

**For discussion
on 10 December 2019**

Legislative Council Panel on Food Safety and Environmental Hygiene

Rodent Control Work

Purpose

This paper briefs Members on the progress of rodent control work undertaken by government departments and the rodent control measures to be stepped up.

Background

2. Our rodent control strategy is to take targeted measures to eliminate the fundamental survival conditions of rodents, namely food, harbourage and passages. Efforts have been made to eliminate rodents' food sources, hiding places and to block their dispersal routes. The Pest Control Steering Committee (PCSC) under the Food and Health Bureau have set three targets for the 2019 work plan, namely enhancement of prevention, co-ordination and surveillance.

Effectiveness of Anti-rodent Work

3. The territory-wide cleansing campaign was launched in May 2019. During the campaign, the number of enforcement actions taken against rodent infestation and the number of rodents caught have increased, whereas the number of rodent-related complaints has decreased. A comparison of the relevant figures is as follows:

**Comparison of the figures for October 2018
with those for May and October 2019**

	October 2018	May 2019	October 2019
Number of live rodents trapped	1 477	1 809	2 305
Number of filled rat holes	8 69	1 291	1 311
Number of poisoned dead rodents	2 438	2 652	2 387
Number of complaints	1 239	1 429	743
Number of enforcement actions ¹	Not available	22 (since 27 May 2019)	104

4. Furthermore, since start of the campaign, as at 24 November 2019, the Food and Environmental Hygiene Department (FEHD) caught 10 114 live rodents, filled 5 344 rat holes and collected 12 542 dead rodents. A comparison of relevant figures for the period from January to October in 2018 and those for the same period in 2019 is as follows:

**Comparison of the figures for the period from January to October in
2018 with those for the same period in 2019**

	2018	2019	Percentage change
Number of live rodents trapped	13 264	19 106	+44.0%
Number of filled rat holes	7 698	10 831	+40.7%

¹ The figure only includes enforcement actions taken against irregularities of food premises giving rise to rodent infestation problem at rear lanes.

	2018	2019	Percentage change
Number of poisoned dead rodents	22 812	24 700	+8.3%

Enhanced Rodent Prevention

Rodent proofing design

5. With the support of the PCSC, the Buildings Department (BD) promulgated a guideline to the building professionals and registered contractors on incorporating rodent proofing design in new private buildings (such as the distance between pipes and the position of flower beds) in May 2019, and carrying out rodent control work in construction and demolition sites. In June 2019, the Architectural Services Department (ArchSD) promulgated a similar design guide on government works and buildings. FEHD, in conjunction with BD, ArchSD and the Housing Department (HD), organised a talk in November 2019 to brief the trade on the relevant guidelines. The attendees included building professionals from private sectors. The rodent proofing design introduced in these guidelines, which aims at long-term rodent prevention and control, is applicable to construction of new buildings and renovation of existing buildings.

6. Besides, over 200 talks were organised by FEHD during the territory-wide cleansing campaign to encourage active participation in anti-rodent work by various sectors of the community. The participants included departments' pest control service contractors, property management companies, owners of food premises and operators of market and hawker stalls. Representatives from the Pest Control Personnel Association of Hong Kong were invited as speakers for the talks, during which pest control experience and knowledge of the trade were shared among pest control personnel from the public and private sectors. Details are set out in **Annex 1**.

Eliminating food sources in public markets

7. In July 2019, a three-month intensive anti-rodent operation was put on trial in FEHD's Lai Wan Market, Ap Lei Chau Market and Kam Tin Market. Speedy refuse removal and cleaning of all passages and drains in the markets were carried out every night after the stalls were closed to eliminate rodents' food sources. Besides, rodent trapping devices² were placed extensively. The department is now concluding its experience and will adjust future anti-rodent operations in view of the ground situation. A new round of operation will be conducted in Lockhart Road Market, To Kwa Wan Market and Sha Tin Market in addition to the original three markets. Details are set out in **Annex 1**.

Enhanced Inter-departmental Co-ordination

Eliminating hiding places of rodents and blocking dispersal routes in back alleys

8. In May 2019, after taking into account the community's feedback and results of the site inspection, FEHD and the Home Affairs Department (HAD) provided the Highways Department (HyD) with a list containing 99 back alleys with identified environmental hygiene problems. Repair works of different scales were then conducted by HyD. As at November 2019, HyD completed 240 improvement work items, including repairing road surfaces or damaged surface channels as well as local repaving. Details are set out in **Annex 2**. FEHD and HyD have all along worked closely to conduct joint inspections, with a view to reviewing the situation and effectiveness of the repair works.

Eliminating food sources through enforcement actions

9. Improper dumping of food remains by food premises is a common food source for rodents. FEHD has been conducting a special operation

² A new rodent trapping device combining bait box and break back trap was tested by FEHD during the intensive anti-rodent operation with a total of 36 new trapping devices installed. However, as observed by an overseas expert, the effectiveness of the operation was affected by multiple food sources in the markets. Using mixed baits may be one of the feasible remedies.

targeted at irregularities of food premises such as food preparation, scullery, improper storage of articles and illegal disposal of refuse in back alleys. Between the start of the territory-wide cleansing campaign and 24 November 2019, a total of 584 summonses, 837 Fixed Penalty Notices, 1 109 Notices to Remove Litter / Waste and to Clean Areas, 3 239 advisory letters, 1 851 verbal warnings, 13 warning letters and 5 Nuisance Notices were issued. Besides, the department issued some 5 900 summonses targeted at illegal activities of food premises between January and October 2019, more than some 4 700 summonses issued in the same period in 2018.

Eliminating food sources and blocking dispersal routes in public rental housing (PRH) estates

10. As a participant of the PCSC and to support the cleansing campaign, the Housing Authority (HA) has examined the rodent proofing structures installed in more than 180 public rental housing estates across the territory with reference to FEHD's guidelines. Reinforcement works were completed in end October 2019 to block the dispersal routes of rodents and prevent them from entering the residential units. For new PRH estates, HA will, with reference to BD's guideline, continue to review and enhance rodent proofing design where applicable. Details are set out in **Annex 3**.

11. Between June and October 2019, taking into account FEHD's recommendations, HA installed over 6 500 additional rodent guards on the external walls / pipes of the PRH estates where appropriate. The number of rodent guards installed thus increased to a total of around 15 000. Besides, HA implemented additional measures in over 50 priority PRH estates to provide additional cleansing services in common areas and to strengthen the implementation of the Marking Scheme for Estate Management Enforcement. Meanwhile, more than 170 pest control talks were organised for residents, commercial tenants and management staff with the assistance of FEHD. The above measures have significantly raised the awareness of the residents and commercial tenants on pest control. Details are set out in **Annex 3**.

Enhanced Surveillance of Rodent Infestation

12. FEHD proactively introduces new technologies and has been putting on trial thermal and night-vision cameras with artificial intelligence analytical function since April 2019. Initial trial results have shown that both technologies are able to monitor rodent activities effectively and have similar functionalities. Firstly, data captured by the cameras can quantify and assess the effectiveness of anti-rodent operations by comparing the rodent population density before and after carrying out anti-rodent work³. Also, the technologies can be used for identifying rodents' potential entry points, travel routes and areas where rodents visit frequently. Thus, rodenticides and trapping devices can be placed in a more effective manner and more targeted rodent control measures can be implemented.

Anti-rodent Work Continues to be Stepped up

13. The territory-wide cleansing campaign helps to raise the public awareness of maintaining environmental hygiene, and the enhanced cleaning and anti-rodent work undertaken by various departments are yielding positive results. After reviewing their work, various departments have proposed a series of additional work and will strive to complete the following work in the coming 3 months:

- Identify back alleys where improvement works are required based on community feedback and their hygienic conditions; and undertake improvement work items of different scales if needed, including local repaving. It is initially estimated to involve more than 30 back alleys.
- Review and install additional rodent proofing facilities at suitable locations in PRH estates; and review as well as decide on the priority PRH estates with reference to the latest estate situation.

³ For example, at a back alley in Mongkok, where field trial on night-vision camera was conducted by FEHD, the number of rodents captured by the cameras dropped from three in April 2019 to zero in June 2019. No further rodent activities were detected between mid-June 2019 and late July 2019.

- Conduct enhanced intensive anti-rodent operations in Lockhart Road Market, To Kwa Wan Market and Sha Tin Market in addition to the original three markets with reference to expert advice.
- Further step up enforcement work against illegal dumping of refuse.
- Install cameras before and after anti-rodent operations in designated target areas with a view to quantifying and reviewing the effectiveness of the operations.
- Conduct studies on application of thermal imaging camera to capture data and to detect the extent of rodent activities with a view to updating and upgrading the quantifying functions of the Rodent Infestation Rate (RIR)⁴.
- FEHD invited a British expert in rodents, introduced by the World Health Organisation, to visit Hong Kong in early November 2019 and he provided advice on improvement in anti-rodent work, including fostering more public participation and improving the effectiveness of baits and traps. The Government will continue to increase cooperation with District Councils and local organisations in anti-rodent work, and to follow up on the expert's advice on baits and traps.
- Strengthen cooperation with the Hong Kong Science and Technology Parks Corporation and local universities and invite companies and academics to explore technologies that can track rodents' activities in the short and long run with a view to implementing long-term effective and comprehensive rodent control measures for eliminating rodents' harbourage and dispersal routes.

⁴ At present, FEHD conducts RIR surveys by setting baits in selected areas. The ratio of the baits bitten will be used to infer the distribution of rodents in public places.

Conclusion

14. Members are invited to note the Government's rodent control work with focus on enhanced prevention, co-ordination and surveillance as well as the rodent control measures to be stepped up.

Food and Health Bureau

Food and Environmental Hygiene Department

December 2019

FEHD's work during the territory-wide cleansing campaign

Talks organised for government departments and the private sector

Action items	Progress
Health talks for building management companies of private buildings, owners of food premises, and market and hawker stall operators.	202 talks were held.
Pest control talks for HD and Leisure and Cultural Services Department in-house staff, property management staff and contractual staff as well as FEHD contractual staff.	6 half-day pest control talks were held between 2 July 2019 and 8 July 2019 with a total of 721 attendees.
Pest control talks for staff of property management companies.	2 half-day pest control talks were held on 30 July 2019 with a total of 235 attendees.

Anti-rodent work in public markets

Action items	Progress
Trials of intensive anti-rodent operation.	Trials in Lei Wan Market, Ap Lei Chau Market and Kam Tin Market were conducted between 17 July 2019 and 25 October 2019. FEHD will explore further the feasibility of the suggestions on

Action items	Progress
	improved rodent trapping made by the overseas expert in rodents and conduct another round of trial in Lockhart Road Market, To Kwa Wan Market and Sha Tin Market in addition to the above three markets.
Enhanced cleansing work in public markets, including daily gully emptying and thorough cleansing. Stall tenants are advised to clear unused articles to eliminate food sources and harbourage of rodents.	FEHD has already implemented the measures in all its markets and enforcement actions have been stepped up ⁵ .

⁵ Enforcement action is mainly against improper storage of food, littering offences and failure to maintain the stall in a clean and hygienic condition, etc.

HyD's work during the territory-wide cleansing campaign

Action items	Progress
Local repaving of back alleys.	As at November 2019, works for 61 back alleys were completed, and works for 1 back alley are still in progress.
Repairing of cracks and crevices at back alleys and surface channels.	As at 20 August 2019, repair works in 99 back alleys suggested by FEHD and various District Offices in May 2019 were completed.
Filling of cracks and crevices in three districts with confirmed cases of infection of rat Hepatitis E virus.	Works for 80 back alleys ⁶ were completed in the three districts with confirmed cases of infection of rat Hepatitis E virus.

⁶ 17 back alleys in Kowloon City, 57 back alleys in Southern District and 6 back alleys in Tuen Mun.

Work of HA and HD for PRH estates during the territory-wide cleansing campaign

Action items	Progress
<p>Review and improvement of rodent proofing structures of buildings.</p>	<p>HA reviewed some 180 existing PRH estates' rodent proofing structures with reference to the checklist provided by FEHD in June 2019. The enhanced rodent proofing works in all PRH estates were completed in October 2019.</p> <p>For new buildings, HA will continue to review and install rodent proofing design as appropriate.</p>
<p>Launching of the Summer Cleaning Campaign, which includes stepping up cleansing operations in PRH estates, carrying out additional cleansing work and strengthening enforcement action under the Marking Scheme for Estate Management.</p>	<p>The cleaning campaign in PRH estates has been extended to November 2019. Strengthened cleansing operations and enforcement action under the Marking Scheme for Estate Management have been carried out. Meanwhile, joint inspections were conducted by HD, FHED and local stakeholders to identify areas for improvement in rodent control and pest control talks were held in more than 50 priority PRH estates, including the 9 estates where anti-rodent operations in designated target areas were conducted with FEHD in mid- 2019. All PRH estates have stepped up and carried out</p>

Action items	Progress
	additional cleansing operations to maintain environmental hygiene and prevent rodent infestation.
Improvement of rodent proofing structures in buildings managed by the LINK.	Letters containing a checklist of rodent proofing structures provided by FEHD were issued to the LINK in June 2019 to urge them to improve rodent proofing design in buildings and maintain environmental hygiene in PRH estates. Liaison meetings between HA and the LINK were also held.