

CONTROLLING OFFICER'S REPLY

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(Question Serial No. 2417)

Head: (49) Food and Environmental Hygiene Department

Subhead (No. & title): (-) Not specified

Programme: (1) Food Safety and Public Health

Controlling Officer: Director of Food and Environmental Hygiene (Ms Irene YOUNG)

Director of Bureau: Secretary for Environment and Ecology

Question:

Regarding the serious mosquito infestation in Ma On Shan, please advise this Committee of the following:

1. What are the details of the mosquito control work carried out in Ma On Shan in the past year? What are the manpower and expenditure involved?
2. What are the expenditure and effectiveness of adopting new technologies/methods to enhance mosquito control work in the past year?
3. What are the targets and budget for the future mosquito control work?

Asked by: Hon LI Sai-wing, Stanley (LegCo internal reference no.: 27)

Reply:

1. The crux of mosquito prevention and control work is to prevent and remove accumulation of water for curbing mosquito breeding. Each year, the Food and Environmental Hygiene Department conducts the territory-wide Anti-mosquito Campaign in 3 phases, usually around February to October. A territory-wide thematic mosquito prevention and control special operation is also launched between the phases, which focuses on enhanced mosquito control work at strategic areas with more serious mosquito infestation, such as construction sites.

To further enhance the effectiveness of mosquito control efforts, the Department also conducts All-out Anti-mosquito Operations each year in collaboration with relevant bureaux/departments from around March and April until the end of the rainy season. The operations focus on eliminating potential breeding places in venues under the management of the relevant bureaux/departments, especially through repairing structural defects, such as defective floor and surface channels, etc. Regular fogging operations are also carried out to suppress the density of adult mosquitoes in the venues under their respective management.

Every week, the Sha Tin District Environmental Hygiene Office (the Office) of the Department carries out routine environmental improvement measures at public places in the district to prevent mosquito breeding. Such measures include removal of fallen leaves and accumulated water at the roadside, clearing of fallen leaves and refuse in surface drainage channels, and application of larvicides to gullies and ditches. Moreover, the Office installs additional new mosquito trapping devices and use ultra-low volume foggers to conduct fogging operations at suitable places in Ma On Shan area to reduce mosquito breeding and the population of adult mosquitoes. In 2022, robotics foggers were introduced to carry out fogging operations in suitable places in Ma On Shan in order to further control the population of adult mosquitoes.

The Office also maintains close communication with the relevant departments and management offices of housing estates, providing them with professional advice and technical guidance from time to time, so as to facilitate the adoption of effective measures for mosquito prevention and control in the areas under their management. Noting the relatively high gravidtrap index in the area, the Office has offered advice and technical guidance to the relevant departments and management offices of private housing estates, assisting them to implement effective anti-mosquito measures swiftly. Besides, site inspections have been conducted in collaboration with the relevant departments and members of the local community to check the effectiveness of the anti-mosquito efforts. Publicity and education have also been strengthened. The Office will continue with the targeted measures to control mosquito breeding and the population of adult mosquitoes.

In 2022, 43 in-house staff and 135 outsourced contractor staff under the Office engaged in pest control services, including the prevention and control of rodents and mosquitoes. In 2022-23, the overall revised estimated expenditure on pest control services was about \$796 million. The Department does not keep a separate breakdown of the expenditure of individual District Environmental Hygiene Offices on mosquito control services.

2. The technological applications employed by the Department for enhancing mosquito control in the past year, their effectiveness and the expenditure involved are provided at the **Annex**.
3. In 2023-24, the overall revised estimated expenditure on pest control services is \$797 million. The Department will continue with the above-mentioned mosquito control work to consolidate the results of its anti-mosquito efforts and ensure the continuous control of mosquito infestation.

Technological applications for mosquito control and the expenditures incurred

Technological application for mosquito control	Effectiveness	Expenditure 2022-23
New mosquito trapping device	The Department tested the new mosquito trapping device in Tuen Mun and Tsim Sha Tsui in 2019. Test results showed that the new mosquito trapping device was effective in minimising the nuisance caused by <i>Aedes</i> mosquitoes. The Department has introduced the use of the device in its regular anti-mosquito work and recommended the technology to other departments.	Around \$640,000
Use of gravidtraps to monitor <i>Aedes albopictus</i>	The gravidtrap was tested in the laboratory and 10 districts from 2019 to 2020. Test results showed that the gravidtrap was effective in attracting and capturing adult <i>Aedes albopictus</i> mosquitoes, reducing the time required for surveillance, as well as providing a quantitative density index. Starting from April 2020, the gravidtrap has completely replaced the ovitrap previously used for monitoring <i>Aedes albopictus</i> .	Around \$250,000
Large ultra-low volume (ULV) fogger	The large ULV fogger was tested in Yuen Long District between April and July 2020. Test results showed that the large ULV fogger was suitable for conducting ULV space treatment over a large area, and its spray range was longer than the knapsack sprayer being used. The fogger was more effective in killing adult mosquitoes in the fogging treatments conducted in scrubby areas. The Department has introduced the use of large ULV foggers in its regular anti-mosquito work in the same year.	N.A. ^{Note}
Robotics fogger	Field trials were conducted in Yuen Long, Sha Tin and Sai Kung Districts between April and November 2021. Test results showed that the robotics fogger, which could be driven to designated places to spray pesticides when installed on vehicles, was safe, effective and user-friendly. The range of the sprayer was wider than that of the knapsack sprayer being used. The robotics fogger could facilitate fogging operations in large areas and was particularly useful in killing adult mosquitoes in places that were difficult for workers to reach. The Department has introduced the use of robotics foggers in its regular anti-	Around \$1.19 million

Technological application for mosquito control	Effectiveness	Expenditure 2022-23
	mosquito work since 2022. The technology has been recommended to other departments, and on-site demonstration on the operation of robotics foggers have been arranged.	

Note: The Department did not procure such equipment in that financial year.

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