

**For discussion
on 25 February 2004**

LegCo Panel on Food Safety and Environmental Hygiene

Anti-mosquito Campaign and Dengue Vector Surveillance in 2004

PURPOSE

At the meeting held on 25 February 2003, Members were briefed on the Anti-mosquito Campaign 2003 and the enhanced dengue vector surveillance programme implemented by the Food and Environmental Hygiene Department (FEHD). This paper outlines the objectives and implementation plan of the Anti-mosquito Campaign 2004, reports the findings of the dengue vector surveillance programme in 2003 and describes how the programme will be further enhanced in 2004.

ANTI-MOSQUITO CAMPAIGN 2004

2. To heighten public awareness of the potential risk of mosquito-borne diseases notably dengue fever and to forge partnership of the community and government departments concerned in anti-mosquito work, territory-wide anti-mosquito campaigns have been organised under the stewardship of FEHD annually. The Anti-mosquito Campaign 2004 will be implemented in three phases as follows -

Phase 1: from 23.2.2004 to 3.4.2004, lasting for a period of six weeks

Phase 2: from 24.5.2004 to 3.7.2004, lasting for a period of six weeks

Phase 3: from 30.8.2004 to 23.10.2004, lasting for a period of eight weeks

3. During the entire campaign period, control measures and publicity efforts will be stepped up to supplement the regular inspection

and enforcement work carried out by district pest control staff. The third phase of the Campaign will be extended to 8 weeks as this period follows the summer break, during which a large number of local residents will travel to dengue endemic areas and may bring the dengue virus with them back to the territory.

4. Under the slogan of “Beware of Dengue Fever Act Now”, the message of the campaign will be promulgated through different channels including Announcement of Public Interests on radio and television, VCD, exhibitions, talks, and publicity materials e.g. posters, leaflets, banners, etc. Relevant government bureaux and departments including the Education and Manpower Bureau, Agriculture, Fisheries and Conservation Department, Architectural Services Department, Correctional Services Department, Environmental Protection Department, Department of Health, Highways Department, Home Affairs Department, Housing Department, Immigration Department, Labour Department, Lands Department, Leisure and Cultural Services Department, Marine Department, Social Welfare Department and Water Supplies Department will also play an active role in the campaign through eliminating mosquito breeding grounds in places under their charge and soliciting community support.

FINDINGS OF THE DENGUE VECTOR SURVEILLANCE PROGRAMME IN 2003

5. Since 2000, FEHD has put in place a dengue vector surveillance programme to monitor the distribution of *Aedes albopictus* at selected locations, evaluate the effectiveness of mosquito prevention and control work carried out by various parties, and provide surveillance information for making timely adjustments to our mosquito control strategies and measures. Following the finding of the first local dengue fever case in Hong Kong in 2002, the surveillance programme was enhanced in 2003 with the introduction of a comprehensive ovitrap survey to monitor the local situation. 38 selected areas were covered by the ovitrap survey each month. Two different indices, namely, Area Ovitrap Index (AOI) and Monthly Ovitrap Index (MOI), have been used to assess the extensiveness of the distribution of Aedine mosquitoes in a

surveyed area and to reflect the distribution and activity of *Aedes albopictus* in the whole territory. The AOIs, once available, are provided to the relevant government departments so that mosquito control actions can be taken promptly according to the value of the ovitrap index recorded. The indices are also announced each month through FEHD's website and press release to arouse public awareness of the situation of mosquito breeding in respective districts and to enlist community participation in mosquito control work.

6. The MOIs and AOIs recorded in 2003 are shown in **Appendix 1**. It can be seen that the MOIs were much lower than that of 2000-2002 (**Appendix 2**). MOI increased gradually from 1.4% in March to 20.3% in July, which followed the seasonal pattern observed in the last three years although the peak appeared in July instead of June. AOIs of individual surveyed areas also followed the seasonal changes. Higher indices were generally observed during the warmer months in June, July and August. Highest AOI of 48.0% was recorded in Cheung Chau and Tai Po North during June and July respectively. Tin Shui Wai, on the other hand, had an AOI over 40% in June and July consecutively.

7. For areas with high indices over 30%, inter-departmental anti-mosquito response mechanism led by FEHD was activated with the setting up of Task Force at district level in a bid to contain the rise in ovitrap index. Apart from the government departments concerned, relevant non-governmental organizations including housing estate management companies and schools were also invited to participate in the special control operations. In the fourth quarter of 2003, the control measures were further strengthened and the response mechanism would be activated in areas recording ovitrap indices over 20%. Intensive on-the-spot inspections would be conducted in those areas, followed by elimination of breeding sources and application of larvicides to potential breeding grounds that were non-removable. These measures have proved to be effective in lowering the ovitrap indices.

FURTHER ENHANCEMENT OF DENGUE VECTOR SURVEILLANCE PROGRAMME IN 2004

Port Surveillance

8. Under the current vector surveillance programme, airport has always been under stringent monitoring using ovitraps. The existing 38 strategic locations also cover some port areas. In view of the high number of imported cases of dengue fever last year and the fact that port areas are important strategic locations vulnerable to the introduction of dengue virus from neighbouring areas, there will be an enhancement of the dengue vector surveillance programme in 2004 through extending the coverage of the programme to all major port areas. These include airport, cross boundary sea ports, land ports, cargo working areas and container terminals (**Appendix 3**). The Port Ovitrap Index (POI) will be categorized into seven groups, namely, Airport, Public Cargo Working Areas, Private Cargo Handling Areas, Cross Boundary Ferry Piers, Cross Boundary Check Points on Land, Container Terminals and Rail Cargo Handling Areas. A Monthly Port Ovitrap Index (MPOI) will be enumerated to indicate the overall situation of mosquito breeding in port areas and will be released monthly together with the MOI and AOIs.

Community Surveillance

9. After reviewing the 38 selected locations covered by the ovitrap survey in 2003, we decide to retain 36 old locations with some adjustments of their boundaries while two new locations will be added in 2004. Lo Wu and Sai Ying Pun will no longer be covered by the community surveillance programme. Lo Wu as a cross boundary land port will be covered by the port surveillance programme, while most areas of Sai Ying Pun previously covered will remain to be covered by expanding the surveillance areas of the neighbouring Sheung Wan and Kennedy Town.

10. The new areas to be included in the surveillance programme will be Yuen Long and North Point. The only one local dengue fever case in 2003 was found in Pat Heung, Yuen Long. Dengue vector surveillance will be carried out in the area to monitor the vectorial

situation aiming to prevent a recurrence of the problem. In addition, North Point will be included in the dengue vector surveillance programme in 2004 as it is a densely populated area with schools. A total of 38 AOIs and a MOI will be recorded monthly to represent the vectorial situation in the community.

ADVICE SOUGHT

11. Members are invited to note the Anti-mosquito Campaign 2004, the findings of the dengue vector surveillance programme in 2003, and the further enhanced dengue vector surveillance programme in 2004.

**Health, Welfare and Food Bureau
Food and Environmental Hygiene Department
February 2004**

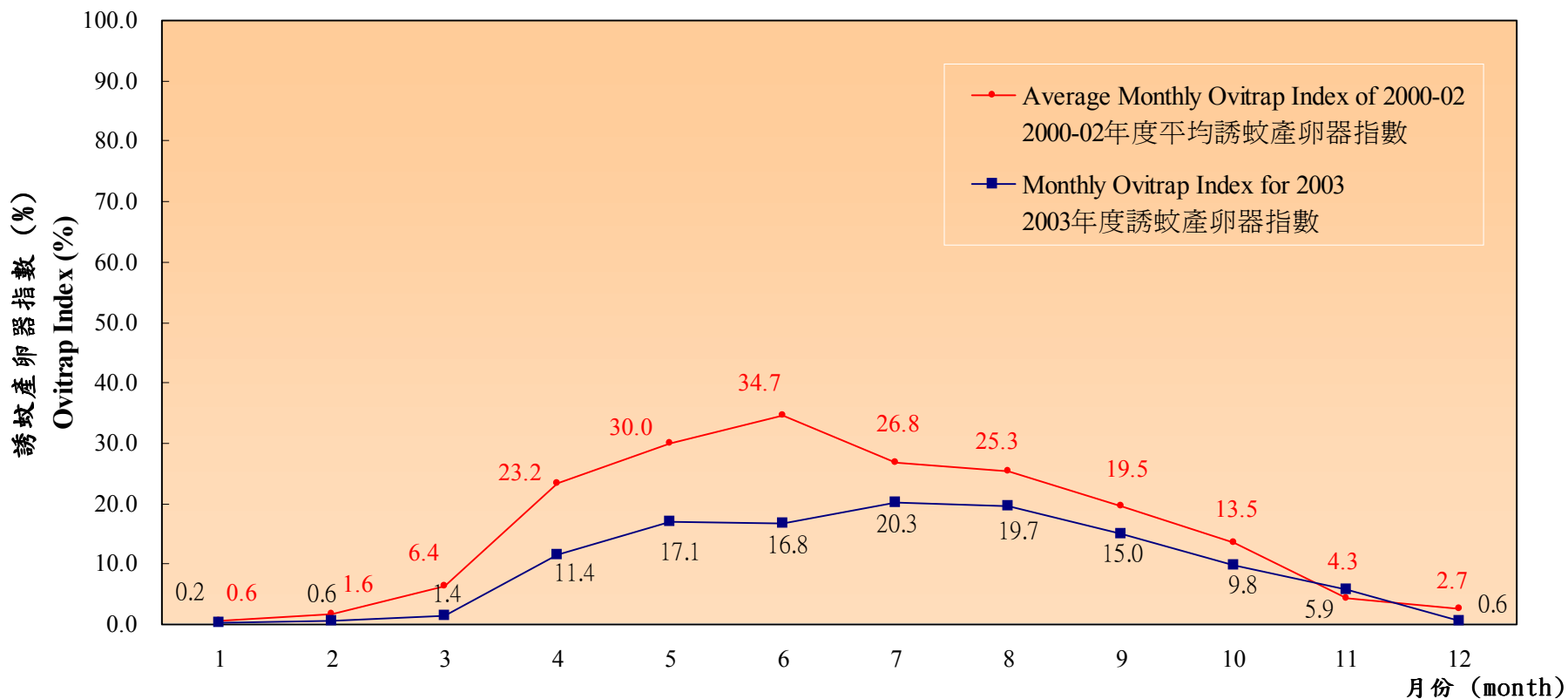
Appendix 1

Monthly Area Ovitrap Index in 2003

Ops Area	Locations	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Hong Kong Island & Outside Islands	Chai Wan West	0.0%	5.8%	0.0%	7.3%	30.8%	25.5%	20.8%	12.8%	14.6%	8.0%	10.9%	0.0%
	Wan Chai North	0.0%	0.0%	6.0%	1.9%	10.4%	8.2%	8.0%	8.0%	2.0%	7.7%	2.0%	0.0%
	Happy Valley	0.0%	0.0%	13.2%	3.7%	21.8%	20.8%	18.2%	17.6%	11.5%	5.8%	7.4%	7.7%
	Sheung Wan	0.0%	0.0%	0.0%	7.8%	8.0%	10.4%	12.2%	9.8%	8.2%	8.2%	4.2%	0.0%
	Kennedy Town	2.1%	2.0%	2.2%	22.0%	14.0%	27.5%	18.0%	13.7%	11.5%	7.8%	2.0%	0.0%
	Sai Ying Pun	0.0%	2.2%	6.8%	8.9%	13.3%	23.9%	12.2%	12.0%	12.0%	6.0%	2.0%	0.0%
	Aberdeen	0.0%	0.0%	0.0%	7.8%	12.2%	17.4%	19.1%	14.6%	10.4%	6.1%	10.2%	0.0%
	Pokfulam	0.0%	0.0%	1.9%	9.6%	10.9%	14.8%	12.0%	27.8%	14.6%	9.3%	5.8%	0.0%
	Cheung Chau	0.0%	0.0%	0.0%	36.4%	29.2%	48.0%	21.2%	12.5%	15.2%	12.1%	5.9%	0.0%
	Tung Chung	0.0%	0.0%	0.0%	22.2%	16.1%	13.3%	29.0%	23.5%	12.5%	12.5%	3.0%	0.0%
Kowloon	Tsim Sha Tsui	0.0%	0.0%	0.0%	13.0%	13.0%	9.4%	13.5%	16.0%	14.0%	12.0%	10.4%	0.0%
	Yau Ma Tei	0.0%	0.0%	0.0%	4.2%	4.2%	5.8%	13.2%	11.5%	7.7%	9.8%	1.9%	0.0%
	Lai Chi Kok	0.0%	0.0%	0.0%	1.9%	12.7%	7.8%	17.3%	11.3%	14.3%	7.5%	5.7%	0.0%
	Kln Tong	0.0%	0.0%	0.0%	13.5%	24.5%	20.4%	18.4%	19.1%	22.0%	7.7%	4.7%	5.9%
	Cheung Sha Wan	0.0%	0.0%	0.0%	7.5%	7.7%	11.8%	17.6%	15.7%	13.7%	14.3%	11.8%	0.0%
	Kln City North	0.0%	0.0%	0.0%	7.8%	3.9%	12.5%	20.8%	16.3%	4.0%	12.0%	4.2%	0.0%
	Ho Man Tin	0.0%	0.0%	0.0%	6.4%	4.7%	6.5%	14.8%	17.3%	22.4%	20.4%	3.9%	0.0%
	Wong Tai Sin Central	0.0%	4.3%	0.0%	37.5%	35.6%	16.3%	36.5%	22.2%	18.5%	11.8%	4.0%	0.0%
	Diamond Hill	2.4%	0.0%	0.0%	12.0%	20.8%	9.6%	19.6%	34.7%	15.4%	7.8%	9.3%	0.0%
	Kwun Tong Central	2.2%	0.0%	0.0%	11.5%	11.3%	10.4%	20.8%	20.0%	13.7%	12.5%	10.0%	0.0%
Lam Tin	0.0%	0.0%	4.4%	4.4%	17.6%	14.3%	27.1%	18.9%	15.1%	5.9%	2.0%	0.0%	

New Territory East	Tseung Kwan O	0.0%	0.0%	0.0%	1.6%	9.2%	15.4%	17.5%	14.5%	17.7%	6.7%	3.2%	0.0%
	Ma On Shan	0.0%	0.0%	0.0%	4.0%	25.5%	26.7%	16.7%	17.0%	14.3%	8.3%	6.3%	0.0%
	Lek Yuen	0.0%	0.0%	0.0%	9.8%	21.8%	16.4%	16.3%	25.0%	13.7%	13.7%	3.7%	0.0%
	Tai Wai	0.0%	5.8%	2.0%	10.0%	19.6%	22.0%	16.4%	18.9%	17.6%	13.7%	4.0%	0.0%
	Tai Po North	0.0%	0.0%	8.5%	21.7%	17.3%	18.8%	48.0%	29.2%	28.0%	11.8%	8.0%	0.0%
	Fanling	0.0%	0.0%	0.0%	15.2%	31.1%	17.0%	24.5%	18.9%	18.0%	6.1%	9.8%	3.9%
	Lo Wu	0.0%	0.0%	4.6%	26.1%	33.3%	29.2%	10.0%	18.8%	8.8%	0.0%	3.1%	0.0%
	Sheung Shui	0.0%	0.0%	0.0%	11.3%	20.0%	13.5%	21.2%	26.0%	14.3%	11.5%	11.5%	2.0%
New Territory West	Tin Shui Wai	2.3%	0.0%	4.6%	13.5%	25.0%	40.7%	46.0%	34.7%	27.7%	14.6%	4.3%	0.0%
	Yuen Long Town	0.0%	0.0%	0.0%	18.8%	17.3%	18.0%	19.2%	17.0%	17.6%	3.9%	2.0%	0.0%
	Tuen Mun (S)	0.0%	0.0%	0.0%	5.9%	5.7%	18.0%	18.8%	18.4%	18.4%	11.9%	4.0%	0.0%
	Tuen Mun (N)	0.0%	0.0%	1.8%	12.7%	10.9%	12.7%	20.4%	23.1%	17.0%	5.7%	5.8%	0.0%
	Tsuen Wan Town	0.0%	0.0%	0.0%	0.0%	3.7%	13.5%	13.2%	14.0%	7.5%	3.9%	3.8%	0.0%
	Ma Wan	0.0%	0.0%	0.0%	39.3%	14.3%	11.5%	13.3%	17.2%	17.9%	6.9%	6.7%	0.0%
	Kwai Chung	0.0%	0.0%	0.0%	22.6%	24.5%	10.6%	20.4%	35.4%	23.1%	17.0%	5.9%	1.9%
	Lai King	0.0%	0.0%	0.0%	10.9%	28.3%	21.6%	27.5%	19.2%	17.3%	16.0%	10.0%	0.0%
	Tsing Yi	0.0%	1.9%	0.0%	8.8%	21.1%	15.8%	28.6%	23.5%	17.0%	14.8%	11.5%	1.8%
Monthly Ovitrap Index	0.2%	0.6%	1.4%	11.4%	17.1%	16.8%	20.3%	19.7%	15.0%	9.8%	5.9%	0.6%	

2000-02年與2003年白紋伊蚊誘蚊產卵器指數比較
 Comparison of Monthly Average Ovitrap Index (2000-02 and 2003)



Areas to be covered in Port Surveillance 2004

	Cross Boundary Check Points on Land	Cross Boundary Ferry Piers	Public Cargo Working Areas	Private Cargo Handling Areas	Container Terminals	Rail Cargo Handling Areas	Airport
1.	Lok Ma Chau	Macau Ferry Terminal	Tuen Mun	China Merchant Wharf, Kennedy Town	No.1	Hung Hom Cargo Handling Area	Chek Lap Kok Island
2.	Lo Wu	China Ferry Terminal and Ocean Terminal	Rambler Channel	Yun Fat Pier, Shum Shui Po	No.2	Fo Tan Railway Siding	
3.	Sha Tau Kok		Stonecutters Island	River Trade Terminal, Tuen Mun	No.3	Sheung Shui Railway Siding	
4.	Man Kam To		New Yau Ma Tei		No.4		
5.			Kwun Tong		No.5		
6.			Cha Kwo Ling		No.6		
7.			Western District		No.7		
8.			Chai Wan		No.8		
9.					No.9		