

**For discussion on
13 May 2008**

**LegCo Panel on Food Safety and Environmental Hygiene
Rodent Prevention and Control Measures**

PURPOSE

This paper briefs Members on the rodent prevention and control measures of the Food and Environmental Hygiene Department (FEHD), including the Anti-rodent Campaign 2008.

RODENT SURVEILLANCE PROGRAMME

2. Rodents are pests that not only cause nuisance and physical damage to properties but can also give rise to public health concerns by transmitting a number of diseases, such as plague, leptospirosis, hantaviral diseases, scrub typhus, urban typhus and spotted fever.

3. To monitor the situation of rodent infestation, FEHD has been conducting territory-wide rodent infestation rate (RIR)^(Note) surveys in the public areas annually since 2000 by setting baits in selected localities. The localities covered in the surveys are selected from different districts over the territory and are either rodent trouble spots or areas likely to have rodent problems, particularly those with frequent human activities. Twice a year in the selected localities, around 100 baits are placed in each locality and each bait is placed at least 50 metres apart to ensure a sufficiently large area is covered. The ratio of baits bitten of the selected localities will be the RIR of that particular locality. The results, when aggregated, will give the territory-wide overall RIR. A summary of the annual overall RIRs for 2000 to 2007 is at **Annex 1**, and the annual RIRs for 19 districts from 2005 to 2007 are at **Annex 2**.

4. According to the RIR survey in 2007, all 19 districts had rodent infestation rates below 10% with Sai Kung recording the highest RIR of 9.0%

^(Note) Rodent Infestation Rate = $\frac{\text{Number of baits consumed by rodent}}{\text{Total number of baits collected}} \times 100\%$

and Shatin yielding the lowest RIR of 0.5%. The annual overall RIR for 2007 was 4.8%, somewhat higher than that of 2.9% in 2006, but generally on a par with the annual RIR recorded between 2003 and 2005. In addition, it is noted that the annual territory-wide RIR recorded in recent years were significantly lower than those from 2000 to 2002. This indicates that in overall terms, rodent problem in the public areas is largely under control.

RODENT PREVENTION AND CONTROL MEASURES

5. When the RIR of any selected locality rises above 10%, FEHD will carry out rodent disinfestation operations throughout the entire area under survey. For a locality with RIR at or higher than 20%, the relevant government departments will form a joint task force and launch a special rodent control operation programme to provide comprehensive rodent disinfestations and enhanced cleansing services.

6. In Hong Kong, we rely primarily on poisonous baiting for rodent disinfestations, supplemented by environmental control measures including elimination of food sources, harbourages and passages for the rodents. The method of using poisonous baits is considered efficient, effective and safe, and is commonly used in other countries and cities. In contrast, the effectiveness of placing rodent cage traps is subject to various limitations. Rodents are neophobic and do not approach trapping devices easily as they are unfamiliar objects in the environment. Moreover, usually each trapping device can only capture one rodent at a time. Deploying the same method at the same location within a short period of time may also undermine effectiveness. Trapping will be deployed if the persons responsible for the premises strongly object to the use of poisonous baits or when there is a high risk of pets and children contacting the poisonous bait.

7. As prevention is more effective than disinfestation, food sources as well as harbourages for rodents must be removed and their routes blocked to effectively prevent and control rodent problems. For example, garbage should be stored in covered rubbish bins and food should be placed in covered containers; concealed facilities such as false ceilings, air-conditioning ducts and wiring ducts should be checked frequently; defective ceilings, walls and floors should be repaired promptly; and refuse chambers and corridors should be kept clean.

ANTI-RODENT CAMPAIGN

8. Rodent control is an important area of work for FEHD. In addition to implementing rodent control measures on a regular basis to maintain environmental hygiene, FEHD also organizes annual territory-wide interdepartmental anti-rodent campaigns to raise public awareness and coordinate community efforts to tackle this problem. Every year, the campaign selects specific kinds of environment (biotopes) where dedicated rodent control, publicity and educational efforts are made by relevant government departments. The number of rodents collected, rat holes destroyed and warnings issued during the anti-rodent campaigns in the past 3 years are summarized in **Annex 3**. The target biotopes from 2000 to 2008 are summarized in **Annex 4**.

9. To promote and sustain active community participation in rodent prevention and control, FEHD will roll out the territory-wide interdepartmental Anti-rodent Campaign 2008 in two phases.

First Phase of the Anti-rodent Campaign 2008 – Promotion and Rodent Collection

(7 January 2008 to 1 February 2008)

10. During the first phase of the Campaign, the target biotopes were markets/market buildings and their surroundings, and other rodent problematic spots identified by FEHD's district pest control staff. During that phase, 1 827 dead and 246 live rodents were collected across the territory. 758 rat holes were destroyed and 936 rodent infestation warnings were issued.

11. A census baiting study was conducted at selected markets/market buildings which were the target biotopes of the first phase to detect rodent activities so as to evaluate the effectiveness of the rodent control operations. The RIR of the target biotopes decreased from 10.5% before the commencement of the Promotion Phase to 7.7% after the completion of the Phase.

Enhancement Phase of the Anti-rodent Campaign 2008

(13 May 2008 to 8 August 2008)

12. In the light of recent public concerns on rodent infestation, FEHD has advanced the launch of the Enhancement Phase originally scheduled for July

2008 to May 2008 and extended the Campaign period from the original four weeks to 12 weeks to enhance and sustain the overall effectiveness of rodent preventive and control work in the district. As a prelude to the Enhancement Phase, advisory letters and pamphlets were issued to licensed food premises and three thematic talks for the food trade were held in April 2008 to disseminate rodent control advice. During routine inspections to licensed food premises, FEHD's Health Inspectors will disseminate health education messages and advice on rodent control and measures to enhance hygiene standard of the premises. Advisory letters and leaflets on rodent preventive and control measures will also be issued to stall holders of markets and hawker fixed pitches to remind them of the importance of rodent prevention and control work.

13. To maximise the impact of the Campaign, the target biotopes of the Enhancement Phase will be extended to cover -

- (i) markets / market buildings and their surroundings;
- (ii) fixed pitch hawker stalls / hawker bazaars and their surroundings;
- (iii) licensed food premises and associated rear lanes; and
- (iv) cargo handling areas and their surroundings.

In addition, rodent problematic spots identified by district pest control staff of FEHD will also be attended to.

14. During the Enhancement Phase, FEHD will step up control measures and publicity efforts. With respect to control measures, FEHD will carry out systematic rodent surveys and disinfestation in public places around target biotopes and known problematic spots. Particular attention will be given to places such as rear/side lanes and vacant sites adjacent to the target biotopes, flowerbeds, refuse chambers and store rooms. Poisonous baiting stations and rodent cage traps will be set as appropriate. To eliminate rodent harbouring places in public places, FEHD will enhance cleansing services and refer defects detected in roads/lane surfaces, surface channels and gratings to the Highways Department for prompt remedial measures. In conducting regular inspections to licensed food premises, Health Inspectors will take enforcement actions against the operators if rodent infestation is detected. FEHD will also join hands with relevant departments including Agriculture, Fisheries and Conservation Department, Drainage Services Department, Highways Department, Home Affairs Department, Housing Department, Lands Department, Leisure and Cultural Services Department and Marine Department to provide technical assistance to the

management of target biotopes, to advise the parties concerned to improve and upkeep the environmental hygiene condition, adopt proper storage practices and rectify structural defects to guard against rodent infestation, and to monitor and follow up on rodent problems in areas under their management.

15. On education and publicity, FEHD will produce new Announcements of Public Interest (APIs) and broadcast them through radio and television to raise community awareness of the importance of rodent prevention and control and mobilize community resources. The same messages will also be disseminated widely through posters, pamphlets and banners displayed in public places, on FEHD's homepage and VCDs/DVDs distributed to the management of markets. A series of publicity and education activities will be organized during the Enhancement Phase, including exhibition at FEHD's Health Education Exhibition and Resource Centre, thematic talks, etc.. District Councils and community groups will also be invited to participate in the Campaign by organizing anti-rodent activities at the district level. Other relevant departments will also solicit community support for the Campaign through their networks.

16. The effectiveness of the 2008 Campaign will be assessed by means of census baiting before and after each phase of the campaign in addition to the regular territory-wide RIR surveys. The data collected will provide useful reference for mapping out anti-rodent directions and strategies.

ADVICE SOUGHT

17. Members are invited to note and comment on the paper.

Food and Health Bureau
Food and Environmental Hygiene Department
May 2008

Overall Rodent Infestation Rates (2000 - 2007)

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rodent Infestation Rate | 16.0% | 8.8% | 9.0% | 5.6% | 4.1% | 4.4% | 2.9% | 4.8% |

Rodent Infestation Rates for Districts (2005 - 2007)

| District | 2005 | 2006 | 2007 |
|--|-------------|-------------|-------------|
| Central /Western | 4.7% | 1.5% | 7.5% |
| Eastern | 1.5% | 1.8% | 3.2% |
| Southern | 3.1% | 4.2% | 6.0% |
| Wan Chai | 6.0% | 5.2% | 8.5% |
| Islands | 2.7% | 7.3% | 6.6% |
| Kowloon City | 3.1% | 2.6% | 3.6% |
| Kwun Tong | 4.4% | 5.6% | 5.3% |
| Mong Kok | 9.0% | 1.7% | 4.7% |
| Sham Shui Po | 4.3% | 1.2% | 3.9% |
| Wong Tai Sin | 3.1% | 1.6% | 3.0% |
| Yau Tsim | 6.6% | 4.3% | 3.0% |
| North | 5.3% | 3.9% | 5.9% |
| Sai Kung | 4.1% | 2.0% | 9.0% |
| Shatin | 3.6% | 2.8% | 0.5% |
| Tai Po | 4.6% | 0.5% | 3.9% |
| Tsuen Wan | 5.6% | 3.3% | 5.9% |
| Tuen Mun | 3.2% | 3.6% | 5.4% |
| Yuen Long | 3.0% | 4.4% | 5.3% |
| Kwai Tsing | 4.7% | 1.2% | 1.7% |
| Overall Rodent Infestation Rate | 4.4% | 2.9% | 4.8% |

**Numbers of Rodents Collected, Rat Holes Destroyed and
Warnings Issued during Anti-rodent Campaigns
(2005-2007)**

| Year | No. of dead rodents collected | No. of live rodents collected | No. of rat holes destroyed | No. of warning issued |
|-------------|--------------------------------------|--------------------------------------|-----------------------------------|------------------------------|
| 2005 | 4415 | 250 | 2648 | 317 |
| 2006 | 3877 | 290 | 1996 | 601 |
| 2007 | 3358 | 236 | 1534 | 1337 |

Target Biotores of Anti-rodent Campaigns

| <u>Year</u> | <u>Featured Biotope</u> |
|--------------------|--|
| 2000 – 2001 | <ol style="list-style-type: none">1. Markets2. Construction sites |
| 2002 | Licensed food premises |
| 2003 | Residential buildings |
| 2004 | Cargo handling areas |
| 2005 | Shopping centres |
| 2006 | Rural villages |
| 2007 | Old tenement buildings built before 1970 and not managed by building management companies |
| 2008 | <ol style="list-style-type: none">1. Markets / market buildings and their surroundings2. Fixed pitch hawker stalls / hawker bazaars and their surroundings3. Licensed food premises and associated rear lanes4. Cargo handling areas and their surroundings |