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**WWF's Submission on the Marine Litter Issue
For the Legislative Council
Subcommittee on Merchant Shipping (Prevention of Pollution by
Garbage) Regulation and Merchant Shipping (Prevention of Pollution by
Garbage) Regulation (Repeal) Regulation**

Hong Kong waters and the coastal areas have been affected by the long-standing marine refuse problem, in which marine littering from vessels is one of the important sources. WWF-Hong Kong welcomes the government's decision to repeal the existing Merchant Shipping (Prevention of Pollution by Garbage) Regulation and enact a new one according to the latest requirements as prescribed by the International Maritime Organization to control the discharge of garbage from ships. WWF believes the new regulation can improve the situation of marine littering more effectively and is favourable for the protection of our sea and marine ecology. However, WWF is also concerned that the monitoring and enforcement intensity by the law enforcement departments are not sufficient to act in concert with the regulation to effectively deter marine littering activities. The current marine refuse condition and enforcement status in Hong Kong is presented below together with some recommendations to improve the government's enforcement insufficiency.

A) The local pollution situation caused by marine refuse

1) Case Study: Aberdeen Typhoon Shelter

Aberdeen coastal water is one of the survey areas of Coastal Watch Project organized by WWF. Large amount of domestic waste including plastic bottles, cutlery, food packaging and fast food containers etc has been frequently found floating in the water. According to local marine users, improper littering by some fishermen is one of the reasons of the marine litter accumulation. Polystyrene boxes are frequently found to be disposed into the sea as revealed from the Coastal Watch surveys, and the potential sources are the fish market and fishing vessels.

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Although Marine Department (MD) claims that cleanup operation is performed by scavenging motor boats within the typhoon shelter from 0800 to 1830 seven days a week, the situation has remained serious which reflects the inadequate enforcement effort.

2) Case Study: Lap Sap Wan

According to the results of the Lap Sap Wan survey conducted by Coastal Watch, the total weight of the litter at the beach was estimated to be 185 tonnes with an estimated total of 12 million individual pieces of litter. In general, of the various materials found, plastic litter constituted the highest proportion at 89% (Figure 1). Unclassified fragments from different materials ranked top among the various categories of litter, especially polystyrene fragments (Table 1). There were also more single-use plastic items like plastic packaging, straws and drinks bottles as compared to other types of litter. These single-use plastic items can be generated from both land-based and marine-based activities, and discharge from merchant vessels is one of the potential sources.

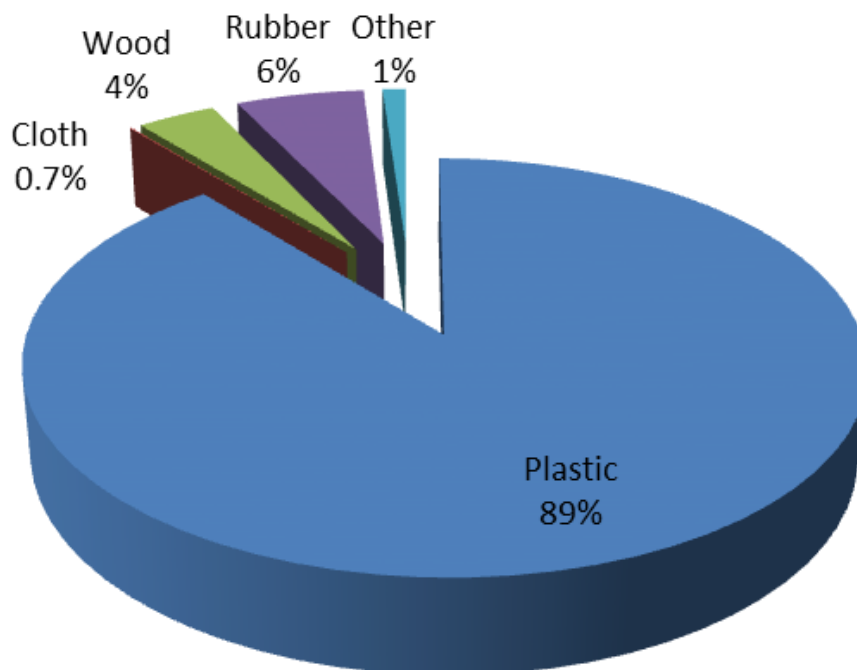


Figure 1: Composition of marine refuse found at Lap Sap Wan

Regarding the serious accumulation of marine litter at Lap Sap Wan, MD replied in LC Paper No. CB(4)955/14-15(03) that site investigation near Lap Sap Wan had been conducted and no floating litter was found. Since wind direction and water current affect the distribution of marine refuse, this *ad hoc* investigation would not be sufficient enough to reveal the normal floating refuse situation at the area. Although the “Investigation on the Sources and Fates of Marine Refuse in Hong Kong” conducted by Government’s Inter-departmental Working Group on Clean Shorelines indicated that more than 80% of marine refuse in Hong Kong waters originates from land-based sources, it also

Rank	Category	Percentage
1	Polystyrene - fragments	68.3%
2	Rubber fragments	6.0%
3	Plastic fragments -hard	3.1%
4	Wood fragments	3.1%
5	Other bottle caps, pump and spray lids	1.9%
6	Plastic packaging (wrappers) and film - fragments	1.8%
7	Drink bottle caps	1.4%
8	Straws & stirrers	1.4%
9	Drink bottles 1L and less	1.2%
10	Shoes, flip flops	1.1%

Table 1: Top Ten Categories of marine refuse found at Lap Sap Wan

clearly states that “*the specific source of individual types of refuse is not easy to determine due to multiple uses of products by a variety of user-groups. For example, a plastic beverage bottle can be land-based refuse from shoreline and recreational activities or marine-based refuse littered from a vessel*”. Therefore, the classification method adopted in the Study could not actually distinguish whether the single-used items were generated from land-based or marine-based sources. Moreover, marine-related activities should not be neglected as considerable amount of fishing nets, buoys and large polystyrene boxes as well as their respective fragments were found on the beach which point to the fishing industry.

Thus, we suggest that the general figure of “80% of marine refuse originates from land-based sources” can only serve as a general reference and it is not conclusive enough for MD to state that “*the refuse accumulated on the beach of Lap Sap Wan should not be mainly caused by discharge from vessels*”. More comprehensive monitoring and study is needed to investigate what causes the Lap Sap Wan’s situation.

B) The causes of floating marine refuse

1) Littering from marine vessels

WWF has received reports from various marine vessel operators that they have observed vessel operators (including yachts and fishing boats) disposing garbage into the sea. In addition, the

yellow garbage bags provided by MD to various vessels have also been found afloat on the sea or stranded at beaches, apparently being discarded from marine vessels.

2) Generated from marine-related activities

As pointed out by the government in LC Paper No. CB(4)955/14-15(02), “*according to the results of Hong Kong Reef Check and underwater ecological surveys, we have not found any trawl net left in the local coral areas*”. Hong Kong Reef Check surveys on the **hard coral** communities, while it is normal that no trawl net is found in hard coral areas by Reef Check because trawling is normally not conducted in these areas to avoid trawl nets being entangled or damaged by the hard corals. However, various octocorals (i.e. soft coral, gorgonian and seapen) inhabit deeper sea floors usually with soft sediments. Although trawling ban has been enacted since 31 Dec 2012, there are still illegal trawling activities in Hong Kong waters as reported by fishermen and villagers. It is expected that abandoned trawl nets from both recent trawling activities as well as those left in the past are still affecting certain coral communities.

Apart from abandoned trawl nets, other types of abandoned fishing gears like ghost nets also potentially poses serious impact on the growth of all sorts of corals. Ghost nets could damage corals through direct abrasion, covering coral which affects their photosynthesis and entangling them which may fragment them or overturn them in strong waves. Although trawl ban has already been implemented, the threats from other types of abandoned fishing gears on corals remain. More investigation should be done to reveal the distribution and amount of abandoned trawl nets as well as other marine debris and how they impact our local marine ecology.

C) Insufficient enforcement by the government

The cleanliness of marine environment depends on the collaboration of all stakeholders. MD regularly visit fishermen communities, yacht clubs, fish markets, marine work sites, mariculture farms and anchorages to publicize the message of keeping the sea clean to the persons-in-charge of the vessels and workers in these places, and to remind them to properly dispose of refuse generated from their operations and avoid dumping refuse into the sea. However, the information released by the government shows that the situation does not seem to be improved significantly by this work.

According to the information from “Port of Hong Kong Statistical Tables” published by Marine Department, the amount of floating litter collected annually since 2003 remains more or less stable at around 11000 to 12000 tonnes (Figure 2) which reflects garbage dumping has not been reduced much over the 11 years. On the other hand, the number of prosecution of marine littering cases has

reduced gradually from 131 cases in 1999 to 11 cases in 2014 (Figure 3). WWF doubts about this trend, and is concerned about the apparent reduction in enforcement intensity in view of the still serious marine litter condition.

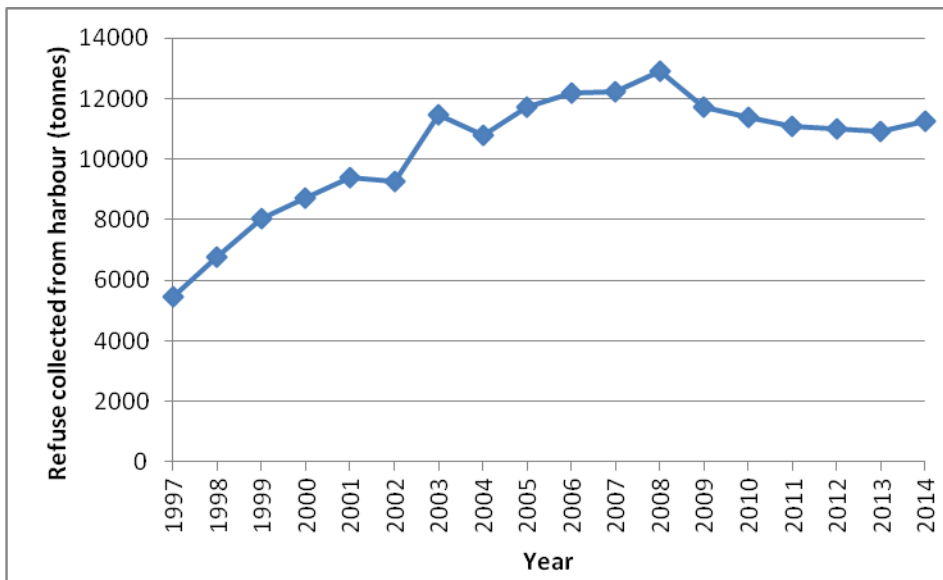


Figure 2: Floating refuse collected from harbor (tonnes) by Marine Department from 1997 to 2014 (Source: Marine Department)

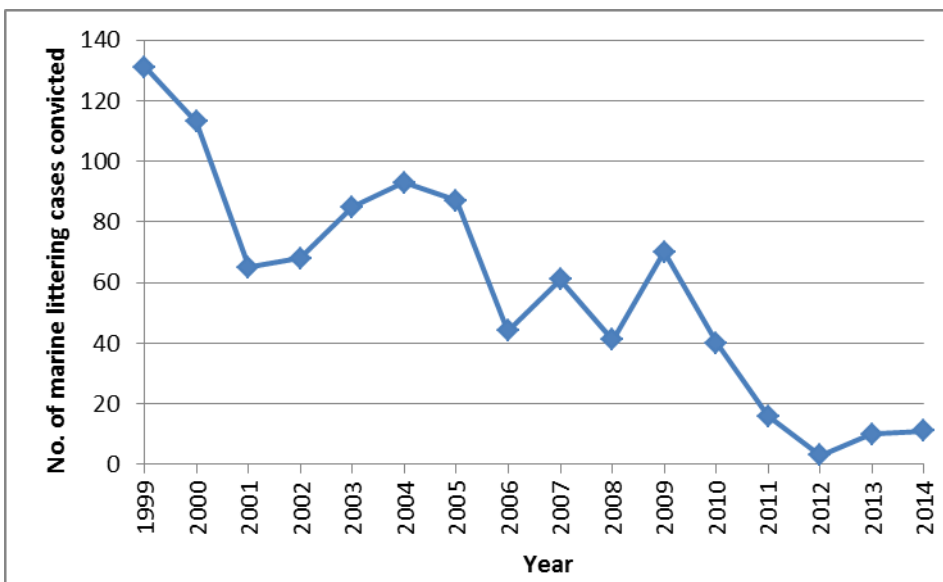


Figure 3: Number of marine littering cases convicted from 1999 to 2014. (Source: Marine Department)

The amount of marine refuse collected from vessels arranged by MD has maintained at the annual amount of 4000-4500 tonnes from 2006 to 2014 (Figure 4). If this service can be extended to cover more areas, we expect the amount of refuse directly disposed from vessels to the sea would be significantly reduced which will in return ease the workload of marine litter scavenging from the sea

and at the shore. Nevertheless, in the long run, education is very important to change the attitude of the vessel owners to dispose garbage responsibly.

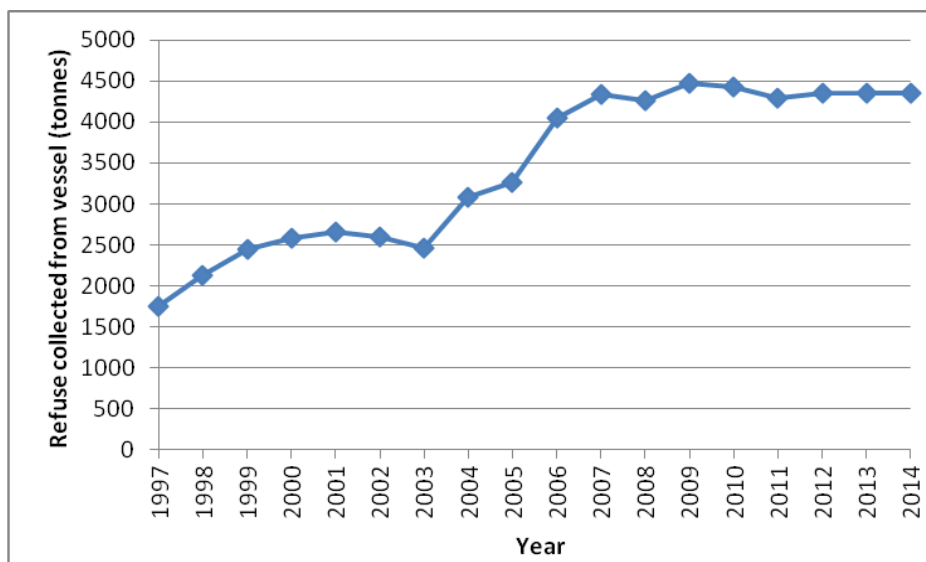


Figure 4: Domestic refuse collected from vessels (tonnes) by Marine Department from 1997 to 2014 (Source: Marine Department)

Conclusions:

The government should optimize the efforts by the responsible departments in order to improve the marine litter situation in Hong Kong. WWF-Hong Kong requests:

1. In order to deter the illegal garbage disposal activities, MD and other law enforcement departments should identify marine littering black spots and increase enforcement intensity at those areas so as to keep our shorelines clean.
2. The impact of fishery-related marine refuse, especially ghost nets, has not been systematically assessed in Hong Kong. Regular monitoring of the ghost net impact as well as organizing underwater cleanup actions by AFCD are essential to safeguard our fragile marine ecosystems.
3. To further reduce the amount of litter disposed into the sea, MD should reassess the scale and effort of domestic refuse collection from vessels in order to find the most cost-effective balance of refuse collection and floating litter scavenging.
4. MD should evaluate the effectiveness of delivering the 'keeping the sea clean' message to marine users in order to induce significant positive change of their attitude.