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# Panel on Food Safety and Environmental Hygiene

## Updated background brief prepared by the Legislative Council Secretariat for the meeting on 10 January 2017

#### Anti-mosquito work

#### Purpose

This paper provides background information on the Administration's work in mosquito control and prevention, and summarizes major concerns of members of the Panel on Food Safety and Environmental Hygiene ("the Panel") on the subject.

#### Background

2. According to the Administration, apart from causing nuisance to human beings, some species of mosquitoes may pose threat to public health as vectors of diseases, such as dengue fever ("DF") and Japanese encephalitis. The Food and Environmental Hygiene Department ("FEHD") organizes anti-mosquito campaigns annually on a territory-wide basis to heighten public awareness of the potential risk of mosquito-borne diseases, encourage community participation and promote concerted efforts among government departments concerned in anti-mosquito work.

3. An Anti-Mosquito Steering Committee ("AMSC") has been set up since 2002 to set strategies and directions for territory-wide anti-mosquito efforts. AMSC is chaired by the Permanent Secretary for Food and Health (Food) and comprises members from 12 policy bureaux and departments. An Interdepartmental Coordinating Committee on Dengue Fever was also set up in 2001 to coordinate efforts at the operational level. FEHD has been coordinating the mosquito control and prevention work by various departments under their respective purviews.

4. Since 2003, FEHD has put in place an enhanced dengue vector surveillance programme for monitoring the distribution of Aedes albopictus at selected areas, and for evaluating the effectiveness of mosquito prevention and control work carried out by various parties. The surveillance data thus collected provide an informed basis for timely adjustment to FEHD's mosquito Under the dengue vector surveillance control strategies and measures. programme, two different indices, namely Area Ovitrap Index ("AOI") and Monthly Ovitrap Index ("MOI"), are recorded. AOI indicates the extensiveness of the distribution of Aedine mosquitoes in the surveyed area while MOI is the average of all AOIs of the same month reflecting the extensiveness of Aedes albopictus throughout the territory. Since October 2015, FEHD has enhanced the dengue vector surveillance programme to cover eight more areas. A total of 52 areas in the community are currently covered under the surveillance programme. Starting from 2004, the surveillance programme has been extended to cover all major port areas. The Port Monthly Ovitrap Index for Aedes albopictus ("PMOI") is enumerated to reflect the overall monthly situation of mosquito breeding in the port areas.

5. Apart from announcing all the indices each month on FEHD's website and through press releases, a rapid alert system targeting the management offices of residential premises, social welfare facilities, schools, construction sites and utilities companies that fall within the 52 surveillance areas has been introduced since April 2011 to ensure that anti-mosquito measures are taken promptly when AOI of a particular area reaches the alert level of 20%. Whenever AOI reaches 20%, subscribers to the system whose premises are situated within the surveillance area concerned will be individually notified by the relevant departments upon the publication of AOI. Subscribers will be invited to post up specially designed notices in the common parts of their premises, alerting occupants and management staff of the need to take mosquito preventive and control actions promptly.

According to the Administration's information provided to the Panel in 6. April 2016, MOIs recorded in 2015 were in general lower than those in previous years, and the movements in 2015 were also in general similar to the pattern in previous years. A chart showing the trend is at **Annex I**. In 2015, the highest AOI of 33.3% was recorded in Lam Tin in May, followed by 26.9% in Tai Po in September. The monthly AOIs for all 52 surveillance areas are In total, 11 areas had recorded AOIs reaching or provided at Annex II. exceeding the alert level of 20% on at least one occasion. In response, FEHD convened district task force meetings and activated the rapid alert system for a total of 13 times to step up the coordination of government efforts in mosquito control and to mobilize community participation in anti-mosquito efforts. In 2015, the ovitrap indices for all six groups in the port areas were The highest ovitrap index of 11.5% was recorded in the group of below 20%. Private Cargo Working Areas in June (see Annex III). PMOIs in 2015 ranged from the lowest of 0% (in January to March) to the highest of 2.4% (in June). The PMOI movements showed a similar pattern as in previous years. A chart showing the trend is at **Annex IV.** 

### Members' concerns

7. The subject of mosquito control was regularly discussed at the meetings of the Panel. Members' major views and concerns are summarized below.

#### Anti-mosquito measures

8. Members were concerned about the measures taken by the Administration to prevent incidents of interference of ovitraps. Enquiry was raised as to whether the Administration would consider expanding the scope of the dengue vector surveillance programme and lowering the AOI alert level of 20%. The Administration was also urged to have better coordination and division of labour among government departments, and to make continuous efforts to carry out anti-mosquito work throughout the year, particularly in those districts frequently affected by mosquito infestation.

9. According to the Administration, ovitrap covers and wind bridges had been used to minimize intentional or unintentional interference. Regular and surprise inspections were also conducted to ensure that contractors followed the anti-mosquito work plan. To ascertain the accuracy of the surveillance results, FEHD's pest control staff would inspect whether the ovitraps were functioning normally without interference. Since October 2015, FEHD had enhanced the dengue vector surveillance programme to cover eight more areas. It should also be noted that the AOI alert level was lowered from 30% to 20% several years ago. The Administration assured members that it would continue to monitor the situation and consider adjusting the alert level as and when necessary.

10. Concern was expressed about the rise in the number of imported DF cases and the prevalence of DF in Guangdong Province and some Southeast Asian countries (including Singapore, Malaysia and Thailand) in recent years. Noting that PMOI recorded at cross boundary check points on land and cross boundary ferry piers were particularly high, posing threat to the residents living in the nearby areas, e.g. Tin Shui Wai and Yuen Long, members enquired whether there were targeted measures to strengthen the anti-mosquito work in the port areas so as to prevent DF from being introduced into the territory. There was a suggestion that the Administration should collect information on specific cities/regions of countries with higher risks of DF and advise Hong Kong residents not to visit those places to avoid infection of DF.

The Administration advised that the dengue vector surveillance in all 11. the 29 land and sea ports had been stepped up from once every month to once every fortnight since November 2015. The port dengue vector surveillance programme had been launched in Tuen Mun Ferry Terminal on a biweekly basis in February 2016 after the terminal re-opened in January 2016. Port dengue vector surveillance at Hong Kong International Airport was conducted on a weekly basis and had been extended to the newly opened Mid Field Tests on dengue virus would be conducted on Concourse in March 2016. dengue vectors collected from ovitraps set in all port areas. As most of the DF cases confirmed in the past few years were imported, and DF remained highly prevalent in neighbouring areas that were frequently visited by Hong Kong residents, including Guangdong Province, Taiwan and Southeast Asia, FEHD would monitor the situations in neighbouring areas and strengthen public education on prevention of DF accordingly. At present, information about the countries that were visited by infected people would be collected. FEHD would work with the Port Health Office of the Department of Health to remind Hong Kong residents to take mosquito preventive measures when travelling abroad and to seek medical advice if they felt sick after visiting endemic areas.

12. In response to members' enquiry about the criteria for selecting locations for setting up ovitraps in the surveyed areas and how data were collected from all 52 surveillance areas for compiling AOIs and MOIs, the Administration explained that FEHD followed the relevant advice of the World Health Organization ("WHO") in setting up ovitraps. FEHD's pest control staff would identify places with higher human concentration and potential for becoming a mosquito breeding ground for the purpose of placing ovitraps. For accurate detection of the larval breeding rate of mosquitoes, a distance of 100 meters or more would normally be kept between two ovitraps. About 50 to 55 ovitraps would be set up in each of the areas under surveillance.

#### Inter-departmental cooperation

13. There was concern that some government departments seemed not to have accorded a high degree of importance to mosquito control in venues under their management and were not proactive in undertaking anti-mosquito work. Members enquired about the coordination and cooperation among various departments in taking forward various mosquito control strategies and measures.

14. The Administration advised that effective mosquito control required sustained efforts on the part of all parties concerned. In assuming a coordinating role, all FEHD District Environmental Hygiene Offices would convene a special anti-mosquito task force meeting each year before the start of the rainy season to enhance relevant departments' awareness of the importance

of mosquito control in venues under their management. Whenever AOI reached 20%, the FEHD District Environmental Hygiene Office concerned would convene district task force meetings with concerned departments/parties and provide necessary advice and assistance to them in formulating mosquito control strategies. These apart, FEHD had launched a new Anti-mosquito Campaign in early 2016 in collaboration with other relevant bureaux/ government departments to maintain the momentum. Bearing the theme "Prevent Japanese encephalitis and Dengue Fever - Act Now!", the Campaign was scheduled for implementation by three phases, during which relevant departments had joined hands to launch two rounds of intensive mosquito preventive and control exercises across the territory covering areas under their purview.

#### Prevention and control measures against Zika virus infection

15. Members were concerned that like DF, Zika virus might also be imported to Hong Kong from affected areas. As *Aedes albopictus mosquito*, which was commonly found in Hong Kong, was a potential vector of Zika virus, some members expressed concern that in the event that Hong Kong residents who had travelled to affected areas were infected with Zika virus through mosquito bites and were subsequently bitten by *Aedes albopictus* in Hong Kong, there would be secondary spread of Zika virus in the territory. An enquiry was raised about the measures that the Government had in place to prevent imported cases of Zika infection.

According to the Administration, to enhance surveillance of Zika virus 16. infection, the Prevention and Control of Disease Ordinance (Amendment of Schedule 1) Notice 2016 was gazetted on 5 February 2016 to make Zika virus infection a statutorily notifiable infectious disease under the Prevention and Control of Disease Ordinance (Cap. 599) with immediate effect on the same The Administration also announced the Preparedness and Response Plan dav. on Zika Virus Infection on 11 March 2016 and the Alert Response Level was activated. The Centre for Health Protection of the Department of Health would be notified of any confirmed case for investigation and follow-up actions. As there was no vaccine on the market at present against DF or Zika virus infection, the Administration had reminded travellers to take anti-mosquito and personal precautionary measures to reduce the risk of DF and Zika virus infection and to seek medical advice and inform their doctor of their travel history if symptoms developed. The Department of Health had also implemented a series of port health measures to guard against DF and Zika To tackle the local mosquito problem, various bureau/departments viruses. would make concerted efforts to carry out anti-mosquito work and would continue to implement new measures to eliminate mosquitoes breeding. Apart from stepping up anti-mosquito work, the Administration would strengthen publicity and public education to enhance public awareness of Zika virus and

remind the public to take personal precautionary measures to reduce the risk of Zika virus transmission.

### **Recent developments**

According to the Administration's reply to a written question raised at the 17. Council meeting of 30 November 2016, WHO issued a statement on 18 November 2016, indicating that Zika virus and associated consequences remained a significant enduring public health challenge requiring intense action although they no longer represented a Public Health Emergency of International Concern. The Administration correspondingly made clear to the public that Zika virus remained a challenge to public health, and Hong Kong should stay vigilant by continuing the prevailing prevention and control strategy and maintaining the Alert Response Level. According to the Administration it would maintain close liaison with public and private hospitals, medical professions and the community. Relevant bureaux/government departments and organizations would continue to undertake prevention and control measures in line with the Preparedness and Response Plan to ensure that measures on effective disease surveillance, vector control, examination and diagnosis, emergency preparedness, health advice, public education and risk communication were in place. The enhanced efforts on mosquito control and elimination as well as publicity and community engagement activities would also be sustained.

18. The Administration will brief members on its enhanced mosquito prevention and control measures in face of the added threat posed by Zika virus infection at the Panel meeting on 10 January 2017.

#### **Relevant papers**

19. A list of relevant papers on the Legislative Council website is in Annex V.

Council Business Division 2 Legislative Council Secretariat 4 January 2017



# 2015年分佈於 19個地區的 52個監察地點的誘蚊產卵器指數

Ovitrap Indices for 52 locations in 19 districts - 2015

	監察地點 Locations	1 月 Jan	2 月 Feb	3 月 Mar	4 月 Apr	5 月 May	6 月 Jun	7 月 Jul	8月 Aug	9 月 Sep	10 月 Oct	11 月 Nov	12 月 Dec
	柴灣西 (Chai Wan West)	0.0%	0.0%	0.0%	3.5%	3.6%	19.6%	16.4%	5.6%	1.8%	3.6%	0.0%	0.0%
	天后 (Tin Hau)*										11.1%	9.1%	1.9%
(spu	筲箕灣和西灣河 (Shau Kei Wan & Sai Wan Ho)	0.0%	0.0%	0.0%	0.0%	1.8%	15.5%	8.5%	1.8%	1.7%	3.4%	0.0%	0.0%
slar	北角 (North Point)	0.0%	0.0%	0.0%	0.0%	1.9%	15.4%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%
& I	灣仔北 (Wan Chai North)	0.0%	0.0%	0.0%	0.0%	4.2%	1.9%	3.8%	9.6%	1.9%	0.0%	0.0%	0.0%
ng	跑馬地 Happy Valley)	0.0%	0.0%	0.0%	1.8%	1.8%	22.8%	8.8%	12.5%	5.3%	0.0%	0.0%	0.0%
ng Ko	中環、上環和西營盤 (Central, Sheung Wan & Sai Ying Pun)	0.0%	0.0%	0.0%	3.6%	7.4%	7.3%	5.5%	7.1%	3.6%	0.0%	1.6%	0.0%
(Ho	西環 (Sheung Wan)	0.0%	0.0%	0.0%	0.0%	18.2%	3.9%	5.5%	12.7%	7.3%	1.8%	0.0%	0.0%
訇꿿	香港仔和鴨脷洲 (Aberdeen & Ap Lei Chau)	0.0%	0.0%	0.0%	3.8%	7.4%	11.3%	5.6%	1.9%	5.6%	3.7%	0.0%	0.0%
「文書	薄扶林 (Pokfulam)	0.0%	0.0%	0.0%	2.1%	6.3%	15.2%	8.3%	10.4%	8.9%	2.2%	2.2%	0.0%
調	深水灣和淺水灣 (Deep Water Bay & Repulse Bay)	0.0%	0.0%	0.0%	3.7%	0.0%	24.1%	0.0%	3.6%	9.1%	0.0%	0.0%	0.0%
	長洲 (Cheung Chau)	0.0%	0.0%	0.0%	5.6%	5.6%	11.1%	5.6%	0.0%	2.8%	2.8%	0.0%	0.0%
	東涌 (Tung Chung)	0.0%	0.0%	0.0%	13.5%	18.4%	7.9%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%
(u	尖沙咀 (Tsim Sha Tsui)	0.0%	0.0%	0.0%	0.0%	1.8%	23.2%	8.8%	9.8%	3.7%	3.6%	0.0%	1.8%
owloo	尖沙咀東 (Tsim Sha Tsui East)*										3.9%	1.9%	0.0%
(K	旺角 (Mong Kok)	0.0%	0.0%	0.0%	0.0%	1.8%	7.1%	0.0%	1.8%	3.6%	3.6%	0.0%	0.0%
調	荔枝角 (Lai Chi Kok)	0.0%	0.0%	0.0%	8.0%	13.7%	3.9%	2.0%	5.9%	1.9%	3.9%	0.0%	0.0%
エ	深水埗東 (Sham Shui Po East)	0.0%	0.0%	0.0%	3.6%	9.1%	7.5%	5.6%	5.5%	1.9%	0.0%	0.0%	0.0%

	監察地點 Locations	1 月 Jan	2 月 Feb	3 月 Mar	4 月 Apr	5 月 May	6 月 Jun	7 月 Jul	8月 Aug	9月 Sep	10 月 Oct	11 月 Nov	12 月 Dec
	長沙灣 (Cheung Sha Wan)	0.0%	0.0%	0.0%	0.0%	22.6%	10.0%	6.1%	5.6%	0.0%	0.0%	0.0%	0.0%
	九龍城北 (Kowloon City North)	0.0%	0.0%	0.0%	0.0%	3.6%	5.6%	1.8%	6.0%	7.3%	3.6%	0.0%	0.0%
	紅磡 (Hung Hom)	0.0%	0.0%	0.0%	0.0%	1.9%	7.5%	5.7%	11.8%	2.0%	0.0%	0.0%	0.0%
	何文田 (Ho Man Tin)	0.0%	0.0%	0.0%	0.0%	3.8%	17.6%	5.6%	17.3%	5.7%	0.0%	0.0%	0.0%
	樂富西 (Lok Fu West)*										13.2%	1.9%	0.0%
	啟德北 (Kai Tak North)*										14.3%	0.0%	0.0%
	黃大仙中 (Wong Tai Sin Central)	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	4.9%	7.9%	6.3%	0.0%	1.6%	0.0%
	鑽石山 (Diamond Hill)	0.0%	0.0%	0.0%	0.0%	5.7%	13.7%	7.8%	6.0%	3.8%	2.0%	0.0%	0.0%
	牛池灣 (Ngau Chi Wan)*										5.5%	5.7%	0.0%
	觀塘中 (Kwun Tong Central)	0.0%	0.0%	0.0%	6.7%	25.4%	12.1%	6.7%	16.9%	3.4%	1.7%	1.7%	0.0%
	藍田 (Lam Tin)	0.0%	0.0%	3.6%	1.8%	33.3%	9.1%	3.6%	3.6%	0.0%	1.8%	0.0%	0.0%
	九龍灣 (Kowloon Bay)*										18.5%	1.9%	0.0%
ries East)	將軍澳南 (Tseung Kwan O South) (前稱: 將軍澳) (Formerly :Tseung Kwan O)	0.0%	0.0%	0.0%	3.4%	8.6%	8.3%	0.0%	8.8%	8.6%	1.8%	1.8%	0.0%
errito	將軍澳北 (Tseung Kwan O North)*										7.0%	5.0%	0.0%
T	西貢市 (Sai Kung Town)	0.0%	0.0%	2.0%	2.0%	18.0%	2.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Ne	馬鞍山 (Ma On Shan)	0.0%	0.0%	0.0%	1.7%	5.2%	22.4%	19.0%	17.2%	1.7%	3.4%	0.0%	1.8%
東	圓洲角 (Yuen Chau Kok)	0.0%	0.0%	0.0%	0.0%	5.2%	21.1%	26.8%	17.9%	3.7%	12.5%	1.7%	0.0%
一派	大圍 (Tai Wai)	0.0%	0.0%	0.0%	1.8%	8.9%	12.5%	17.9%	3.6%	1.8%	1.8%	0.0%	0.0%
帝	大埔 (Tai Po)	0.0%	0.0%	0.0%	5.7%	3.7%	22.6%	7.8%	1.9%	26.9%	1.9%	0.0%	0.0%

	監察地點 Locations	1 月 Jan	2 月 Feb	3 月 Mar	4 月 Apr	5 月 May	6 月 Jun	7 月 Jul	8月 Aug	9 月 Sep	10 月 Oct	11 月 Nov	12 月 Dec
	粉嶺 (Fanling)	0.0%	0.0%	0.0%	0.0%	5.7%	20.4%	3.7%	5.6%	13.0%	3.7%	0.0%	0.0%
	上水 (Sheung Shui)	0.0%	0.0%	0.0%	0.0%	7.3%	22.2%	5.5%	16.4%	10.9%	0.0%	0.0%	0.0%
	天水圍 (Tin Shui Wai)	0.0%	0.0%	0.0%	0.0%	17.9%	14.3%	5.4%	5.3%	3.7%	1.8%	0.0%	0.0%
	元崗 (Yuen Kong)	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	8.0%	16.0%	8.0%	0.0%	0.0%
st)	元朗市 (Yuen Long Twon)	0.0%	0.0%	0.0%	3.9%	9.6%	0.0%	1.9%	1.8%	3.6%	0.0%	0.0%	0.0%
We	屯門南 (Tuen Mun South)	0.0%	0.0%	1.9%	1.9%	0.0%	7.7%	0.0%	1.9%	9.8%	0.0%	0.0%	0.0%
ies	屯門北 (Tuen Mun North)	0.0%	0.0%	0.0%	1.8%	6.8%	13.8%	7.0%	8.6%	11.9%	0.0%	0.0%	0.0%
itor	掃管笏 (So Kwun Wat)	0.0%	0.0%	0.0%	1.9%	1.9%	7.4%	5.6%	0.0%	3.6%	0.0%	0.0%	0.0%
err	荃灣市 (Tsuen Wan Town)	0.0%	0.0%	0.0%	0.0%	5.4%	1.8%	3.6%	9.3%	3.8%	3.5%	0.0%	0.0%
Lw	馬灣 (Ma Wan)	0.0%	0.0%	0.0%	4.0%	4.2%	8.3%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ne	上葵涌 (Sheung Kwai Chung)	0.0%	0.0%	0.0%	2.0%	5.6%	7.7%	0.0%	1.9%	1.9%	3.8%	0.0%	0.0%
للآ	葵涌 (Kwai Chung)	0.0%	0.0%	0.0%	0.0%	3.8%	7.4%	3.7%	13.0%	5.8%	0.0%	0.0%	0.0%
既	荔景 (Lai King)	0.0%	0.0%	0.0%	0.0%	10.9%	1.8%	7.3%	5.5%	5.5%	0.0%	0.0%	0.0%
兼	青衣南 (Tsing Yi South) (前稱: 青衣) (Formerly : Tsing Yi)	0.0%	0.0%	0.0%	3.5%	7.1%	12.5%	7.0%	14.0%	7.4%	7.0%	3.4%	0.0%
	青衣北 (Tsing Yi North)*										13.0%	5.5%	0.0%
每月 Month	白紋伊蚊誘蚊產卵器指數 ly Ovitrap Index for Aedes albopictus	0.0%	0.0%	0.2%	2.0%	7.7%	11.7%	6.0%	7.3%	5.1%	3.3%	0.9%	0.1%

\* Eight new areas have been covered by the dengue vector surveillance programme since October 2015.

# <u>2015 年港口地區誘蚊產卵器的監察結果</u> <u>Result of Ovitrap Surveillance in Port Areas in 2015</u>

		1	1	1	1	1	1	1	1	1	1	
監察地點	1月	2月	3月	4月	5月	6月	7月	8月	9月	10 月	11 月	12 月
Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
香港國際機場	0.0%	0.0%	0.0%	0.4%	1.8%	1.9%	1.5%	1.9%	1.0%	0.3%	0.3%	0.04%
Hong Kong												
International Airport												
陸路邊境口岸	0.0%	0.0%	0.0%	0.0%	5.1%	7.7%	2.7%	3.9%	2.1%	1.2%	0.3%	0.0%
Cross Boundary Check												
Points on Land												
私人貨物裝卸區	0.0%	0.0%	0.0%	0.0%	3.8%	5.1%	7.5%	11.5%	5.0%	0.0%	1.3%	0.0%
Private Cargoes												
Working Areas												
出入境碼頭	0.0%	0.0%	0.0%	0.0%	1.3%	1.3%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%
Cross Boundary Ferry												
Piers												
貨櫃碼頭	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Container Terminals												
公共貨物裝卸區	0.0%	0.0%	0.0%	0.0%	1.7%	5.1%	6.8%	4.4%	4.3%	0.9%	0.0%	0.0%
Public Cargoes												
Working Areas												
每月港口白紋伊蚊誘	0.0%	0.0%	0.0%	0.3%	2.0%	2.4%	1.7%	2.2%	1.3%	0.4%	0.3%	0.03%
蚊產卵器指數												
Port Monthly Ovitrap												
Index for Aedes												
albopictus												



Committee	Date of meeting	Paper
	inceting	
Panel on Food Safety	14.6.2011	Agenda
and Environmental	(Item VII)	Minutes
Hygiene		
	8.5.2012	Agenda
	(Item VII)	Minutes
	13.5.2014	Agenda
	(Item VI)	Minutes
	12.5.2015	Agenda
	(Item VI)	Minutes
	12.4.2016	Agenda
	(Item IV)	Minutes
Legislative Council	30.11.2016	Written question raised by Hon
		Kenneth LAU on "Measures to
		prevent an outbreak of the Zika
		epidemic"

# **Relevant papers on anti-mosquito work**

Council Business Division 2 Legislative Council Secretariat 4 January 2017