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Panel on Environmental Affairs

Meeting on 22 May 2017

Background brief on tackling of marine refuse prepared by the Legislative Council Secretariat

Purpose

This paper provides background information on the tackling of marine refuse in Hong Kong, and provides a summary of the major views and concerns expressed by Members when related issues were discussed by the relevant committees of the Legislative Council ("LegCo").

Background

Marine refuse situation in Hong Kong

2. Marine refuse consists of floating refuse and shoreline refuse washed up on the shores. Floating refuse comprises a wide range of materials such as plastic items and foam packaging materials. According to the Administration, over 80% of floating refuse comes from the land. There is a noticeable increase in floating refuse in the harbour following heavy rain as water courses and storm water drains carry refuse on land into the sea. Floating refuse drifts by wind and tide and consequently scatters over large areas, and tends to accumulate near the coastline as shoreline refuse.

Collection of marine refuse

3. Over 70% of the marine refuse is collected by the Marine Department ("MD"), and the rest by the Leisure and Cultural Services Department ("LCSD"), the Agriculture, Fisheries and Conservation Department ("AFCD"), and the Food and Environmental Hygiene Department ("FEHD") according to

the locations of which they are in charge.¹ MD has outsourced the marine refuse cleansing services since 2005 to collect floating refuse, as well as domestic refuse from vessels moored at anchorages and inside typhoon shelters. MD's marine refuse cleansing contractor provides about 70 vessels to perform daily marine refuse scavenging and collection services. MD's pollution control staff perform daily patrol duties to monitor the cleanliness condition of the sea and the contractor's work.² MD also regularly conducts joint operations with FEHD to clear refuse accumulated at foreshores other than gazetted beaches.

4. Refuse sunk to the sea bottom may become seabed refuse if not decomposed. Removal of seabed refuse is conducted on a need basis. AFCD cleans up seabed refuse affecting marine parks, marine reserves and sites with high ecological value, and other key coral sites under the annual Hong Kong Reef Check. MD will remove objects found to be affecting navigational safety in fairways and typhoon shelters. The Civil Engineering and Development Department will remove sediments together with seabed refuse during maintenance dredging to ensure navigational safety. In addition, marine works project proponents may also be required to carry out seabed dredging including the removal of seabed refuse affecting their marine works on a need basis.

Legislative control on marine littering

5. Marine littering control is enforced by MD, AFCD, FEHD and LCSD under the relevant legislation of their respective purviews:

- (a) Fixed Penalty (Public Cleanliness Offences) Ordinance (Cap. 570) – Cap. 570 was introduced in 2002 to enforce minor public cleanliness offences including marine littering and nearshore littering. The offender is liable to a fixed penalty of \$1,500;
- (b) Summary Offences Ordinance (Cap. 228) – Section 4D of Cap. 228 stipulates penalties for marine littering. An offender is liable to a fine of \$10,000 and imprisonment for six months. If the offence is committed from a vessel or premises, the owner/master/proprietor/occupier of the vessel/premises is liable to a maximum fine of \$50,000 and to imprisonment for one year; and

¹ For example, LCSD, AFCD and FEHD are responsible for collection of marine refuse in gazetted beaches, marine parks and marine reserves, and unallocated coastal areas respectively.

² A cleanliness index ranging from 0 to 10 is used to rate and control the contractor's performance. Score 10 stands for no floating refuse. When the cleanliness index of a particular area falls below 7 (the "satisfactory" level), the contractor is required to restore the satisfactory level condition within a designated period.

- (c) Marine Parks and Marine Reserves Regulation (Cap. 476A) – Section 9(1)(c) of the Regulation prohibits the deposit of litter within a marine park or marine reserve. An offender is liable to a maximum fine of \$25,000 and imprisonment for one year.

Improvement measures to address marine refuse problem

6. To enhance coordination among the relevant departments in addressing the marine refuse problem, the Administration set up an interdepartmental Working Group on Clean Shorelines ("the Working Group") in November 2012. In support of the Working Group, the Environmental Protection Department commissioned a consultant to conduct a study titled "Investigation on the Sources and Fates of Marine Refuse in Hong Kong" (commonly known as the "Marine Refuse Study") in 2013-2014 to investigate the sources, distribution and movement of marine refuse, and to suggest measures to further improve the cleanliness of Hong Kong waters and shorelines. The Marine Refuse Study has drawn up a list of priority sites which are more prone to refuse accumulation, and identified five key improvement areas to enhance the cleanliness of Hong Kong's shorelines. A summary of the improvement measures is in **Appendix I**.

Major views and concerns expressed by Members

7. The Panel on Environmental Affairs ("EA Panel") discussed collection of marine refuse and enforcement against marine littering at its meetings on 14 June 2013, 22 June 2015 and 23 January 2017. Members raised questions on marine refuse during examination of the Estimates of Expenditure 2016-2017 and 2017-2018. Related issues were also brought up at meetings of the Subcommittee on Merchant Shipping (Prevention of Pollution by Garbage) Regulation and Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Repeal) Regulation held in April and May 2015. In the 2016-2017 legislative session, Members raised questions at LegCo meetings concerning suspected dumping of refuse by Mainland vessels in the waters of Wanshan Qundao (Ladrones Islands) of Zhuhai which caused marine pollution in Hong Kong. The major views and concerns expressed by Members are summarized in the ensuing paragraphs.

Comprehensive plan to tackle marine refuse

8. Members opined that the Administration should formulate a comprehensive plan with specific targets and policies to address the marine refuse problem in Hong Kong, and deploy additional resources to remove marine refuse more frequently to minimize refuse accumulation in the marine environment.

9. The Administration advised that it had adopted a three-pronged strategy (including reducing waste generation at source, reducing the amount of refuse entering the marine environment, and removing refuse from the marine environment) under the Marine Refuse Study to tackle the marine refuse problem. It would enhance the cleanup frequency at priority sites which were prone to refuse accumulation due to their geographical locations. After implementation since April 2015 of the improvement measures recommended by the Working Group, the cleanliness of about 60% of these priority sites had shown noticeable improvement.

Illegal dumping of refuse near Hong Kong waters

10. Members expressed grave concern about the large quantity of marine refuse of Mainland origin carried into Hong Kong waters by ocean currents and washed up onto local beaches. Referring to media reports in 2016 about illegal dumping by Mainland vessels in the waters of Wanshan Qundao of Zhuhai, which was about 40 kilometres away from Lantau, Members had asked about the follow-up actions to be taken by the Administration to address the problem, including cooperation with relevant Mainland authorities, and assistance to be provided to Hong Kong fishermen whose catches were affected by floating refuse.

11. The Administration advised that, having received complaints from Hong Kong fishermen in August 2016 about suspected illegal dumping of industrial refuse in the waters of Wanshan Qundao, it had promptly relayed the case to the fisheries and marine authorities and the Department of Environmental Protection of Guangdong Province ("GDEPD"). According to GDEPD, the Mainland law enforcement agencies had already commenced operations both at sea and on land to proactively track down the illegal dumping activities. Vessels and personnel suspected of illegal activities had been detained and illegal marine dumping had been curbed. MD had also stepped up patrol in Hong Kong waters, in particular the offshore waters near Hong Kong's boundary, to check on the situation concerning floating refuse. In September 2016, Hong Kong and Guangdong agreed to set up the Hong Kong-Guangdong Marine Environmental Management Special Panel, under the framework of the Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection, to enhance exchange and communication on various regional marine environmental matters. The work of the Special Panel would include, among other things, setting up a notification and alert system on marine refuse issues and combating illegal marine dumping activities.

12. As there were reports on large quantity of refuse netted by Hong Kong fishermen that affected their catches and livelihoods, MD had set up two

24-hour hotlines through which fishermen might request MD to arrange a large refuse collection vessel for collection of netted refuse, if such refuse was too bulky for collection by the fleet of MD's contractor. MD would enhance the promotion of this service to fishermen.

Enforcement against marine littering and public education

13. Members urged the Administration to step up enforcement at nights when marine littering activities were more rampant, install surveillance cameras at black stops, source contractors using modern equipment such as mechanical scooping device fitted on ships to provide marine refuse collection services, and engage the tertiary education sector to develop advanced equipment to improve the efficiency of cleaning up marine refuse.

14. The Administration advised that MD would step up patrols and conduct special operations against marine littering. MD's Harbour Patrol Section operated 25 patrol boats enforcing marine legislation at various districts, six of which performed round-the-clock duty. The Pollution Control Unit of MD also performed daily patrol in Hong Kong waters to inspect the cleanliness condition of various zones of Hong Kong waters, monitor the contractor's performance according to the sea cleanliness index, and conduct enforcement actions against marine littering. Special operations at marine littering black spots, such as promenades and typhoon shelters, were conducted regularly and particularly during weekends and public holidays.

15. As regards members' suggestion to strengthen publicity and public education against marine littering, the Administration advised that MD had been carrying out continuous publicity and education activities to raise public awareness of keeping the sea clean. MD frequently worked with other government departments and non-governmental organizations to organize promotional activities, such as publicizing the message of keeping typhoon shelters clean to fishermen organizations during the periods of Lunar New Year and fish moratorium.

Latest development

16. At the meeting on 22 May 2017, the Administration will brief EA Panel on the work progress of tackling marine refuse and the way forward.

Relevant papers

17. A list of relevant papers is set out in **Appendix II**.

Council Business Division 1
Legislative Council Secretariat
16 May 2017

Summary of improvement measures recommended in the Marine Refuse Study conducted in 2013-2014 to address marine refuse problem

- I. Conducting publicity campaigns to engage the community to contribute and participate
 - (a) Maintaining and improving a dedicated website¹ as a platform for interaction with local community and the public
 - (b) Conducting monthly cleanup events coordinated by the Environmental Protection Department in partnership with community groups
 - (c) Conducting a beach cleanup event during the annual sand sculpture competition and beach carnival
 - (d) Conducting an underwater cleanup event at selected coral sites

- II. Promoting educational message to target groups, students and local community
 - (a) Promoting waste reduction and clean shorelines messages through programmes for target groups, including visitors to recreational venues, users of typhoon shelters and marinas, operators at fish and vegetable wholesale markets and major marine works sites, etc.
 - (b) Education against smoking at gazetted beaches
 - (c) Collaborating with Environmental Campaign Committee to promote "Marine Conservation, Greener and Cleaner Shorelines Programme", and developing educational tools for students
 - (d) Arranging printing of environmental message on garbage bags distributed to vessels in typhoon shelters for collection of their domestic garbage
 - (e) Conducting campaigns to promote related themes or messages and embracing the broader context of "Keeping Hong Kong Clean"

¹ http://www.epd.gov.hk/epd/clean_shorelines/

III. Providing support measures and facilities to reduce refuse entering the marine environment

- (a) Supporting community groups in launching cleanup operations and promotional activities by providing guidance information on organizing cleanup operation and publicizing their cleanup operations on the thematic website, providing gloves and garbage bags, arranging for refuse disposal and rendering assistance upon request
- (b) Supporting community groups in undertaking educational, research and other projects and activities for understanding, control and prevention of marine refuse
- (c) Providing more drinking fountains at gazetted beaches, parks, waterfront promenades, and other recreational venues
- (d) Conducting more frequent refuse removal from surface drainage (e.g. road gullies, upstream catchpits and storm drains)
- (e) Continuing to try out floating booms at storm drain/culvert outlets
- (f) Reviewing the locations, size and number of rubbish bins/waste separation bins, and the clearance frequency of the bins

IV. Enhancing efforts to remove refuse from the marine environment

- (a) Stepping up enforcement on marine littering through more regular patrols, and special operations after festive events at coastal locations which are popular places for festival celebration
- (b) Conducting land-based patrols soon after typhoons and organize subsequent cleanup by the Marine Department ("MD")
- (c) Considering deploying additional resources as necessary to set up shoreline cleanup by MD and carry out joint operation with concerned departments to remove refuse trapped at the foreshore during wet seasons
- (d) Stepping up cleansing at priority areas which are more prone to accumulate marine refuse as identified by the Marine Refuse Study, and enhance cleanup after festive events at coastal locations which are popular places for festival celebration

V. Engaging public participation to report marine littering and refuse problem

- (a) Putting up signage/posters/stickers at prominent locations to encourage the public to report marine littering and refuse problem at sea and coastal areas through the 1823 hotline services
- (b) Educating the public to record key information in reporting marine littering
- (c) Updating key contacts of the relevant departments regularly for speedy referral and cleanup in handling complaints/report of marine refuse

[Source: Adapted from Appendix D of the [Marine Refuse Study Report](#) released by the Environmental Protection Department in April 2015.]

Tackling of marine refuse

List of relevant papers

Date	Event	Paper
14 June 2013	Meeting of the Panel on Environmental Affairs	Administration's paper on "Controlling the impact of dumping and dredging activities on the marine environment" (LC Paper No. CB(1)1269/12-13(03)) Minutes of meeting (LC Paper No. CB(1)1690/12-13)
April to May 2015	Subcommittee on Merchant Shipping (Prevention of Pollution by Garbage) Regulation and Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Repeal) Regulation	Legislative Council Brief (File Ref: THB(1)PML 8/10/90/8) Legal Service Division Report (LC Paper No. LS58/14-15) Report of the Subcommittee (LC Paper No. CB(4)1256/14-15)
22 June 2015	Meeting of the Panel on Environmental Affairs	Administration's paper on "Control on marine pollution from oil spillage, marine littering and floating refuse" (LC Paper No. CB(1)995/14-15(04)) Minutes of meeting (LC Paper No. CB(1)1267/14-15)
6 April 2016	Special meeting of the Finance Committee for examination of Estimates of Expenditure 2016-2017	Written question raised by a Member and Administration's reply (Reply serial number: ENB152)

Date	Event	Paper
23 January 2017	Policy briefing cum meeting of the Panel on Environmental Affairs	Administration's paper on "2017 Policy Address – Policy initiatives of Environment Bureau: Environmental protection" (LC Paper No. CB(1)451/16-17(01)) Minutes of meeting (LC Paper No. CB(1)683/16-17)
5 April 2017	Special meeting of the Finance Committee for examination of Estimates of Expenditure 2017-2018	Written questions raised by Members and Administration's replies (Reply serial numbers: ENB117 and 164)

Hyperlink to relevant document:

Government department	Document
Environmental Protection Department	Investigation on the Sources and Fates of Marine Refuse in Hong Kong: Study Report

Hyperlinks to relevant Council Questions:

Date	Council Question
16 November 2016	Press release on Council question (oral) raised by Hon Steven HO
14 December 2016	Press release on Council question (written) raised by Hon Kenneth LAU
15 February 2017	Press release on Council question (written) raised by Hon WU Chi-wai