

**CONTROLLING OFFICER'S REPLY**

**EEB(F)106**

**(Question Serial No. 3084)**

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:

As regards rodent control, please advise this Committee of the following:

1. What are the details of the current trial scheme in Central and Western District, Wan Chai District and Eastern District? Has the Government compared the data with the Rodent Infestation Rates of the districts concerned in the same period to consider the pros and cons of the two approaches? If yes, what are the details? If no, what are the reason(s)?
2. What are the preparatory work required for extending the scheme to all districts across the territory, as well as the resources and staffing involved?
3. Please set out the numbers of dead rodents and live rodents caught in the past 3 years, with a breakdown by district.
4. The Government stated earlier that the number of live rodents caught in the past year increased by 39% over the year before, with those caught by overnight rodent control teams accounting for 40%. Please set out the numbers of dead rodents and live rodents caught by overnight rodent control teams, with a breakdown by district. Will additional resources be allocated to enhance the outcome in view of the favourable results? If yes, what are the details? If no, what are the reason(s)?
5. What are the resources and staffing involved for overnight rodent control teams in the past year and this year?
6. What is the progress of implementing the new rodent control technologies and tools?

Asked by: Hon LEUNG Hei, Edward (LegCo internal reference no.: 66)

Reply:

- 1.&2. Since 2000, the Food and Environmental Hygiene Department had conducted the Rodent Infestation Survey (RIS) every 6 months by setting baits in designated survey locations across the territory to collect data on the ratio of baits gnawed by rodents for generating the Rodent Infestation Rate. There were limitations with the RIS. For instance, it only showed whether there were rodent activities in the survey locations during the survey period without providing quantified data to reflect the severity of rodent infestation. Besides, it was more susceptible to human interference and other environmental factors.

From 2024 onwards, the Department has fully adopted thermal imaging cameras with artificial intelligence technology for conducting the Rodent Activity Survey (RAS) as a replacement for the RIS. The RAS will be conducted in all districts across the territory once every 6 months. Compared with the original survey method, the new method is more effective in reflecting the distribution and severity of rodent infestation in districts, for it has greater sensitivity and precision, a more comprehensive coverage and a lower risk of interference by environmental factors.

The RAS for the first half of 2024 has already commenced, and the survey findings for the 5 districts covered in the first phase, including Central and Western, Wan Chai, Eastern, Mong Kok and Sham Shui Po Districts, have been published. The surveys for the remaining 14 districts are commencing in phases, and the findings will be progressively published and uploaded onto the website of the Department for public information. Since the RAS conducted with thermal imaging cameras with artificial intelligence technology is different from the original survey method, the data concerned cannot be used for a direct comparison.

In respect of the aforementioned survey, each lasting for 6 months and covering all districts across the territory, the Department has engaged outsourced contractors for installing, operating and demounting thermal imaging cameras as well as using artificial intelligence to help analyse the thermal images captured. The estimated expenditure for the survey is about \$7.5 million.

3. The number of dead rodents collected and the number of live rodents caught by the Department in the past 3 years (2021 to 2023), with a breakdown by District Council district, are provided at **Annex 1**.
4. Since July 2022, the Department has set up overnight rodent control teams in all District Environmental Hygiene Offices to enhance the effectiveness in capturing rodents. The number of live rodents caught by the teams since their formation up to end-2023 are provided at **Annex 2**.
5. The information on the staff of the overnight rodent control teams in the past 2 years is provided as follows:

**2022-23**

| <b>Team/Post</b>              | <b>Number of teams</b> | <b>Number of staff</b> | <b>Actual expenditure (\$ million)</b> |
|-------------------------------|------------------------|------------------------|--|
| Overnight rodent control team | 19                     | 57                     | 10                                     |
| Rodent inspection officer     | N.A.                   | 11                     | 4                                      |
| Total                         | 19                     | 68                     | 14                                     |

2023-24

| Team/Post                     | Number of teams    | Number of staff     | Revised estimated expenditure (\$ million) |
|-------------------------------|--------------------|---------------------|--|
| Overnight rodent control team | 68 <sup>Note</sup> | 204 <sup>Note</sup> | 26   |
| Rodent inspection officer     | N.A.               | 19                  | 9  |
| Total                         | 68 <sup>Note</sup> | 223 <sup>Note</sup> | 35   |

Note: The Department has progressively increased the number of overnight rodent control teams to 31 (93 staff in total) since August 2023. Besides, the Department temporarily deployed additional 37 teams (111 staff in total) from mid-December 2023 to February 2024 to support the Year-end Clean-up Campaign.

6. The new technologies and tools currently used by the Department for rodent control and their effectiveness are as follows:

| Rodent control technology and tool                    | Effectiveness   |
|---|---|
| <b>Thermal imaging camera surveillance system</b>     | The Department conducted trials on thermal imaging cameras with artificial intelligence analytical function in 2020 and found it effective in facilitating objective assessment of rodent infestation situation. The equipment has been widely employed in the strategic anti-rodent operations. Moreover, the Department has fully adopted thermal imaging cameras for conducting the RAS as a replacement for the RIS from 2024 onwards to enhance rodent surveillance in districts and deploy more effective anti-rodent operations in blackspots. |
| <b>Placing poisonous baits in a T-shaped bait box</b> | The bait box was tested between October and November 2020. Test results showed that the T-shaped bait box was more effective than ordinary rectangular bait boxes in attracting rodents to enter and consume the baits. The equipment has been widely employed.   |
| <b>Alcohol rodent trapping device</b>                 | The Department has conducted trials progressively on alcohol rodent trapping devices in public markets and refuse collection points since October 2022. The results are positive. The equipment will be used in suitable places as necessary.   |
| <b>Glue trap</b>                                      | The Department has tried out the application of glue traps in public markets with more serious rodent infestation as an additional measure for rodent disinfection since November 2022. Positive results have been achieved, and the rodent infestation problem in public markets has been alleviated effectively. The equipment will be used   |

| <b>Rodent control technology and tool</b> | <b>Effectiveness</b>  |
|---|---|
|   | in suitable indoor venues, such as public markets and refuse collection points, as necessary. |

| District            | Year                   |                     |                        |                     |                        |                     |
|---------------------|------------------------|---------------------|------------------------|---------------------|------------------------|---------------------|
|                     | 2021                   |                     | 2022                   |                     | 2023                   |                     |
|                     | Dead rodents collected | Live rodents caught | Dead rodents collected | Live rodents caught | Dead rodents collected | Live rodents caught |
| Central and Western | 2 040                  | 1 679               | 1 885                  | 1 873               | 1 370                  | 2 261               |
| Eastern             | 2 053                  | 2 259               | 1 363                  | 2 982               | 905                    | 4 004               |
| Southern            | 706                    | 537                 | 465                    | 936                 | 546                    | 1 268               |
| Wan Chai            | 1 532                  | 2 920               | 1 402                  | 2 915               | 1 231                  | 4 402               |
| Kowloon City        | 2 474                  | 2 102               | 1 915                  | 2 271               | 3 811                  | 3 458               |
| Kwun Tong           | 2 740                  | 3 528               | 2 037                  | 3 779               | 1 293                  | 4 277               |
| Wong Tai Sin        | 1 424                  | 2 137               | 1 298                  | 2 481               | 4 031                  | 4 592               |
| Sham Shui Po        | 3 763                  | 6 198               | 4 132                  | 5 842               | 3 926                  | 6 133               |
| Yau Tsim Mong       | 6 732                  | 4 690               | 6 639                  | 6 862               | 6 230                  | 9 342               |
| Sha Tin             | 1 237                  | 799                 | 1 298                  | 1 253               | 917                    | 2 598               |
| Tai Po              | 1 126                  | 713                 | 1 692                  | 957                 | 2 322                  | 1 465               |
| North               | 1 307                  | 760                 | 1 041                  | 2 281               | 527                    | 2 414               |
| Kwai Tsing          | 466                    | 747                 | 692                    | 1 007               | 1 173                  | 2 052               |
| Tsuen Wan           | 958                    | 1 864               | 906                    | 2 903               | 557                    | 2 491               |
| Tuen Mun            | 881                    | 755                 | 1 747                  | 2 681               | 2 501                  | 4 521               |
| Yuen Long           | 1 634                  | 1 377               | 1 550                  | 2 723               | 1 960                  | 4 843               |
| Sai Kung            | 874                    | 539                 | 746                    | 794                 | 592                    | 1 087               |
| Islands             | 1 389                  | 242                 | 1 002                  | 882                 | 604                    | 2 136               |
| Whole Territory     | 33 336                 | 33 846              | 31 810                 | 45 422              | 34 496                 | 63 344              |

**Number of live rodents caught by the Department's overnight rodent control teams**

| <b>District</b>     | <b>2022<sup>Note</sup></b> | <b>2023</b> |
|---------------------|----------------------------|-------------|
| Central and Western | 434                        | 908         |
| Wan Chai            | 398                        | 1 275       |
| Eastern             | 520                        | 1 763       |
| Southern            | 305                        | 606         |
| Islands             | 550                        | 1 277       |
| Yau Tsim            | 329                        | 1 426       |
| Mong Kok            | 359                        | 1 553       |
| Sham Shui Po        | 712                        | 1 231       |
| Kowloon City        | 525                        | 1 142       |
| Wong Tai Sin        | 659                        | 1 830       |
| Kwun Tong           | 523                        | 938         |
| Kwai Tsing          | 305                        | 718         |
| Tsuen Wan           | 417                        | 883         |
| Tuen Mun            | 815                        | 1 962       |
| Yuen Long           | 1 082                      | 2 959       |
| North               | 650                        | 1 635       |
| Tai Po              | 213                        | 589         |
| Sha Tin             | 451                        | 914         |
| Sai Kung            | 266                        | 618         |
| Whole Territory     | 9 513                      | 24 227      |

Note: The number of live rodents caught by overnight rodent control teams since their formation in July 2022 up to December 2022.

- End -