

## LCQ1: Prevention and control of mosquito and rodent problems

Following is a question by the Hon Vincent Cheng and a reply by the Secretary for Food and Health, Professor Sophia Chan, in the Legislative Council today (May 30)

Question:

Some members of the public have relayed to me that poor environmental hygiene in the community will easily cause mosquito and rodent problems, posing direct threat to public health. As hot weather has come back in recent days and the rainy season is approaching, mosquitoes, insects and rodents breed easily, resulting in the risk of an outbreak of infectious diseases growing day by day. It is learnt that a number of District Councils (DCs) have relayed to the authorities that the environmental hygiene at certain streets is unsatisfactory and is even worsening, including illegal dumping of construction waste and illegal littering by members of the public, accumulation of water and food remnants in rear lane drains, etc. Regarding the prevention and control of mosquito and rodent problems, will the Government inform this Council:

(1) given that the Ovitrap Index, which mainly serves to survey the infestation of *Aedes albopictus*, has been formulated for a number of years since 2000, whether the Government will review and improve the Index, including the extension of the surveillance scope to cover the infestation of other mosquitoes and insects, such as Culicine mosquitoes which may transmit Japanese encephalitis, Anopheline mosquitoes which may transmit malaria, as well as biting midges which feed on blood and whose bites produce seriously itchy welts; if so, of the implementation time; if not, the reasons for that;

(2) as a number of members of the public and DCs have complained that the rodent problem of the old districts and districts where many restaurants are located is very serious, and traits of rodents can be found everywhere at night, but the Rodent Infestation Rates (RIRs) in those districts as recorded by the Food and Environmental Hygiene Department (FEHD) are on the low side, whether the Government has studied if RIRs can reflect the actual situation; if so, of the details; as it is learnt that the FEHD completed the first phase of the Anti-rodent Campaign in March this year, of the effectiveness of the Campaign, including the numbers of dead rodents collected and live rodents caught; and

(3) as the Government is installing Internet Protocol (IP) cameras at various hygiene black spots in phases to collect evidence of illegal dumping of refuse by offenders with a view to strengthening the deterrent effect, but the locations selected for installing IP cameras in the first phase are mostly places located outside refuse collection points, of the reasons why the Government has not accepted the several installation locations proposed

by DCs such as rear lanes; whether it will consider coordinating various government departments in installing IP cameras at the locations proposed by DCs in future?

Reply

President,

The Government has always strived to maintain the environmental hygiene in Hong Kong, including carrying out mosquito and rodent control. My reply to the Hon Vincent Cheng's question is as follows:

(1) The Food and Environmental Hygiene Department (FEHD) reviews the dengue vector surveillance (DVS) annually as part of the efforts to step up control of *Aedes albopictus*. In response to the local dengue fever cases reported in 2016 and 2017, urban development as well as requests from the public and District Councils (DCs), a total of five additional areas will be covered by the DVS programme starting from July 2018. The survey frequency will also be increased from one week per month to two weeks per month. To strengthen surveillance at the border, the survey frequency at border control points will be increased from two weeks per month to weekly basis.

The FEHD has also devised surveillance programmes targeting Culicine and Anopheline mosquitoes, which are vectors of Japanese encephalitis (JE) and malaria respectively. Culicine mosquitoes are mostly found in the countryside, particularly in flooded rice fields and water-logged abandoned fields. If these fields are close to pig farms or locations frequented by natural hosts of JE virus, such as waders, Culicine mosquitoes are more likely to get infected, and the risk of JE transmission is higher. Monthly JE vector surveillance exercises have been scheduled since 2015 by the FEHD, covering seven districts with relatively higher risk of JE transmission. In these seven districts, there are either pig farms or locations frequented by waders, or that local JE cases have been reported. As for the surveillance of Anopheline mosquitoes, regular surveys have been carried out since 1980 to collect samples of Anopheline larvae at streams to identify the existence of species responsible for the transmission of malaria in Hong Kong.

As regards the surveillance of biting midges, the World Health Organization has not published guidelines for systematic surveillance targeted at biting midges. According to my understanding, other places like the Mainland, Singapore as well as countries in America and Europe have not formulated any surveillance programmes for biting midges. Biting midges found in Hong Kong are not major vectors of any vector-borne diseases. In response to the problem of biting midges in recent years, the FEHD had, on two occasions, invited an expert studying biting midges from the Mainland to visit Hong Kong, with a view to providing guidance and recommendations to study the local fauna of biting midges in the territory and review the control methodology. Based on the advice of the expert, the FEHD commenced a one-year territory-wide survey in mid-July last year to investigate the species diversity of the midges in Hong Kong, confirm whether there is presence of any disease-carrying biting midges and find out their

distribution. The FEHD will continue to keep in view the biting midges situation in public places through routine inspections and handling of complaints. Control measures against biting midges will be strengthened whenever necessary, while efforts have at the same time been stepped up in the publicity and education work. In view of the public nuisance caused by biting midges earlier, the FEHD will continue to conduct joint operations with the Leisure and Cultural Services Department (LCSD) to strengthen the preventive and control work against biting midges at parks under the management of LCSD and their vicinity.

(2) There is no internationally adopted Rodent Infestation Rate (RIR). When devising the RIR, the FEHD made reference to overseas practices and tried out different methods having regard to a number of factors including local climate, environmental conditions and the habits of rodents. The FEHD considered that adopting the ratio of baits gnawed by rodents as the infestation rate was the most suitable method for Hong Kong. As there have not been major changes in Hong Kong's environment or rodents' habits in recent years, the current survey approach is still appropriate.

As the RIR of a district only assesses the rodent problem in public places within the surveillance areas during the surveillance period, it does not reflect fully the situation of rodent infestation of the district concerned. In addition to the RIR, the FEHD also takes into account the traits left by rodents, complaint figures and views of the local community and the public in targeting rodent prevention and control actions at areas where rodent problems exist.

Noticing that the number of food premises in some districts has increased, the FEHD has, apart from including the rear lanes adjacent to food premises as the target areas of the anti-rodent campaigns, strengthened the cleansing work in these areas. To focus on managing the rodent trouble spots, the FEHD conducted anti-rodent operations in designated target areas in various districts and adopted multi-pronged strategies in selected localities, including cleansing, rodent disinfestation and enforcement action against the survival conditions of rodents, namely food, harbourage and passages. The FEHD staff will enhance street washing and sweeping services at rear lanes where hygiene conditions are relatively poor. Inspections of food premises will be stepped up and public education and enforcement actions will be strengthened. The first round of the anti-rodent operation in designated target areas in various districts was launched in April which will last for two months. The second round operation will commence in October.

The first phase of the territory-wide Anti-rodent Campaign 2018 was completed in March. During the campaign, the FEHD conducted 16 348 inspections, handled 1 147 rat holes, caught 2 337 live rodents and cleared 4 265 dead rodents. The second phase of the campaign will be launched in July and will last for ten weeks.

(3) The FEHD launched a pilot scheme from December 2016 to June 2017 to install camera at hygiene blackspots. Internet Protocol (IP) cameras were installed at six illegal refuse dumping blackspots in Central and Western,

Sham Shui Po and Yuen Long Districts to step up surveillance on illegal dumping of refuse and facilitate the planning of more effective enforcement actions. Given the encouraging results the FEHD decided to extend the scheme to all districts progressively on a trial basis for one year. It has consulted the DCs on the illegal refuse dumping blackspots at which the IP cameras are to be installed, and obtained support from them. On the locations, the FEHD has obtained the support from the DCs on their suggestions on the locations and priority of installation of IP cameras with regard to the seriousness of illegal refuse dumping activity at the blackspots. The FEHD has accepted the locations and priority proposed by the DCs and arrangements have been made accordingly. Some of the proposed spots include rear lanes. If the DCs request changing the locations for camera installation in the future, the FEHD will actively seek to meet their demands so long as the suggestions are technically feasible. The contractor engaged by the FEHD will start to operate the IP cameras next week. If the hygiene conditions of a particular location show improvement, the FEHD may consider adding or re-locating the cameras to other spots according to priority.