CONTROLLING OFFICER'S REPLY

(Question Serial No. 1923)

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 (Miss Diane WONG)

Director of Bureau: Secretary for Food and Health

Question:

With regard to pest control, please advise this Committee of the following:

1. What are the manpower of the Food and Environmental Hygiene Department (the Department) and the expenditure currently involved in the pest control work, including civil service staffing, outsourced service contractors' manpower and the total value of outsourced service contracts?

2. Please set out the number of rodent control surveys conducted, the number of poison treatments of rodent infestation, the number of rodent trappings, the number of dead rodents collected and the number of live rodents caught, with a breakdown by District Council district.

3. While the estimated figures on rodent control surveys, poison treatments of rodent infestation and rodent trappings increased in 2019, 2020 and 2021, it is generally perceived that the rodent problem is serious. Has the Department assessed the effectiveness of the existing work? If yes, what are the details? If no, what is/are the reason(s)?

4. Last year, the Department planned to conduct trial tests on the thermal imaging camera surveillance system in selected districts. What is the progress of the work?

Asked by: Hon CHAN Hak-kan (LegCo internal reference no.: 19)

Reply:

1. The overall expenditure on the provision of pest control services by in-house staff of the Food and Environmental Hygiene Department and its outsourced staff in 2020-21 was $726 million (revised estimate). The total number of in-house staff responsible for pest control work was 740 and the total number of outsourced staff providing pest control services was about 2 180. As at 31 December 2020, the total value of pest control service contracts awarded by the Department was $1.125 billion.

2. The number of rodent control surveys conducted, the number of poison treatments of rodent infestation in building blocks, the number of rodent trappings, the number of dead rodents collected and the number of live rodents caught in 2020 are tabulated as follows:

District	Number of rodent control surveys	Number of poison treatments of rodent infestation in building blocks	Number of rodent trappings	Number of dead rodents collected	Number of live rodents caught
Central and Western	350	4 752	5 058	2 006	1 626
Eastern	275	19 813	2 895	2 245	1 313
Southern	213	3 641	1 118	647	492
Wan Chai	180	13 184	4 085	1 302	2 081
Kowloon City	435	4 608	13 393	2 753	2 054
Kwun Tong	372	6 016	4 107	3 848	4 357
Wong Tai Sin	380	832	2 234	1 305	1 507
Sham Shui Po	265	270	4 850	3 254	4 173
Mong Kok	162	2 493	8 854	5 059	4 238
Yau Tsim	564	192	2 732	1 324	300
Sha Tin	439	5 060	9 679	1 118	737
Tai Po	165	13 260	419	771	589
North	870	1 701	470	1 102	580
Kwai Tsing	883	1 296	3 086	469	753
Tsuen Wan	240	2 981	5 212	1 034	1 837
Tuen Mun	466	5 274	2 023	548	321
Yuen Long	1 085	5 314	7 263	1 520	1 449
Sai Kung	417	8 672	1 737	521	226
Islands	3 122	742	2 615	1 162	239
Whole territory	10 883	100 101	81 830	31 988	28 872

3&4. The Department adopts an integrated management approach to the prevention and control of mosquitoes and rodents. Such approach, which is mainly premised on the recommendations and technical guidelines of the World Health Organization (WHO), emphasises on fundamental control, i.e. eliminating mosquito breeding places and the 3 survival conditions of rodents, namely food, harbourage and passages, with the aim of prevention and control of pests.

To review the mosquito and rodent control work, the Department has invited an expert in mosquito control from the WHO Regional Office for the Western Pacific and an expert in rodent control referred by the WHO to provide advice on the mosquito and rodent control work of Hong Kong respectively.

For mosquito control, the Department is taking forward the recommendations of the expert gradually to enhance mosquito surveillance and control. Since April 2020, the Department has put in place newly designed gravidtraps as a replacement for the ovitraps previously used. The gravidtraps can directly count the number of adult mosquitoes to enumerate the new Gravidtrap Index (GI) and to release the additional Density Index (DI). The GI reflects the extensiveness of distribution of Aedes albopictus mosquitoes in the survey area, whereas the new DI indicates the average number of adult Aedes albopictus mosquitoes collected in each positive gravidtrap to quantify their activity level. The Department has also introduced a new mosquito trap which involves the carrying of growth regulators by female mosquitoes to the water bodies where they lay eggs to prevent larvae in those water bodies from developing into adult mosquitoes. Since the new mosquito trap is effective, the Department has put the trap to extensive use, and encouraged relevant government departments/organisations to use the trap in appropriate environments.

For rodent control, after conducting field trials, the Department is adopting the expert's recommendations, including the use of different kinds of food at a time as baits in trapping activities and the employment of a newly designed snap trap to enhance the effectiveness of anti-rodent efforts. In addition, the Department will encourage community engagement in rodent prevention and control work and explore the application of various technologies on baits and traps with a view to improving the efficacy of rodent disinfestation work.

For better rodent surveillance, the Department conducted field trials on thermal imaging cameras with artificial intelligence analytical function in various locations (including 9 target areas of the anti-rodent operations in designated target areas) in 2020. The tests have shown that the new technology is effective in identifying places where rodents frequently visit and the time and patterns of rodent activities, as well as assessing and quantifying anti-rodent work. By means of the artificial intelligence function, the technology can be used for identifying rodents in thermal images, tracing their movements and keeping track of the locations and temporal patterns of foraging rodents, which enables pest control workers to place rodenticides and trapping devices more accurately and to install targeted rodent proofing measures for better rodent control. Furthermore, direct comparison of indicative data collected before and after anti-rodent operations is possible by virtue of the data on the thermal images captured, which is conducive to evaluating and quantifying the effectiveness of anti-rodent work. The Department put the thermal imaging camera to full use during the second round of anti-rodent operation in designated target areas in November 2020, and has planned for its wider use in other suitable locations with a view to increasing the effectiveness of the anti-rodent operations.

In the meantime, the Department will enhance the existing Rodent Infestation Rate (RIR) surveys in several aspects, including improving the sharing of survey data with the departments responsible for managing the relevant venues or facilities; releasing the RIR of all 50 survey areas to the public; installing thermal imaging cameras at the survey locations with a persistently high RIR for deployment of more effective

follow-up actions; and actively exploring various bait choices for improving the sensitivity of RIR.

- End -