bottom and mid-level trawling - the most destructive fishing method - was banned by the Hong Kong government in 2012.

The livelihood of fishermen is being impacted, and most large predatory fish species have disappeared. Our marine ecosystem is seriously out of balance, with further decline inevitable...if we don't act now.



High speed passenger vessels from Hong Kong to Macau have increased by almost 50% since 1999, with almost 500 trips per day.

## DISTURBANCE FROM ESCALATING MARINE TRAFFIC

Hong Kong is one of the world's major ports. The busy shipping traffic, together with increasing trips around the Pearl River Delta by high speed vessels, fishing boats and leisure crafts contribute to marine disturbance.

Heavy marine traffic will increase the potential for vessels to strike and kill marine mammals. High frequency engine noises also interfere with the dolphins' hearing, communication and foraging behavior.



<sup>1</sup>On average, about 15,000 tons (= 3,750 garbage collection trucks<sup>2</sup>) of marine litter was collected by the Hong Kong government annually in the past ten years, still only a small portion of the actual marine litter covering our shores.

## MARINE LITTER POLLUTION

A marine litter study on 56 beaches in Hong Kong in the 90's revealed on average, there were 7,745 pieces of debris collected per kilometer of shoreline. Plastic and polystyrene debris accounted for 62.9% of the refuse. The situation was alarming at that time, but it remains unsolved today. The accumulation of the litter impacts marine species that ingest debris, causing starvation, sickness and death.

<sup>1</sup>The Hong Kong Marine Conservation Society (1997), Marine Debris Survey Report, 41 pp.

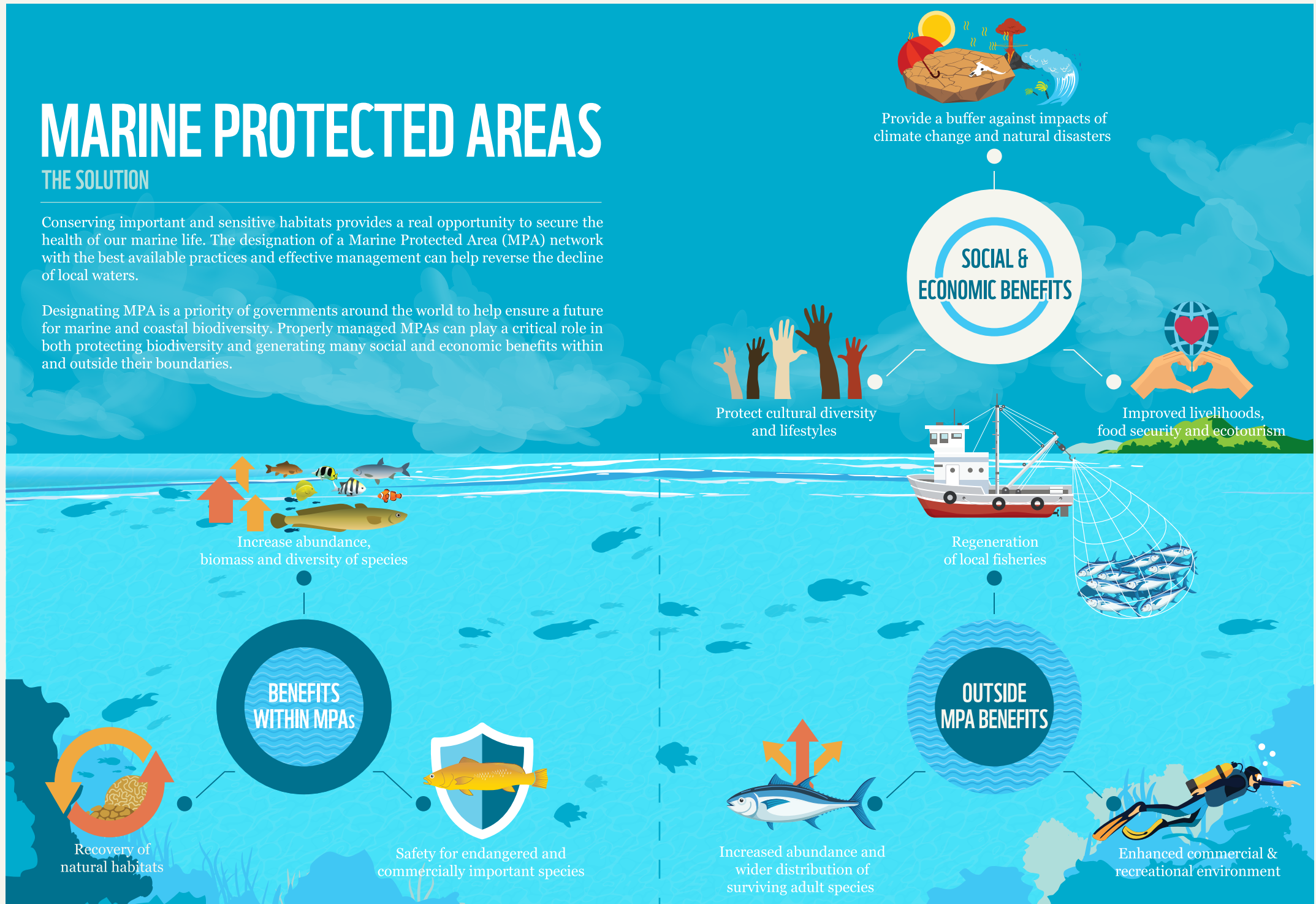
<sup>2</sup>Estimate based on garbage truck capacity at 4 tons each.

# MARINE PROTECTED AREAS

## THE SOLUTION

Conserving important and sensitive habitats provides a real opportunity to secure the health of our marine life. The designation of a Marine Protected Area (MPA) network with the best available practices and effective management can help reverse the decline of local waters.

Designating MPA is a priority of governments around the world to help ensure a future for marine and coastal biodiversity. Properly managed MPAs can play a critical role in both protecting biodiversity and generating many social and economic benefits within and outside their boundaries.

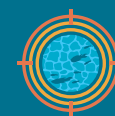




# 20-YEAR OVERVIEW OF HONG KONG'S MARINE PARK SYSTEM



The first batch of Marine Protected Areas (MPAs) in Hong Kong was designated in 1996. 20 years later, WWF commissioned a review at the Simon F.S. Li Marine Science Laboratory, The Chinese University of Hong Kong and found numerous shortcomings:



No clear target or date for future total MPA areas



No transparent long-term MPA "Health Check" data



Minimal stakeholder involvement  
ie. Academics, Fishermen and Conservationists



No clear management plan for existing MPAs



No proactive MPA selection process

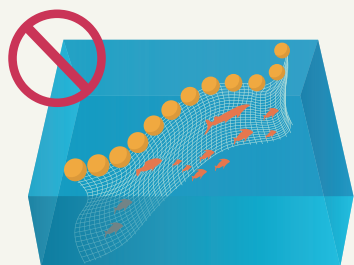


Fishing with permits is still allowed in MPAs

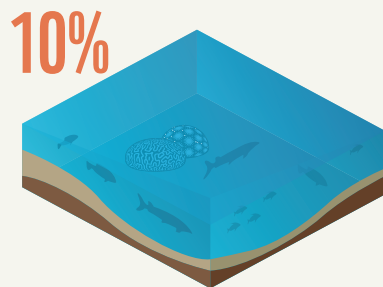
# NO MORE “OUT OF SIGHT, OUT OF MIND”

The public's perception, attitudes and support towards Hong Kong's marine health is the key for better habitat conservation. This information could be used to help inform marine policy development.

WWF-Hong Kong commissioned the Public Opinion Programme at The University of Hong Kong to conduct an opinion poll regarding the health of our marine environment and public views on Marine Protected Areas (MPA), and found that the waters around Hong Kong are not 'out of sight out of mind' - in fact the public is demanding more protection for them.



**78% of interviewees support regulating or banning of commercial fishing in marine park**



**75% interviewees support putting 10% of Hong Kong waters into MPAs by 2020**

*\*The poll was conducted by phone interview with 1,558 Hongkongers interviewed from October to December 2016*

## SEA: THE FUTURE

Time is running out. By taking action, it is still not too late to reverse the decline in the health of our local waters. Let's work together and give hope for the future of our seas.



**Designate 10% of Hong Kong's waters as MPA for habitat and species protection by 2020 and 30% by 2030**



**Formulate conservation plans with clear vision and solid timeframes for all marine ecological hotspots in Hong Kong**



**Put in place an open, transparent and long-term monitoring programme for the marine environment within MPAs**



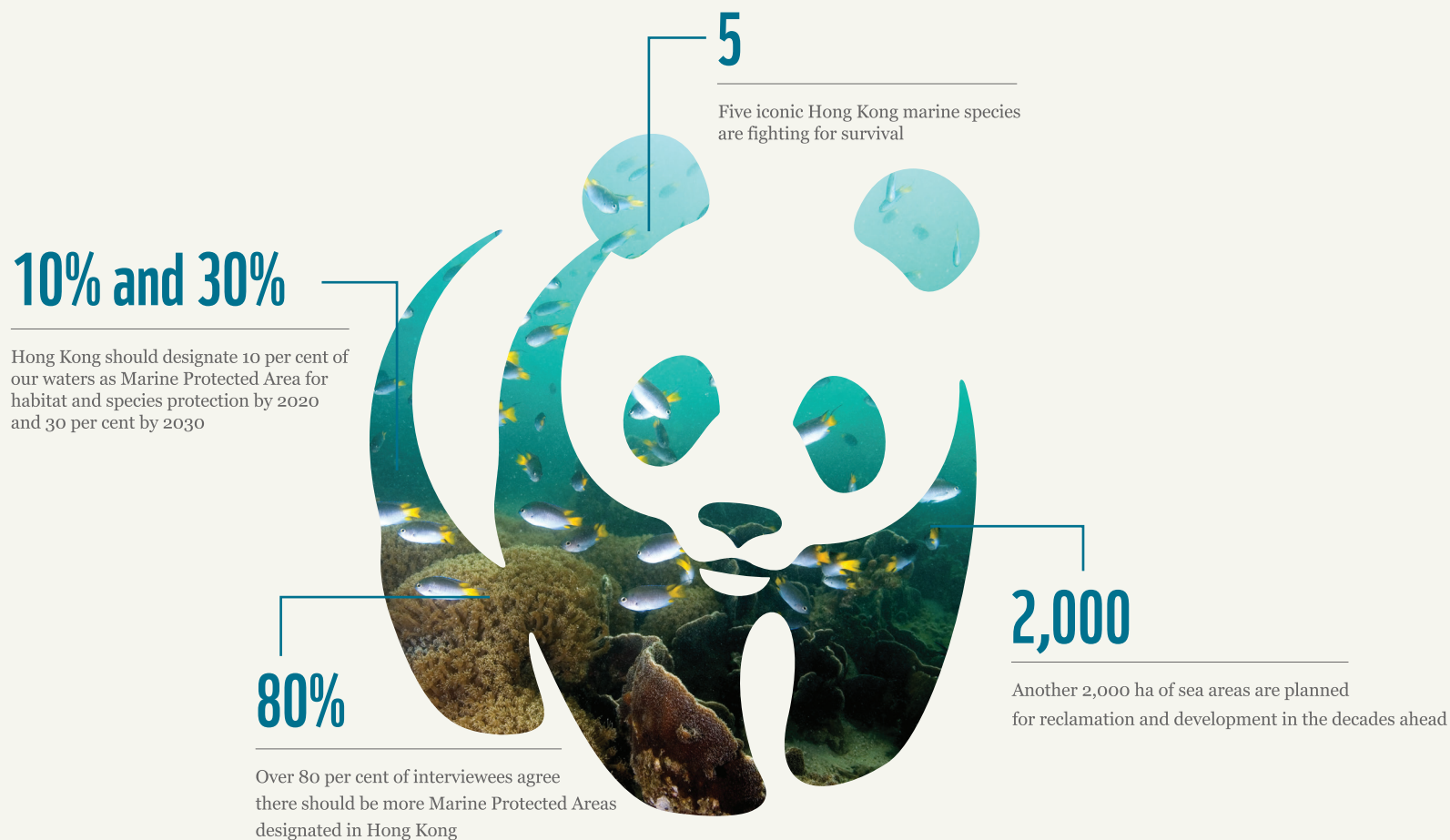
**Develop holistic MPA conservation plans that adapt and respond to ensure the health of the MPA improves**



**Early and transparent involvement of all stakeholders for any conservation or management plans**



# WWF-Hong Kong's Marine Health Check Report



**together possible™**

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Together, we can create a sustainable future for humans and nature.

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WWF-Hong Kong, 15/F Manhattan Centre, 8 Kwai Cheong Road, Kwai Chung N.T. Hong Kong

香港新界葵涌葵昌路8號萬泰中心15樓世界自然基金會香港分會

Tel 電話 : (852) 2526 1011 Fax 傳真 : (852) 2845 2734 Email 電郵 : [wwf@wwf.org.hk](mailto:wwf@wwf.org.hk)

Registered Name 註冊名稱 : World Wide Fund For Nature Hong Kong 世界自然 (香港) 基金會

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