

**For discussion on
10 March 2020**

Legislative Council Panel on Food Safety and Environmental Hygiene

Mosquito Control Work

Purpose

This paper reports on the effectiveness of the mosquito control work carried out by the Government last year and introduces the work focus for this year.

Background

2. Last year, the Pest Control Steering Committee (“the Committee”) coordinated by the Food and Health Bureau set objectives in three areas: strengthening prevention, coordination and surveillance.

3. With experiences in the past consolidated, the Committee is of the view that early prevention is the most effective approach for mosquito control. The Government will commence and strengthen targeted operations to prevent mosquito breeding before the rainy season, and conduct fogging operations once the rainy season arrives to eliminate adult mosquitoes. The Government will also collaborate with the local communities to avoid extensive mosquito breeding after the rainy season. Under the coordination of the Committee, government departments have been allocated with additional resources to enhance pest control work. They have also been continuously incorporating standard terms on pest control in their cleansing service contracts upon contract renewal to better monitor the contractors’ performance and effectiveness in pest control work.

4. The Food and Environmental Hygiene Department (“FEHD”) has also been providing professional training for the relevant government departments. Last year, training courses and talks on anti-mosquito were organised for over 400 staff. In addition, in February 2019, FEHD invited some experts from the World Health Organization to conduct a thematic talk for about 100 staff from government departments.

Effectiveness of mosquito control work

5. The mosquito prevention and control work last year had been conducted effectively to curb the spread of dengue fever in Hong Kong and maintain the ovitrap index for *Aedes albopictus* (“the Index”) at a low level throughout the year. A comparison of the specific figures is set out below –

Comparison between 2018 and 2019

	2018	2019
Number of confirmed local dengue fever cases	29	1
Number of areas with the Index exceeding 40%	3	1
Number of areas with the Index exceeding the alert level of 20% for two or more consecutive months	6	4

6. Last year is the first year since 2015 when there was no area with the Index exceeding the alert level during the rainy season between August and October. Nevertheless, since dengue fever has become endemic in Southeast Asian regions¹, the Government will remain vigilant in sustaining anti-mosquito work.

Work objectives for this year

7. The Government will consolidate the results achieved last year and continue to strengthen prevention, coordination and surveillance. The objectives this year are as follows –

- (i) to continue to prevent the occurrence of local dengue fever cases;
- (ii) to further reduce the Index (the respective targets include maintaining no more than two areas with the Index exceeding the alert level of 20% for two consecutive months or more and no area with the index exceeding 40%); and
- (iii) to compile, measure and release the density index of adult mosquitoes this year.

¹ The numbers of dengue fever cases recorded in some neighbouring Asian regions last year far exceeded the numbers in past years. For example, there were 420 453 cases in the Philippines (around twice the number of cases in 2018), 320 702 cases in Vietnam (around triple the number of cases in 2018) and 127 407 cases in Malaysia (around twice the number of cases in 2018). In Hong Kong, 197 imported cases of dengue fever were recorded in 2019, which represents an apparent increase as compared with the 163 cases recorded in 2018.

Strengthening mosquito prevention

All-out Anti-mosquito Operations

8. The All-out Anti-mosquito Operations (“the Operations”) in 2019 succeeded in maintaining the Index at a low level throughout the year. The relevant government departments will implement the Operations again in the rainy season this year to eliminate the mosquito breeding sites early² and conduct fogging operations at the same time until the rainy season ends. Before the start of the rainy season, government departments will carry out mosquito preventive measures in order to reduce potential mosquito breeding sites. The departments will also pay special attention to locations which may hold water, such as key holes of manhole covers, surface channels, sand traps, drains of canopy of covered walkways, scaffolding, etc.

Strengthening inter-departmental coordination

Technical support

9. FEHD has all along been maintaining close liaison with various government departments and providing them with advice and technical support to facilitate them in implementing effective preventive and control measures in areas under their management. FEHD will continue to enhance its provision of technical guidance and surveillance function.

Wide application of new anti-mosquito technologies

10. Upon completion of internal testing, FEHD has provided some new mosquito traps³ to the relevant departments and organization (including the Leisure and Cultural Services Department, Housing Department, Department of Health and Hospital Authority) for trial use in Ma On Shan and Sheung Shui since September 2019. The new mosquito traps have been effective in eliminating mosquitoes, resulting in a substantial reduction in the number of adult mosquitoes. Motivated by the Committee, various departments will use the new technology more extensively. Around 2 700 new mosquito traps will be set up by various departments within areas under their management before March this year with a view to preventing mosquito breeding before the onset of the rainy season.

² To maintain the mosquito control work in the dry season at the same level as that in the rainy season, FEHD has engaged around 40 additional pest control roving teams from November 2019 to February 2020 to strengthen the anti-mosquito work in public areas in the dry season.

³ The mosquito trap can attract female mosquitoes to lay eggs and allow the dissemination of the insect growth regulator (“IGR”) with which they come into contact to other water bodies where they may land. The IGR can prevent the mosquito larvae in the water bodies from developing into adult mosquitoes.

Enhancing enforcement and monitoring

11. FEHD has set up four Pest Control Inspection Teams since 2017 to step up inspections of construction sites and enforcement actions against persons in charge of premises with unattended mosquito breeding sites⁴. The works departments of the Government will also step up monitoring of the mosquito control work of the contractors at their construction sites.

Strengthening mosquito surveillance

Release of adult mosquito density index

12. FEHD conducted field trials in Wong Tai Sin, Cheung Chau and Yau Tong from June to November 2019 on an ovitrap with new design which was mounted with a sticky trap inside for collecting adult mosquitoes directly. FEHD has finalised the design of the new ovitrap. In April 2020, around 5 000 new ovitraps will be placed in the territory to replace the existing ones to calculate the density of adult mosquitoes directly. By then, apart from the existing Index⁵, FEHD will also release the adult mosquito density index which may better reflect the effectiveness of mosquito control work and facilitate various departments to formulate more targeted anti-mosquito measures.

Stepping up public education

13. Apart from strengthening the anti-mosquito measures of various government departments, the efforts by the public and persons in charge of private premises are also important to the long-term effectiveness of mosquito control work. The Government will continue to make use of different channels, including FEHD's website as well as the Keep Clean Ambassador Ah Tak Facebook page and Instagram, to appeal to the public to carry out anti-mosquito measures and to disseminate information, such as types and methods of mosquito trapping devices and electrocuting devices commonly found in the market⁶, to the public for reference.

⁴ In 2019, FEHD initiated 173 prosecutions for mosquito breeding, and 162 of them involved construction sites.

⁵ The existing Index is the percentage of ovitraps that are found to have positive larval breeding result. It only indicates the extensiveness of the distribution of Aedine mosquitoes.

⁶ https://www.fehd.hksarg/english/pestcontrol/library/pdf_pest_control/mosquito_trap_device.pdf
https://www.fehd.gov.hk/english/pestcontrol/images/Pestnews_27e.pdf
https://www.fehd.gov.hk/english/pestcontrol/images/Pestnews_28e.pdf

Conclusion

14. Members are invited to note the efforts of the Government to strengthen prevention, coordination and surveillance in carrying out mosquito control work and the mobilisation of the local communities to actively participate in the operations to be conducted this year.

Food and Health Bureau

Food and Environmental Hygiene Department

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