

**For discussion
on 12 May 2015**

LegCo Panel on Food Safety and Environmental Hygiene

**Dengue and Japanese Encephalitis Vector Surveillance Programmes
and Anti-mosquito Campaign 2015**

Purpose

This paper briefs Members on the dengue and Japanese encephalitis (“JE”) vector surveillance programmes and the Anti-mosquito Campaign 2015 of the Food and Environmental Hygiene Department (“FEHD”).

Background

2. 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 JE. The conduct of vector surveillance programmes forms part of FEHD’s main duties. Every year, the Department organises anti-mosquito campaigns on a territory-wide basis to enhance 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.

Dengue Vector Surveillance Programme

3. 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 also provide an informed basis for timely adjustment to their mosquito control strategies and measures.

4. Under the dengue vector surveillance programme, small plastic containers, known as ovitraps, are placed at selected locations for detecting the larval breeding rate of Aedine mosquitoes. The ovitrap index is the percentage of ovitraps that are found to have positive larval breeding result. Two different indices, namely the Area Ovitrap Index for *Aedes albopictus* (“AOI”) and the Monthly Ovitrap Index for *Aedes albopictus* (“MOI”), are recorded. AOI indicates the extensiveness of the distribution of Aedine mosquitoes in the surveyed area while MOI reflects the extensiveness of *Aedes albopictus* throughout the territory. A total of 44 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. All the indices are announced each month on FEHD’s website and through press release.

5. In addition, a rapid alert system targeting the management offices of residential premises, social welfare facilities, schools, construction sites and utilities companies that fall within each of the 44 surveillance areas has been introduced to ensure that anti-mosquito measures are taken promptly when the AOI of a particular area reaches the alert level of 20%. Whenever the 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 the 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.

MOIs

6. The MOIs recorded in 2014 were in general lower than those in previous years. A chart showing the trend is at **Annex I**. The MOIs recorded in the first three months of 2014 were 0.0%. The MOIs rose from 1.8% in April to 12.0% in May, which was the peak of the year. From June onwards, the MOIs steadily declined. The MOI movements in 2014 were in general similar to the pattern in previous years.

7. The MOI stayed at 0% in January and February 2015. It rose slightly to 0.2% in March 2015.

AOIs

8. In 2014, the highest AOI of 45.6% was recorded in Tseung Kwan O in May, followed by 41.4% in Ma On Shan in July. The monthly AOIs for all 44 areas of surveillance are provided at **Annex II**. In total, 19 areas had recorded AOIs reaching or 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 20 times to step up the co-ordination of government efforts in mosquito control and to mobilise community participation in anti-mosquito efforts.

PMOIs

9. In 2014, the ovitrap indices for all six groups in the port areas were below 20%. The highest ovitrap index of 10.5% was recorded in the group of Cross Boundary Check Points on Land in June (see **Annex III**). The PMOIs in 2014 ranged from the lowest of 0% (in January to March and December) to the highest of 2.5% (in June). The PMOI movements showed a similar pattern as in previous years. A chart showing the trend is at **Annex IV**.

10. The PMOIs in the port areas from January to March 2015 were 0%.

11. Starting from 2015, Pok Hong, a location visited by the patient of a local dengue case in 2014, had been included in Yuen Chau Kok under the community surveillance programme. The dengue vector surveillance programme for the port areas had also been extended to cover the second berth of the Kai Tak Cruise Terminal and the extended portion of the Cathay Pacific Cargo Terminal at the Hong Kong International Airport in 2014. FEHD will continue to work closely with the relevant government departments and organisations, including the Airport Authority, the Mass Transit Railway Corporation and freight forwarding companies, in strengthening the anti-mosquito work in the port areas.

JE Vector Surveillance Programme

12. In 2014, the JE vector surveillance had been carried out at Yuen Long which is a relatively high risk area. A total of 5 033 samples of the principal vector (*Culex tritaeniorhynchus*) were collected during the period from April to October. These samples were sent to the Public Health Laboratory of the Department of Health for testing. The samples collected in the 2014 JE vector surveillance were all found negative for JE virus. Nevertheless, JE virus was detected in *Culex tritaeniorhynchus* collected from Yuen Long in connection with an investigation of a human JE case in 2014.

The Need for Concerted Actions against DF

13. In 2014, there were 108 imported DF cases in Hong Kong¹. Although only three local cases were recorded at the end of 2014, DF remains highly prevalent in neighbouring areas that are frequently visited by Hong Kong residents, including Guangdong Province, Taiwan and Southeast Asia. From early this year to end April 2015, more than 75 000 DF cases were recorded in Guangdong Province, Taiwan and Southeast Asian countries including Singapore, Malaysia and Thailand. In Hong Kong, 30 cases have been confirmed this year (as at end April 2015), and all are imported cases. With members of the public bitten by infected mosquitoes when travelling abroad or in Hong Kong, and under the scenario where we could not effectively contain the local mosquito problem, the likelihood of a DF outbreak in Hong Kong would go up significantly. If the experience with DF outbreaks in other places in the region is anything to go by, the number of DF cases could shoot up exponentially within a short period. Once it has taken root, the trend will be irreversible.

14. The incubation period of DF ranges from three to 14 days, commonly four to seven days. Although symptoms of first DF infection are usually mild, if the person is infected with other serotypes of dengue viruses in subsequent years, it is more likely to result in a serious complication, namely

¹ Number of DF cases in Hong Kong in the past two years:

Year	Local DF Cases	Imported DF Cases
2012	0	53
2013	0	103

dengue haemorrhagic fever. Failing proper treatment, the fatality rate could exceed 20 per cent.

15. At present, no vaccine for DF is available. Therefore, the best preventive measures are to avoid mosquito bites and adopt measures to prevent mosquito breeding. Urgent actions at the district level are called for to put a territory-wide anti-mosquito campaign into full swing.

Anti-mosquito Campaign 2015

16. In addition to its own staff, FEHD's contractors provide a total of more than 200 teams of workers to do mosquito control and preventive work all over Hong Kong. We have provided additional funding to the Department for sustaining its anti-mosquito work throughout the winter of 2014. We will allocate additional resources to the Department in 2015 for its work in this aspect.

17. Effective mosquito control requires sustained efforts on the part of all parties concerned. In this regard, FEHD has launched a new Anti-mosquito Campaign in early 2015 ("the Campaign") in collaboration with other relevant government departments to maintain the momentum. Bearing the theme "Prevent Japanese encephalitis and Dengue Fever - Act Now!", the Campaign is scheduled for implementation by phases as follows –

Phase I: 23 February – 27 March 2015

Phase II: 27 April – 3 July 2015

Phase III: 17 August – 9 October 2015

18. FEHD's pest control staff will step up inspection, preventive and control actions and publicity work during the Campaign. Mosquito breeding places will be eliminated or treated with larvicides. Potential breeding grounds and trouble spots identified by district pest control staff will also be covered. Special attention will be paid to areas in close proximity to residential premises, schools, construction sites, illegal cultivation sites, hospitals, waterfront public and private cargo working areas, cross boundary check points, typhoon shelters and cross boundary ferry terminals.

19. Community support is vital to the successful implementation of the Campaign. We will utilise a wide range of promotional channels, such as FEHD's website, posters, leaflets, Announcements in the Public Interest ("APIs"), VCDs and letters to target groups, for the purpose of encouraging community participation. We will also organise a variety of events and activities, such as roving exhibitions at major shopping malls of housing estates, outreaching health talks, as well as games and theme exhibitions at the Health Education Exhibition and Resource Centre of FEHD. Available on FEHD's website is a "Guidebook on Control and Prevention of Mosquito Breeding" which gives illustrations on potential mosquito breeding places and advice on how best to eliminate them.

20. The District Councils will also be invited to participate in the Campaign, including organising anti-mosquito activities at the district level. Relevant government departments will play an active role in the Campaign through the conduct of anti-mosquito activities in places under their charge and actions to enlist community support for the campaign through their networks. The Anti-mosquito Plan for 2015 of the relevant government departments is at **Annex V**.

21. In gearing up for the upcoming rainy season, relevant government departments will deploy additional resources to anti-mosquito work and join hands to launch, from May 4 to early June, two rounds of intensive mosquito preventive and control exercises across the territory covering areas under their purview. Through the two exercises, actions will be taken to kill adult mosquitoes, clear stagnant water and conduct grass cutting to eliminate potential mosquito breeding grounds. With each of the two rounds of intensive mosquito prevention and control exercise lasting for two weeks, we hope that mosquitoes of a whole generation, including those infected with DF, will be eliminated.

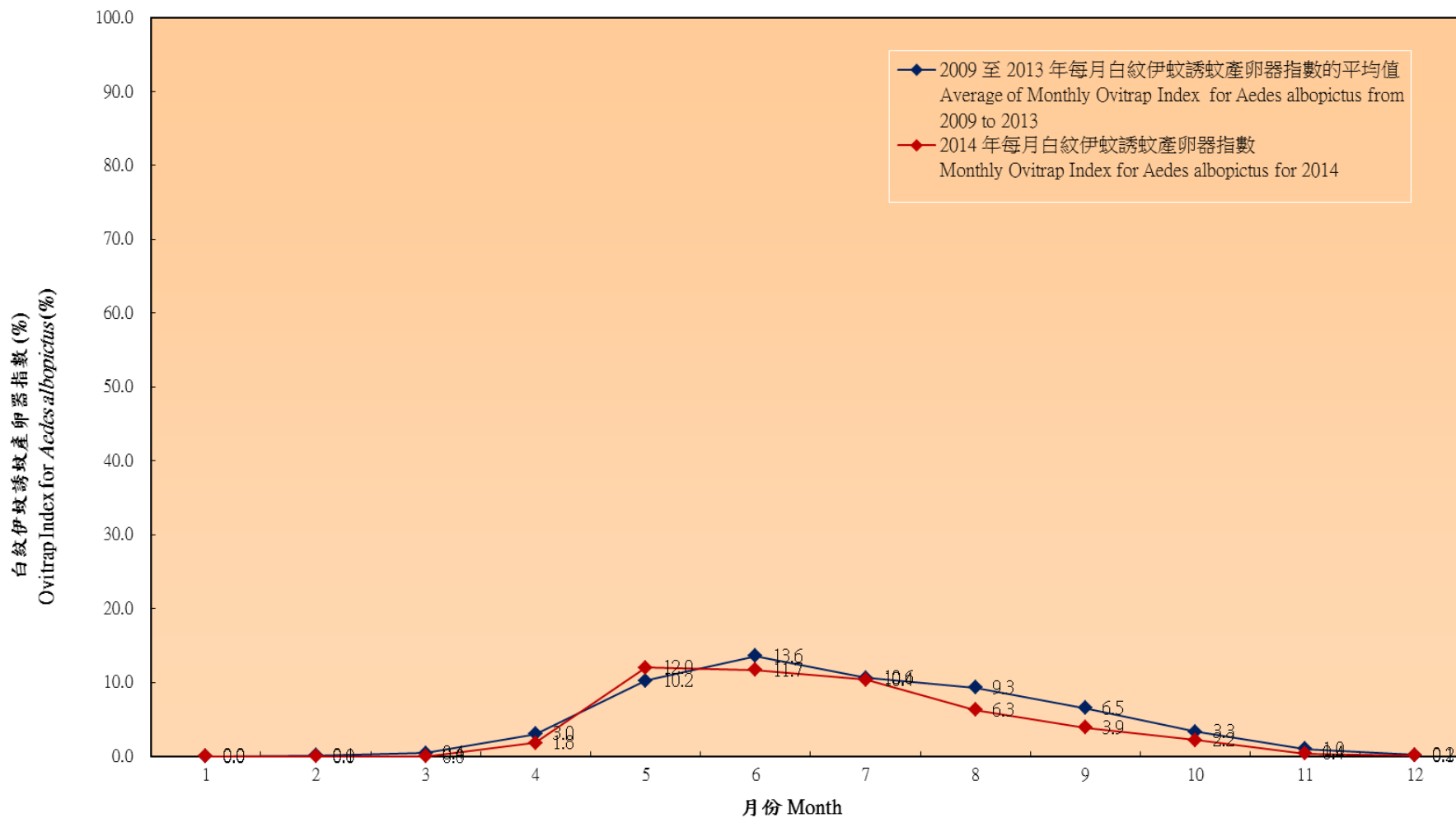
22. We will also strengthen public education and publicity programmes in concert with the District Councils as well as organizations such as school heads associations, the Hong Kong Construction Association and the Pest Control Personnel Association of Hong Kong, for the purpose of enhancing public understanding of mosquito-borne diseases and the importance of mosquito control work.

Advice Sought

23. Members are invited to note the content of this paper.

**Food and Health Bureau
Food and Environmental Hygiene Department
May 2015**

2009-13 年與 2014 年白紋伊蚊誘蚊產卵器指數比較
 Comparison of Monthly Ovitrap Index for *Aedes albopictus* (2009-13 and 2014)



Ovitrap Indices for 44 locations in 19 districts – 2014

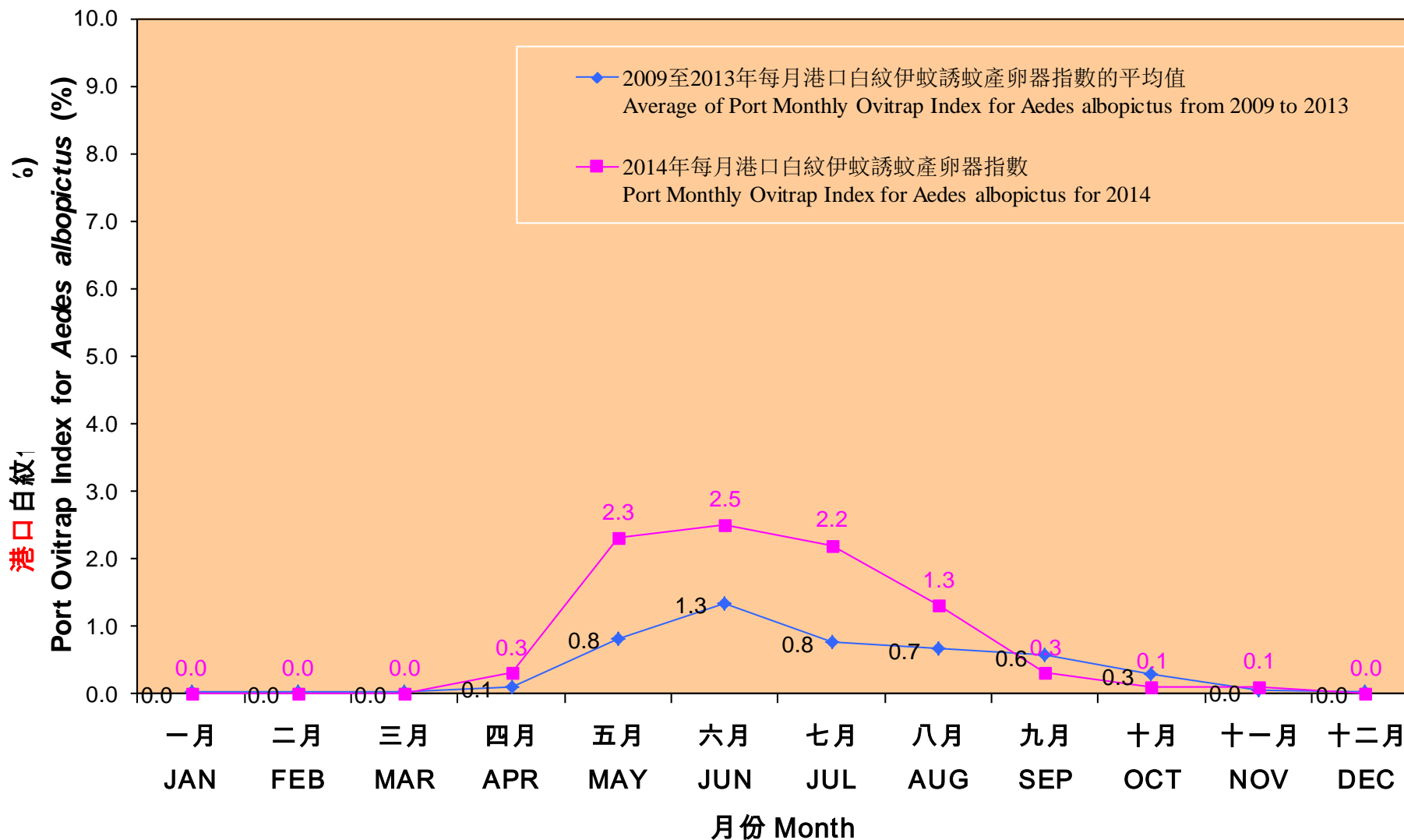
	Locations	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Hong Kong Island & Outlying Islands	Chai Wan West	0.0%	0.0%	0.0%	0.0%	3.6%	10.9%	9.1%	7.3%	5.7%	3.6%	0.0%	0.0%
	Shau Kei Wan and Sai Wan Ho	0.0%	0.0%	0.0%	0.0%	12.1%	21.4%	27.1%	8.5%	3.5%	1.7%	0.0%	0.0%
	North Point	0.0%	0.0%	0.0%	0.0%	13.2%	5.7%	3.7%	9.4%	1.9%	1.9%	0.0%	0.0%
	Wan Chai North	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	10.2%	4.3%	4.2%	0.0%	0.0%	0.0%
	Happy Valley	0.0%	0.0%	0.0%	0.0%	3.5%	16.1%	16.1%	13.5%	3.5%	1.8%	0.0%	1.8%
	Central, Sheung Wan and Sai Ying Pun	0.0%	0.0%	0.0%	0.0%	14.8%	5.6%	9.1%	3.8%	3.6%	3.6%	0.0%	0.0%
	Sai Wan	0.0%	0.0%	0.0%	0.0%	22.6%	7.4%	9.3%	3.9%	9.6%	1.9%	0.0%	0.0%
	Aberdeen and Ap Lei Chau	0.0%	0.0%	0.0%	0.0%	2.0%	5.9%	3.8%	4.3%	3.8%	0.0%	3.7%	0.0%
	Pokfulam	0.0%	0.0%	0.0%	0.0%	16.3%	6.1%	10.4%	6.1%	4.3%	4.3%	0.0%	0.0%
	Deep Water Bay and Repulse Bay	0.0%	0.0%	0.0%	1.8%	13.0%	32.1%	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%
	Cheung Chau	0.0%	0.0%	0.0%	0.0%	2.9%	11.8%	20.6%	13.9%	5.6%	0.0%	0.0%	0.0%
Tung Chung	0.0%	0.0%	0.0%	5.4%	13.2%	13.5%	8.1%	2.7%	8.1%	0.0%	0.0%	0.0%	
Kowloon	Tsim Sha Tsui	0.0%	0.0%	0.0%	0.0%	0.0%	12.3%	14.5%	1.8%	0.0%	0.0%	0.0%	0.0%
	Mong Kok	0.0%	0.0%	0.0%	0.0%	1.8%	3.7%	5.5%	1.9%	1.8%	1.8%	0.0%	0.0%
	Lai Chi Kok	0.0%	0.0%	0.0%	0.0%	16.0%	9.3%	2.1%	9.6%	4.0%	0.0%	0.0%	0.0%
	Sham Shui Po East	0.0%	0.0%	0.0%	9.3%	23.6%	14.8%	5.5%	3.7%	0.0%	0.0%	0.0%	0.0%
	Cheung Sha Wan	0.0%	0.0%	0.0%	3.7%	9.3%	5.7%	13.5%	7.4%	1.9%	1.9%	0.0%	0.0%
	Kowloon City North	0.0%	0.0%	0.0%	1.8%	18.2%	3.7%	13.2%	4.0%	7.3%	0.0%	0.0%	0.0%
	Hung Hom	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	9.6%	5.9%	3.7%	9.8%	0.0%	0.0%
	Ho Man Tin	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	13.2%	10.0%	11.3%	1.9%	3.8%	0.0%
	Wong Tai Sin Central	0.0%	0.0%	0.0%	0.0%	6.3%	20.6%	3.2%	6.3%	3.2%	1.7%	0.0%	0.0%

	Locations	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Diamond Hill	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%	3.8%	3.8%	1.9%	11.8%	1.9%	0.0%
	Kwun Tong Central	0.0%	0.0%	0.0%	3.8%	11.8%	20.4%	3.8%	7.3%	7.5%	1.9%	0.0%	0.0%
	Lam Tin	0.0%	0.0%	0.0%	3.7%	32.7%	18.9%	13.0%	7.7%	5.9%	1.8%	0.0%	0.0%
New Territory East	Tseung Kwan O	0.0%	0.0%	0.0%	18.3%	45.6%	13.3%	8.6%	5.2%	0.0%	1.7%	0.0%	0.0%
	Sai Kung Town	0.0%	0.0%	0.0%	10.0%	30.6%	10.4%	8.2%	4.0%	0.0%	0.0%	0.0%	0.0%
	Ma On Shan	0.0%	0.0%	0.0%	0.0%	3.4%	17.2%	41.4%	3.6%	3.6%	3.6%	0.0%	0.0%
	Yuen Chau Kok	0.0%	0.0%	0.0%	0.0%	10.9%	12.7%	29.6%	16.7%	11.3%	9.1%	3.7%	0.0%
	Tai Wai	0.0%	0.0%	0.0%	0.0%	7.3%	16.4%	23.6%	8.9%	1.9%	3.6%	0.0%	0.0%
	Tai Po	0.0%	0.0%	0.0%	0.0%	3.6%	27.3%	5.6%	3.7%	9.3%	1.9%	1.9%	1.9%
	Fanling	0.0%	0.0%	0.0%	0.0%	16.7%	13.0%	9.4%	13.0%	0.0%	5.6%	0.0%	0.0%
	Sheung Shui	0.0%	0.0%	0.0%	0.0%	5.7%	18.2%	10.9%	14.5%	5.8%	1.9%	0.0%	1.9%
New Territory West	Tin Shui Wai	0.0%	0.0%	0.0%	3.6%	3.8%	10.9%	14.0%	5.3%	1.8%	2.0%	0.0%	0.0%
	Yuen Kong	0.0%	0.0%	0.0%	0.0%	12.0%	16.0%	16.0%	16.0%	4.0%	8.3%	0.0%	0.0%
	Yuen Long Town	0.0%	0.0%	0.0%	0.0%	20.0%	7.7%	5.7%	1.9%	1.8%	0.0%	0.0%	0.0%
	Tuen Mun (S)	0.0%	0.0%	0.0%	0.0%	2.0%	9.4%	2.0%	3.8%	9.6%	1.9%	0.0%	0.0%
	Tuen Mun (N)	0.0%	0.0%	0.0%	0.0%	8.5%	7.0%	5.1%	3.4%	0.0%	3.5%	1.7%	0.0%
	So Kwun Wat	0.0%	0.0%	0.0%	0.0%	5.7%	11.1%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%
	Tsuen Wan Town	0.0%	0.0%	0.0%	3.4%	25.5%	6.7%	12.3%	3.6%	3.4%	0.0%	0.0%	0.0%
	Ma Wan	0.0%	0.0%	0.0%	0.0%	12.0%	4.2%	4.0%	8.0%	8.7%	0.0%	0.0%	0.0%
	Sheung Kwai Chung	0.0%	0.0%	0.0%	1.9%	20.4%	3.8%	2.0%	0.0%	0.0%	0.0%	1.9%	0.0%
	Kwai Chung	0.0%	0.0%	0.0%	10.2%	14.8%	5.8%	5.6%	7.4%	0.0%	0.0%	0.0%	0.0%
	Lai King	0.0%	0.0%	0.0%	1.9%	14.5%	20.0%	5.5%	10.9%	9.3%	3.6%	0.0%	0.0%
	Tsing Yi	0.0%	0.0%	0.0%	0.0%	22.8%	5.5%	5.4%	7.1%	5.3%	0.0%	0.0%	0.0%
Monthly Ovitrap Index for <i>Aedes albopictus</i>		0.0%	0.0%	0.0%	1.8%	12.0%	11.7%	10.4%	6.3%	3.9%	2.2%	0.4%	0.1%

Results of Ovitrap Surveillance in Port Areas in 2014

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hong Kong International Airport	0.0%	0.0%	0.0%	0.3%	1.8%	1.6%	1.6%	1.1%	0.1%	0.0%	0.0%	0.0%
Cross Boundary Check Points on Land	0.0%	0.0%	0.0%	0.0%	8.9%	10.5%	6.6%	3.6%	2.4%	1.8%	0.3%	0.0%
Private Cargoes Working Areas	0.0%	0.0%	0.0%	0.0%	3.8%	9.0%	9.0%	3.8%	1.3%	1.3%	1.3%	0.0%
Cross Boundary Ferry Piers	0.0%	0.0%	0.0%	0.0%	7.8%	6.1%	4.3%	2.1%	1.0%	0.0%	0.0%	0.0%
Container Terminals	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Public Cargoes Working Areas	0.0%	0.0%	0.0%	0.0%	3.4%	8.5%	4.2%	3.4%	0.9%	0.0%	1.8%	0.0%
Port Monthly Ovitrap Index for <i>Aedes albopictus</i>	0.0%	0.0%	0.0%	0.3%	2.3%	2.5%	2.2%	1.3%	0.3%	0.1%	0.1%	0.0%

2009至2013年與2014年每月港口白紋伊蚊誘蚊產卵器指數比較
Comparison of Port Monthly Ovitrap Index for *Aedes albopictus*: 2009 - 2013 and 2014



Anti-mosquito Plan for 2015

Bureau/ Department	Action Plan
Agriculture, Fisheries and Conservation Department ("AFCD")	<p><u>Fish Farms and Fishermen</u></p> <ul style="list-style-type: none">● To distribute anti-mosquito advisory leaflets to mariculturists at AFCD's licence renewal service counters, during our regular farm inspections, and through the representatives in the Mariculturists Liaison and Support Group of the Red Tide Reporting Network.● To issue advisory letters together with anti-mosquito leaflets to fishermen associations. <p><u>Local Livestock Farms</u></p> <ul style="list-style-type: none">● To issue advisory letters and publicity leaflets to livestock farmers and livestock associations to raise their awareness of anti-mosquito measures.● To inspect livestock farms for any potential mosquito breeding sites and remind farmers to take proper anti-mosquito measures during routine farm inspections. <p><u>Government Wholesale Food Markets</u></p> <ul style="list-style-type: none">● To issue advisory letters and notices at regular intervals to market traders and cleansing contractors to remind them to keep the market clean and to raise their awareness of anti-mosquito measures.● To closely monitor the performance of the cleansing contractors and ensure that they will apply larvicide regularly to market drains to prevent breeding of mosquitoes.● To carry out special operations to keep market clean and to eliminate potential mosquito breeding grounds. <p><u>Cheung Sha Wan Wholesale Vegetable Market under Vegetable Marketing Organization ("VMO")</u></p> <ul style="list-style-type: none">● To continue conducting regular inspections, surprise checks and cleansing of the wholesale vegetable market and issuing advisory notices to market users advising them of the

Bureau/ Department	Action Plan
	<p>importance of maintaining the cleanliness of the market and removal of stagnant water.</p> <ul style="list-style-type: none"> ● To maintain close contact with FEHD to eliminate potential mosquito breeding sites directly adjacent to the VMO premises. <p><u>Wholesale Fish Markets under Fish Marketing Organization (“FMO”)</u></p> <ul style="list-style-type: none"> ● To continue conducting regular inspections, surprise checks and cleansing of all FMO markets and issuing advisory notices to market users advising them of the importance of maintaining the cleanliness of the market and removal of stagnant water. <p><u>Country Parks</u></p> <ul style="list-style-type: none"> ● To regularly inspect and cleanse recreation sites, hiking trails and construction sites and carry out clearance of overgrown vegetation in these areas. ● To continue effort in advising visitors to protect themselves against mosquitoes and other insect bites through oral advice, leaflets, posters and warning signs. ● To level depressions which can hold water and remove water storage devices found in country parks to prevent mosquito breeding. ● To advise morning walkers not to keep containers in their gardens and hillsides and remove any unauthorised planting sites and water storage devices found in country parks. <p><u>Mai Po Nature Reserve and Hong Kong Wetland Park</u></p> <ul style="list-style-type: none"> ● To display posters at suitable locations in the Mai Po Nature Reserve (“MPNR”) and Hong Kong Wetland Park (“HKWP”) to alert staff of the AFCD and World Wide Fund Hong Kong (“WWFHK”) to take measures to eliminate mosquito breeding grounds and to advise them and visitors to take preventive measures to avoid mosquito bites. ● To distribute anti-mosquito leaflets to visitors. ● Staff of WWFHK and contractor of HKWP will eliminate stagnant water and mosquito breeding grounds in all their buildings, structures, boats, visitor facilities and gei wai bund areas in the MPNR and HKWP regularly.

Bureau/ Department	Action Plan
Development Bureau	<ul style="list-style-type: none"> ● The high-level Interdepartmental Working Group on Mosquito Prevention at Works Sites will continue to closely monitor the situation at public works sites. ● To continue to liaise with the FEHD to ensure that effective anti-mosquito measures are undertaken by contractors at public works sites. ● To strengthen communication with public works contractors and review the relevant regulatory regime with a view to encouraging more effort to combat mosquito breeding in construction sites. ● To provide contractors with relevant television APIs for broadcasting at rest areas for frontline workers of construction sites.
Department of Health (“DH”)	<p><u>Publicity activities on mosquito-borne diseases</u></p> <ul style="list-style-type: none"> ● Publicity and health education activities on prevention of mosquito-borne diseases will continue in 2015 : <ul style="list-style-type: none"> (a) to liaise with the Information Services Department to coordinate the broadcast of relevant television & radio APIs and video clips; (b) to arrange production of a new TV API with more focus on the medical implications of dengue fever infection; (c) to enhance broadcast of APIs and videos via various channels including healthcare centres, the Centre for Health Protection (“CHP”) Facebook Fan Page and YouTube Channel; (d) to arrange media interviews and publication of feature articles in magazines and newspapers on mosquito-borne diseases; (e) to update and upload relevant information on the CHP website and 24-Hour Health Education Hotline; to send email alerts to relevant stakeholders informing them of the latest development and the preventive measures, and solicit their coordination and support to strengthen publicity activities;

Bureau/ Department	Action Plan
	<p>(f) to establish hyperlinks in the DH and other relevant website;</p> <p>(g) to enhance publicity in spring and summer time through the Summer Programme 2015 by distributing related printed health education materials to various places including health sectors, schools, public and private housing estates, public facilities of the Leisure and Cultural Services Department (“LCSD”) and non-government organisations (“NGOs”); and</p> <p>(h) to enhance publicity at community level including the display of giant wall banners on government buildings; roving exhibition via Health Promotion van; rolling text in public housing estates.</p> <ul style="list-style-type: none"> ● Preventive measures at boundary control points (“BCPs”) and health advice for travellers: <ul style="list-style-type: none"> (a) to continue monitoring and control of mosquito breeding site at the airport, all sea and land BCPs, cargo handling facilities and cross-boundary conveyances by regular inspection and close liaison with relevant stakeholders including operators of the BCPs and conveyances, District Pest Control Teams and Pest Control Advisory Section of FEHD; (b) to continue distribution of leaflets and display of posters on anti-mosquito measures at all BCPs; (c) to continue uploading updated health messages and outbreak news onto Travel Health Service website; (d) to continue health talk/ advice for travel agents/ tour guides at Travel Industry Council of Hong Kong; and (e) to include mosquito-borne diseases including malaria, dengue fever, yellow fever and Japanese encephalitis as topics in the travel health bulletins. ● Other measures: <ul style="list-style-type: none"> (a) to disseminate information on mosquito-borne diseases and health education messages through letter-to-doctor, press releases and via the articles published in

Bureau/ Department	Action Plan
	<p>Communicable Diseases Watch as appropriate; and</p> <p>(b) to update the “Global Malaria Risk Summary” in 2014 by Scientific Committee on Vector-borne Diseases of the CHP.</p>
<p>Education Bureau (“EDB”)</p>	<ul style="list-style-type: none"> ● To jointly organise with the FEHD a seminar on the dengue fever and Japanese encephalitis vectors for school personnel in May 2015 and alert schools within 100m of any positive traps identified in FEHD’s Monthly Ovitrap Surveys to strengthen preventive measures against mosquitoes. ● Circular Memoranda regarding strengthening of preventive measures against mosquitoes have been uploaded on EDB’s webpage for schools’ reference. ● To facilitate communication between universities and FEHD to step up anti-mosquito work on campus.
<p>Food and Environmental Hygiene Department</p>	<ul style="list-style-type: none"> ● Since the coming into operation of the Public Health and Municipal Services (Amendment) Ordinance on 12 May 2006, 196 prosecutions as at 28 February 2015 concerning the control of water and article likely to cause mosquito breeding have been taken out against persons responsible for the management of premises under section 27(3A) of the Public Health and Municipal Services Ordinance (Cap. 132). FEHD will continue to take enforcement actions against persons in breach of this legislation. ● FEHD will continue to convene district anti-mosquito task force meetings with the concerned departments/parties and provide necessary advice and assistance to them in formulating mosquito prevention strategies whenever situation warrants, such as when Area Ovitrap Index (“AOI”) reaches 20% or above. ● All FEHD District Environmental Hygiene Offices convened a special anti-mosquito task force meeting in late February and early March 2015 before the start of the rainy season to enhance relevant departments’ awareness of the importance of mosquito control in venues under their management. ● FEHD continues with the dengue vector surveillance programme which covers a total of 44 areas.

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	<ul style="list-style-type: none"> ● FEHD has maintained the ovitrap rapid alert system targeting at the management offices of residential premises, social welfare facilities, schools and utilities companies and construction companies with work sites that fall within the 44 areas of surveillance. Subscribers to the system will be notified immediately when the AOI of the area where their premises are located has reached the alert level of 20%. They will also be requested to post up specially designed alert notices in the common parts of their premises. ● With effect from January 2015, three more ovitraps would be set up at the surveyed area “Yuen Chau Kok” for covering Pok Hong where was visited by the patient of a local dengue case in 2014. ● Quick tests on dengue virus have been conducted on dengue vectors collected in areas where AOIs have reached/exceeded 10% but below 15% as well as have reached /exceeded 20% starting from 2015. ● Collaboration has been made with the Chinese University of Hong Kong on dengue virus test. Dengue vectors collected in areas where AOIs have reached 15% or above but below 20% would be tested on dengue virus. ● The JE vector surveillance programme in Yuen Long will continue to be conducted from April to October for test on JE virus. The surveillance will be extended to cover all the 43 pig farms in Yuen Long, North District and Sai Kung, areas with local JE cases reported previously and carried out on a monthly basis starting from the summer of 2015. ● The port dengue vector surveillance programme has been extended to the second berth of Kai Tak Cruise Terminal and extended portion of the Cathay Pacific Cargo Terminal at the Airport in 2014. ● The dengue vector surveillance in 9 port areas including Hung Hom Station, Lo Wu Control Point, Lok Ma Chau Control Point, Lok Ma Chau Spur Line Control Point, Man Kam To Control Point, Sha Tau Kok Control Point, Shenzhen Bay Control Point, Hong Kong Macau Ferry Terminal and Hong Kong China Ferry Terminal, had been stepped up from a monthly interval to twice a month since November 2014. The strengthened surveillance will be extended to all the 29 port

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	<p>areas starting from the summer of 2015.</p> <ul style="list-style-type: none"> ● Quick tests on dengue virus have been conducted on dengue vectors collected from ovitraps set up in the port areas starting from 2015. ● In gearing up for the upcoming rainy season, FEHD together with relevant government departments will from May 4 to early June conduct two rounds of intensive mosquito preventive and control exercises across the territory covering areas under their respective purview. Through the two exercises, actions will be taken to kill adult mosquitoes, clear stagnant water and conduct grass cutting to eliminate potential mosquito breeding grounds. With each of the two rounds of the exercise lasting for two weeks, we hope that mosquitoes of a whole generation, including those infected with dengue virus, will be eliminated. <p><u>Publicity and Education Activities in 2015</u></p> <ul style="list-style-type: none"> ● Radio and TV APIs will be broadcast from April to October. ● New Radio and TV APIs with focus on mosquito control in the winter months were produced and first broadcast on 4.12.2014 and 4.2.2015 respectively till end of March 2015, and would be repeated from November to March every year. ● The broadcasting van would be deployed to those sites visited by the patients of the 3 local dengue fever cases during the incubation period of the disease at least twice each month. ● Stakeholders including the Housing Department (“HD”), Lands Department, LCSD and the works departments as well as their contractors had been briefed on the importance of mosquito prevention and control in the bi-monthly Kai Tak Site Coordination Meeting convened by the Civil Engineering and Development Department in March 2015. They would be reminded of the need to prevent mosquito breeding in Kai Tak area in the coming meetings in 2015. ● Promotional messages will be printed on electricity bills by Hong Kong Electric in September 2015. ● Publicity and educational activities had been conducted in January 2015 jointly with the Pest Control Personnel Association of Hong Kong in Kwai Tsing and Western Districts.

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	<ul style="list-style-type: none"> ● The Hong Kong Museum of Medical Sciences would assist in promoting the importance of mosquito prevention and control in the “Fever: The history of Malaria in Hong Kong” exhibition. ● The 2015 diary on anti-mosquito measures was uploaded to FEHD’s website in November 2014. ● Outreaching talks on mosquito prevention and control have been organised for students, teachers, property management, home for the elderly and construction site management, etc. ● AOI, Monthly Ovitrap Index and Port Ovitrap Index have been released to the press on a monthly basis. ● Anti-mosquito exhibitions have been staged since February 2014 and would last until end 2015 at Health Education Exhibition and Resource Centre. ● The slogan “Prevent Japanese Encephalitis and Dengue Fever Act Now” (齊來把蚊滅 預防日本腦炎登革熱) of the Anti-mosquito Campaign 2015 and other anti-mosquito messages are promulgated through the following channels- <ul style="list-style-type: none"> (a) television and radio APIs; (b) publicity materials e.g. posters, pamphlets, banners and diaries; (c) FEHD’s homepage and hotline; (d) games / competition; (e) talks on anti-mosquito measures; (f) roving exhibitions; and (g) a broadcasting van. ● A one-day promotional function with health talk, distribution of pamphlets and souvenirs, game booths/exhibitions, demonstration of mosquito control work, etc. will be conducted in the 19 districts in late May/early June 2015. District Council Members will be invited to join and to encourage community participation. ● Seminars for HD (including their estate management offices),

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	<p>Home Affairs Department (“HAD”), owners' committees of private residential and commercial buildings and mutual aid committees with responsibility for mosquito control work were organized in December 2014 and March 2015. This seminar will be organized again in June/July 2015.</p> <ul style="list-style-type: none"> ● To consider promoting anti-mosquito message to hygiene managers / hygiene supervisors of licensed food premises. ● Seminars for relevant supervisory staff of all member departments of the Inter-departmental Working Group on Pest Prevention and Control (16 departments (except HD and HAD) and Hospital Authority) were organized in November 2014 and March 2015. This seminar will be organized again in June/July 2015. <p><u>Territory-wide Anti-mosquito Campaign 2015</u></p> <ul style="list-style-type: none"> ● The territory-wide Anti-mosquito Campaign has been / would be implemented in three phases as follows: <ul style="list-style-type: none"> Phase I: 23 February 2015 – 27 March 2015 Phase II: 27 April 2015 – 3 July 2015 Phase III: 17 August 2015 – 9 October 2015 ● The Campaign aims at – <ul style="list-style-type: none"> (a) heightening public awareness of the potential risk of dengue fever, Chikungunya fever, Japanese encephalitis and other mosquito-borne diseases; (b) encouraging community participation and forging close partnership among government departments concerned in anti-mosquito work; and (c) eliminating potential mosquito breeding sites. <p><u>Territory-wide Thematic Mosquito Prevention and Control Special Operations in 2015</u></p> <ul style="list-style-type: none"> ● March - April 2015. A three-week Thematic Mosquito Prevention and Control Special Operation targeting at village houses, cross boundary check points, passenger and cargo/container terminals, construction sites, problematic spots and open space in the vicinity of pig farms was launched between 30 March and 17 April 2015 to sustain the momentum after completion of Phase I of the Anti-mosquito Campaign

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	<p>2015.</p> <ul style="list-style-type: none"> ● July – August 2015. A four-week Thematic Mosquito Prevention and Control Special Operation will be launched between 13 July and 7 August 2015. ● October 2015 – January 2016. A twelve-week Thematic Mosquito Prevention and Control Special Operation will be launched between 19 October 2015 and 8 January 2016. We will keep in view developments in the coming months to decide the emphases/themes of Phase 2 and Phase 3 of the above Thematic Operations.
Government Property Agency ("GPA")	<ul style="list-style-type: none"> ● For properties under GPA's purview, the relevant Property Management Agents ("PMA") are required to take the following anti-mosquito measures: <ul style="list-style-type: none"> (a) to put up relevant posters/notices to arouse awareness of occupants/residents and solicit their support to guard against mosquito-transmitted diseases; (b) to conduct daily inspection of areas where water may accumulate, e.g. drain holes, sand traps and gully traps, etc. with proper documentation of duly completed inspection forms which are subject to regular examination by GPA; (c) to apply larvicide to all drains once a week; (d) to conduct Pest Control at all common areas 1-2 times a month; (e) to remind nearby construction sites to take anti-mosquitoes measures; (f) to closely contact with FEHD to apply larvicide to nearby areas; (g) to remind officers in joint-user office buildings to prevent accumulation of water in relation to office plants; (h) To seal up keyholes of manhole covers with adhesive tape to prevent accumulation of water and breeding of mosquitoes; (i) To put up special posters/notices to arouse awareness of occupants/residents about Japanese Encephalitis and Dengue Fever;

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	<p>(j) To implement appropriate measures to prevent Japanese Encephalitis and Dengue Fever; and</p> <p>(k) To conduct fogging at 4 locations with over-grown vegetation in end March and to keep in view the latest situation for further fogging at locations in need if situation warrants.</p> <ul style="list-style-type: none"> ● The performance of PMAs is closely monitored by the designated teams of GPA, and contractual enforcement action will be taken against the PMA if it fails to meet the service requirements and levels as specified in the contract. ● When the AOIs recorded by FEHD have risen above the alert level, respective PMAs will step up the anti-mosquito measures as follows: <ul style="list-style-type: none"> (a) to brief their cleaning staff about anti-mosquito measure; (b) to increase the frequency of inspection to potential mosquito breeding grounds, e.g. roof; (c) to remove water from roof and open area after rain; (d) to clear drains and surface channels to prevent blockage; (e) to remove stagnant water; and (f) to fill up any defective ground surface.
Home Affairs Department (“HAD”)	<ul style="list-style-type: none"> ● To assist with the dissemination of anti-mosquito message, for example, by distributing anti-mosquito leaflets and posters and facilitating community talks and exhibitions. ● To carry out ad hoc maintenance, such as grass cutting, along village footpaths and access roads maintained by HAD. ● To assist FEHD to arrange briefing sessions for owners’ committees, owners’ corporations and mutual aid committees on the importance of mosquito prevention.
Housing Department (“HD”)	<p>Promotional / Publicity and Educational Programmes</p> <ul style="list-style-type: none"> ● To enrich and update the general knowledge in environmental

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	<p>hygiene and prevention of mosquito breeding in estates for staff members of HD, Property Service Agents and cleansing operatives, a seminar on “Prevention of Mosquito Breeding and Pest Control (Cockroach) in Estate 2015” will be held on 12 May 2015 with the support from FEHD and DH.</p> <ul style="list-style-type: none"> ● Tenants will continuously be encouraged to report mosquito breeding black spots through the Housing Authority Hotline. ● Inspection guidelines and checklist have been provided to frontline management staff for guidance. ● Community education against mosquito breeding will be stepped up through promotional posters, notices and leaflets, estate newsletters, Estate Management Advisory Committee meetings and video segments/messages posted onto the Housing Channel through the LCD monitor installed at the G/F lift lobbies of public rental housing (“PRH”) blocks. ● Easy-pull banners will be displayed at PRH estates to promote messages on public hygiene and epidemic prevention such as anti-mosquito and rodent measures etc. <p>Enhanced Anti-mosquito Actions</p> <ul style="list-style-type: none"> ● Estate management offices have been instructed to mobilise necessary resources and work closely with FEHD for the implementation of the territory-wide Anti-mosquito Campaign 2015. ● Anti-mosquito Special Cleansing Squads set up in all PRH estates will continue to carry out daily inspection of gullies, surface channels, hill slopes, flower beds etc. to eliminate accumulation of stagnant water at potential mosquito breeding black spots. ● Mosquito catching apparatuses have been placed at strategic points of PRH estates located in areas with relatively high AOI. ● Estates within districts with AOI over 10% will be alerted to step up anti-mosquito measures. Those estates within districts with AOI at alert level of 20% or above will be required to put up eye-catching notices at the G/F lift lobby of each estate block to alert tenants and solicit their cooperation and support to step up anti-mosquito measures in the estates.

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	<ul style="list-style-type: none"> ● Regular inspections in PRH estates will continue to be conducted by HD, in conjunction with FEHD, to monitor the effectiveness of the anti-mosquito measures. ● Overgrown vegetations on flower beds and slopes will be pruned from time to time. Larvicide will be applied to manholes and surface channels. Maintenance work such as clearing of blocked drains and paving of uneven ground will be sped up. ● All building contractors of HD will be demanded to clear up any stagnant water in construction sites and keep the sites clean. Cleansing contractors will also be required to strengthen their efforts in keeping PRH estates and work sites clean. <p>Enforcement Action</p> <ul style="list-style-type: none"> ● HD will strengthen enforcement actions under the ‘Marking Scheme for Estate Management Enforcement in public housing estates’ and call for tenants’ cooperation. Five penalty points will be allotted to households for committing the offence of “causing mosquito breeding by accumulating stagnant water” under the Scheme. ● To strengthen communication with contractors and review the relevant regulatory regime to contain mosquito breeding in PRH estates.
Lands Department	<ul style="list-style-type: none"> ● To enhance the regular programme of inspection and, if necessary, carry out cleaning of the fenced off Government sites. ● To conduct grass cutting and tidy up government land site black spots. To apply larvicidal oil or pesticide as and when necessary and take action to level the uneven ground where stagnant water is easily accumulated. ● To clear identified hillside illegal cultivation black spots to eliminate mosquito breeding grounds. ● To prosecute offender of illegal cultivation when sufficient evidence is collected. ● To strengthen grass cutting and tidy up the fenced government land sites within 100m radius of the locations having high

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	<p>ovitrap index.</p> <ul style="list-style-type: none"> ● To conduct joint operation with other departments in fighting against mosquito-borne disease. ● To distribute government posters and pamphlets through District Lands Offices to educate the general public. ● To remind government departments that allocated sites should be kept in a clean and tidy condition and that grass cutting should be performed regularly. ● To issue letters to tenants (Short Term Tenancies) and licensees (Government Land Licences) in assisting the Government in mosquito prevention. ● To enhance the supervision of contractors' performance on anti-mosquito measures. Any insufficient mosquito preventive measures or mosquito breeding places found would be accurately reflected in the contractor's quarterly performance report.
<p>Leisure and Cultural Services Department</p>	<ul style="list-style-type: none"> ● To step up inspection and strengthen vector prevention and control measures at LCSD venues. ● To carry out special anti-mosquito operations and cleansing operations at LCSD venues. ● To tighten up supervision over contractor staff in anti-mosquito work and activate the contract sanction mechanism if contractor fails to meet the contract requirements. ● To continue installation of mosquito trapping devices at LCSD venues. ● To conduct roving exhibitions on mosquito control and prevention of dengue fever at LCSD venues. ● To display and distribute anti-mosquito publicity materials such as banners, posters and leaflets. ● To step up enforcement action against littering offenders at LCSD venues.
