CHAPTER 1

Food and Environmental Hygiene Department

Centre for Food Safety: Management of food safety

Audit Commission
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CENTRE FOR FOOD SAFETY: MANAGEMENT OF FOOD SAFETY

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Executive Summary

1. In 2017, over 90% of foods for human consumption in Hong Kong were imported. According to the Census and Statistics Department's published trade statistics, the total value of imported foods in the year was $205,351 million. The Food and Environmental Hygiene Department (FEHD) has the mission of ensuring that food for sale in Hong Kong is safe and fit for consumption. In May 2006, the Centre for Food Safety (CFS) was established under the FEHD to control food safety in Hong Kong. The CFS works under the legal framework of two Ordinances:

(a) the Public Health and Municipal Services Ordinance (Cap. 132) and its subsidiary legislation require that food intended for sale should be fit for human consumption. It covers general protection for food purchasers, offences in connection with sale of unfit food and adulterated food, and seizure and destruction of unfit food; and

(b) the Food Safety Ordinance (Cap. 612) provides additional food safety control measures, such as and in particular a registration scheme for food importers/distributors.

In September 2006, the CFS set up the Expert Committee on Food Safety (the Expert Committee) which is tasked with advising the Director of Food and Environmental Hygiene on matters such as food safety operational strategies and measures.

2. The CFS adopts a risk-based approach to food safety control and works in the following areas:

(a) ***Risk assessment.*** Food hazards (i.e. microbiological, chemical and radiological hazards) are evaluated and potential risks to the population are assessed, thereby facilitating formulation of appropriate risk management

actions (see (b) below) and risk communication messages (see (c) below) to protect public health;

(b) ***Risk management.*** Through food control offices set up across the territory, the CFS carries out import control of foods (e.g. inspecting imported foods). Through the Food Surveillance Programme (FSP), the CFS takes food samples at import, wholesale and retail levels for testing. The CFS also manages local and overseas food incidents, and handles food complaints in the territory; and

(c) ***Risk communication.*** The CFS organises various programmes to promote food safety (e.g. communication forums) and disseminates information on food safety to the public through different communication channels (e.g. on its website, social media platforms and publications).

3. In 2013-14 to 2017-18, the CFS's expenditure had increased by 32% from $448 million to $592 million. The Audit Commission (Audit) has recently conducted a review of the CFS's management and control of food safety. The findings are contained in this Audit Report and in "CFS: Import control of foods" (Chapter 2 of the Director of Audit's Report No. 71). This Audit Report reviews matters relating to the assessment of food safety risks, food surveillance, management of food incidents and risk communication with the public.

Assessment of food safety risks

4. The CFS carries out food consumption surveys (FCSs), total diet studies (TDSs) and risk assessment studies (RASs) periodically to help assess food safety risks (para. 2.2).

5. ***FCSs.*** An FCS collects data on the types and amounts of foods that people consume. A population-based FCS is crucial for establishing a comprehensive database for food safety risk assessment and enhancing the risk assessment capacity of the CFS. According to the CFS, the food consumption data collected is used to find out if the public is exposed to any potential dietary risks such as those from contaminants and food additives, and also to understand the size of the risk and which population groups may be most at risk. Such information is vital for the Government in formulating public policies and education strategies to promote food safety in Hong

Kong. From March 2004 to March 2010, the first population-based FCS was conducted. In May 2017, the CFS engaged another contractor (a consultant) to conduct the second population-based FCS to gauge whether and how CFS's food safety risk assessment should be updated for the population's changes of dietary habits. According to plan, the contractor would conduct the FCS fieldwork from April 2018 to April 2019, during which food consumption data will be collected by two interviews with each respondent. Other information such as weight, height and demographic information will also be collected in the survey (paras. 2.2 to 2.4). Audit found the following:

(a) ***Need to closely monitor the progress of the second population-based FCS.*** Audit examined the progress as at 30 July 2018 (i.e. some 15 weeks after fieldwork commencement in April 2018) and noted that:

(i) ***Slow progress.*** According to the contract, of the some 4,800 respondents to be surveyed, some 1,400 should have completed the survey by 30 July 2018. However, up to that day, the actual number of completed cases was only 278, falling short of the required number of 1,400 by some 1,100 (79%);

(ii) ***Low response rate.*** According to the FCS design, some 8,000 households would be invited with a view to recruiting 4,800 respondents. The underlying assumption was that 70% of the valid households would participate in the FCS. However, the initial response rate was only 42%, falling short of the expected rate; and

(iii) ***Insufficient service hours provided by the contractor.*** According to the contract, the contractor's interviewers should provide at least 210 hours of service per week. In the first 15 weeks, the total service hours provided were only 1,313 hours, falling short of the requirement of 3,150 hours (i.e. 210 hours per week × 15 weeks) by 1,837 hours (58%).

In late September 2018, the CFS informed Audit that it had instituted additional monitoring measures (e.g. requiring weekly progress reports from the contractor) and that the contractor had proposed rectifying measures (paras. 2.5 and 2.6); and

(b) ***Need to conduct FCSs for the youth population.*** In the two population-based FCSs, the youth population had not been adequately factored in. The first population-based FCS covered the population aged 20 to 84, while the second one would cover the population aged 18 or above. As at 31 August 2018, the CFS had not embarked on a separate FCS covering the younger age group (paras. 2.8 and 2.9).

6. ***Scope for enhancing TDSs.*** According to the CFS, a TDS has been recognised internationally as the most cost-effective way to estimate dietary exposure to food chemicals or nutrients for various population groups and to assess their associated health risks. It provides a scientific basis for assessing food safety risks and regulating food supply, and can facilitate risk managers to focus their limited resources on food chemicals or nutrients that may pose the greatest risks to public health. However, a TDS is a large and complex exercise. For a particular substance of concern, the local population's day-to-day total dietary exposure to the substance is estimated by multiplying its concentration in a relevant food (i.e. a food which may contain the substance) by the population's daily consumption amount of the food, and summing up the dietary exposure from all relevant foods. The estimated exposure is then compared to the relevant tolerable intake of the substance of concern in assessing the associated health risks. During March 2010 to December 2014, the CFS conducted the first TDS to cover majority of foods consumed by the Hong Kong population. A total of 146 substances of concern (e.g. pesticide residues) were covered, and a total of 150 foods were selected based on the dual criteria of the frequency of consumption of the food and the likelihood of the food containing high concentration of concerned substances. According to the results of the first TDS, the CFS concluded that the population in Hong Kong was unlikely to experience any adverse health effects due to the dietary exposure to the substances covered in the TDS. In October 2015, the CFS completed an evaluation of the TDS and identified scope for enhancing the TDS. For example:

(a) some substances of high concern (e.g. formaldehyde) were not studied in the TDS; and

(b) for the substances studied, some foods which might contain high concentrations of the substances were not covered in the TDS (paras. 2.14 to 2.17).

7. ***RASs.*** An RAS is a comprehensive review and analysis of a food related hazard (e.g. chemical hazards and microbiological hazards) that is of public health significance. The CFS conducts a number of RASs every year, some by itself (i.e. own studies) and some in cooperation with the Consumer Council (CC) (i.e. joint studies). Findings and recommendations of the RASs are disseminated to the public through press releases, education pamphlets and guidelines for the trade. For conducting RASs, the CFS submits an annual plan to the Expert Committee for the selection of studies. From 2008-09 to 2018-19, 50 studies had been selected. As at 31 August 2018, 45 of the 50 studies had been completed (paras. 2.20 to 2.22 and 2.28). Audit noted that:

(a) ***Need to monitor implementation of the new mechanism for selecting RASs.*** In selecting studies for inclusion in an annual plan, the CFS applied a number of criteria (e.g. whether the study was of significance in terms of public health). In September 2017, the Expert Committee suggested that the selection of RASs could be improved by introducing a scoring system. In late September 2018, the CFS informed Audit that it had introduced the suggested scoring system, which took effect in September 2018. The CFS needs to ensure that the new mechanism is implemented properly as intended (paras. 2.23 to 2.26); and

(b) ***Need to facilitate understanding of study results.*** Of the 45 completed RASs, 25 were the CFS's own studies, of which 2 studies were for internal reference only. For the remaining 23 studies, the CFS had published study reports on its website and had provided certain supplementary information (e.g. guidelines and advice) to enhance the public's understanding. However, for 9 of the 23 study reports, the links to the supplementary information and those to the study reports were posted on different webpages of the CFS website, making it difficult to locate the relevant information (paras. 2.27 and 2.28).

Food Surveillance Programme

8. ***Formulation of the FSP.*** The CFS's FSP is designed to control and prevent food hazards. It is a key component of the CFS's food safety assurance programme and is aimed to find out the safety of food supply. The CFS adopts a risk-based approach to formulating the FSP. The number of projects and food samples under the FSP, as determined by the CFS in consultation with the Expert Committee, might differ between years. Under the FSP, food samples are taken by food

inspectors/sampling officers at the import, wholesale and retail levels of the food chain for microbiological testing (e.g. conduct of overall bacterial counts), chemical testing (e.g. testing of food additives) and radiation testing (i.e. measuring the level of radioactive substances). In 2017, the FSP had 144 projects, which comprised 138 surveillance projects (i.e. food samples taken for surveillance purposes) and 6 follow-up projects (i.e. food samples taken for following up food incidents, complaints and unsatisfactory testing results of surveillance projects). A total of 66,979 food samples were taken under the 144 projects. For each project, the FSP set out a sampling plan (i.e. the number of samples to be taken from each level of the food chain and the composition of samples by food group) and the type of testing to be conducted (e.g. chemical testing) (paras. 3.2 to 3.5 and 3.15). Audit examined the FSPs of 2015, 2016 and 2017 and noted that:

(a) ***Room for covering more potential food hazards.*** Certain potential food hazards had not been covered for surveillance under the FSPs. Such hazards included those which were regulated by the law, those which exceeded certain thresholds and required the CFS's follow-up actions, and those which had resulted in a food safety incident. There is merit for the CFS to consider expanding the coverage of potential food hazards for surveillance under the FSPs in future (paras. 3.6 and 3.8); and

(b) ***Surveillance of a large amount of food items which were not high-risk.*** From 2015 to 2017, a large proportion (ranging from 44% to 46%) of food samples were allocated to surveillance of fruits and vegetables. However, according to the CFS, vegetables were not considered to be high-risk foods (paras. 3.9 and 3.10).

9. ***Implementation of the FSP.*** Audit examined the implementation of the 2017 FSP and noted that:

(a) ***Need for guidelines on taking food samples.*** The CFS had not laid down specific guidelines on taking food samples from different food outlets and food types. CFS staff therefore used their experience and discretion to implement the sampling plan of each project (see para. 8). There were wide variations in the ways samples were taken from different types of outlets (e.g. supermarkets, grocery shops and wet markets) and from different food types (e.g. fish samples taken from different types of fishes) (para. 3.16);

(b) ***Need to better address the food safety concerns of online purchase.*** The CFS sets aside about 4,000 food samples of surveillance projects every year for online purchase. In 2017, 3,868 food samples were purchased online, comprising 3,587 samples (93%) purchased for chemical testing and radiation testing, and 281 samples (7%) purchased for microbiological testing (e.g. conduct of bacterial counts). According to the CFS, ready-to-eat food items that are required to be refrigerated, such as sushi and desserts (and which could be ordered online), generally pose great food safety risks. There might be risks of bacterial growth during delivery. In view of growing popularity of online food purchase in recent years, the proportion of online samples purchased for microbiological testing was on the low side (paras. 3.17 and 3.18); and

(c) ***Need to comply with sampling requirements.*** Audit examined 10 surveillance projects in 2017 (involving 5,304 food samples) and found cases of non-compliance with sampling requirements of the FSP in 6 projects. For each of the 6 projects, the FSP required that no more than two samples should be taken from the same shop. However, the requirement had not been followed in taking 493 samples at 104 shops (para. 3.19).

10. ***Long turnaround time and need to ensure timely delivery of food samples to laboratories.*** Food samples were delivered to different laboratories for testing. The turnaround time refers to the time lag between the collection of a food sample and the subsequent return of the testing result from the laboratory concerned. Audit analysed the turnaround times for 10 surveillance projects in 2017 (involving 2,125 food samples and 4,494 testing results). Audit found that the longest turnaround time was 230 days. Audit further analysed the long turnaround times for 20 samples and found that, for 18 samples, there was a delay in delivering the samples to the laboratories, which ranged from 19 to 203 days. In July 2018, the CFS informed Audit that there were no specific guidelines on the timeliness of delivering food samples to laboratories (paras. 3.24 to 3.27).

Management of food incidents and complaints

11. ***Management of food incidents.*** The CFS defines "food incident" as any event where there is concern about actual or suspected threats to the safety or quality of food that could require intervention to protect public health and consumer interests.

In 2013 to 2017, the number of local food poisoning cases referred to the CFS for investigation ranged from around 190 to 290 each year. The CFS identifies food incidents through the Food Incidents Surveillance System (FISS). In 2013 to 2017, food incidents detected through the FISS had risen by 28% from 1,339 to 1,713. Under the System, the CFS detects overseas and local food incidents through screening websites of national food authorities and receiving notifications from them, as well as consulting academia reports and media reports. The CFS also gathers intelligence on food incidents through investigating food complaints, and following up FSP projects which involve unsatisfactory testing results. For food incidents identified, the CFS conducts initial assessments to find out those requiring further actions for risk management. Such further actions include incident investigations (e.g. checking local availability of the affected products), evidence collection (e.g. taking samples for testing), control measures (e.g. recalling the products) and public announcement (e.g. publicising the food incidents through press releases) (paras. 1.8, 4.2 and 4.3). Audit noted that:

(a) ***Long time had elapsed before unsatisfactory testing results were publicised.*** In 2017, investigation of food complaints and FSP projects had resulted in 106 cases of which the testing of food samples was found to be unsatisfactory. It was the CFS's practice to publicise the unsatisfactory testing results (e.g. by issuing a press release). However, the time taken between the collection of food samples in the first instance and the subsequent publicising of unsatisfactory testing results averaged 19 days, ranging from 1 to 88 days. For some cases, the long time taken was due to the substantial time taken in testing samples and/or the delay in publicising the results after the completion of testing (paras. 4.4, 4.5 and 4.7);

(b) ***Need to better monitor recall of foods.*** In 2013 to 2017, food incidents resulting in food recall exercises increased from 6 to 23. According to the CFS's guidelines, the trader concerned should at the CFS's request, provide the CFS with reports at regular intervals giving essential information (e.g. results of the recall). However, the 23 exercises in 2017 were not entirely effective. On the whole, 51% (by quantity) of the products which had left the manufacturers were not returned in the 23 exercises. Furthermore, CFS records indicated that in the 23 recall exercises, the CFS did not request traders to provide regular reports for monitoring the effectiveness of the recall (paras. 4.3, 4.8, 4.9 and 4.11); and

(c) ***Need to ensure proper disposal of recalled foods.*** According to its guidelines, the CFS would make sure that foods recalled in voluntary exercises were properly disposed of (i.e. destroyed or suitably improved). However, the guidelines had not specified the ways to ensure proper disposal of recalled foods. As a result, the disposal practices varied between cases. Of the 19 cases in 2017 where disposal was required, the disposal was not conducted under CFS supervision for 7 cases (para. 4.12).

12. ***Management of food complaints.*** According to the CFS's guidelines, food complaints lodged with the FEHD are firstly handled by district environmental hygiene offices of the districts concerned. They are then forwarded to the CFS for investigation. In 2017, 5,569 food complaints were forwarded to the CFS (para. 4.15). Audit noted that:

(a) ***Need to compile regular management information.*** From 2014 to 2017, the number of food complaints forwarded to the CFS increased by 30% (1,275 complaints) from 4,294 (2014) to 5,569 (2017). While the increase in certain types of complaints was particularly high (e.g. 188% increase in "fake/counterfeit food"), it was not the practice of the CFS to compile regular management information on food complaints. Such information would provide useful information for monitoring food complaints and surveillance of food safety (paras. 4.16 and 4.18); and

(b) ***Need to expedite investigation of complaints.*** For the 5,569 complaint cases in 2017, Audit analysed the time lag between the complaint dates and the CFS's eventual closing of the complaint cases. The time lag was more than 30 days in 3,389 (61%) cases, including 38 (1%) cases where the time lag was more than 240 days. The long time taken to investigate and close some complaint cases was not conducive to ensuring food safety (paras. 4.19 and 4.20).

Communicating with the public on food safety risks

13. ***Communication matters.*** The CFS communicates with the public on food safety matters through a number of channels, including the Internet, CFS publications, forums for the public and the trade, and talks and exhibitions (para. 5.2). Audit noted that:

(a) ***Need to better communicate official advice to the public.*** Besides the CFS, other organisations (e.g. the CC and universities) also conducted food studies. Audit examined 7 food studies on harmful substances published in January 2017 to June 2018 by two of these organisations. The findings of these studies were matters of public concern (e.g. contaminants detected in foods). In response to these findings, the CFS posted its views and advice on the matters on its website and/or Facebook page. In Audit's view, the CFS is the authority responsible for food safety in Hong Kong. A press release is a key and effective means of communicating the CFS's official views and advice to the public (paras. 5.3 and 5.5); and

(b) ***Need to enable viewing of talks on the Internet.*** The CFS delivers talks to the public, the trade and schools. From 2013 to 2017, the number of talks organised for the public had decreased by 34% while the number of attendees had decreased by 28%. For the trade, the number of talks had decreased by 24% while the number of attendees had decreased by 26%. Upon enquiry in August 2018, the CFS informed Audit that the public's habits of obtaining information had been changing from relying on traditional means (e.g. attending talks) to accessing online information. However, the CFS had not made arrangements to facilitate people viewing its talks on the Internet (e.g. online broadcasting and placing recorded talks on the Internet) (paras. 5.6 and 5.7).

14. ***Scope for improving implementation of charters.*** The CFS has implemented two charters to promote food safety. One is the Food Safety Charter which was introduced in 2008. It provides facilitation for the trade to incorporate food safety measures in day-to-day practices. Signatories of the charter include restaurants and food production premises. The other charter is the "Reduce Salt, Sugar, Oil. We Do" Charter which was introduced in December 2014. It calls for the active participation of Food Safety Charter signatories to help members of the public reduce the intake of salt, sugar and oil when dining out (para. 5.13). Audit noted that:

(a) ***Limited number of signatories.*** The number of signatories of the Food Safety Charter had decreased from 2,000 in 2012 to 1,400 in 2018 (which accounted for about 5% of the number of all food premises). The number of signatories of the "Reduce Salt, Sugar, Oil. We Do" Charter had remained at 37 in recent years (para. 5.14(a));

(b) ***Promotion of the charters could be improved.*** For example, while a function for searching signatories was provided in the CFS mobile application for the Food Safety Charter, a similar function was not provided for the "Reduce Salt, Sugar, Oil. We Do" Charter (para. 5.14(b)); and

(c) ***Performance of signatories required monitoring.*** Audit randomly selected 9 signatories of the Food Safety Charter for visits. Of these 9 signatories, 2 were no longer in business, and only 3 of the remaining 7 signatories displayed the charter's certificate or stickers as required under the charter (para. 5.14(c)).

Audit recommendations

15. **Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in this Executive Summary. Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

Assessment of food safety risks

(a) **continue to closely monitor the progress of the second population-based FCS and the performance of the contractor to ensure timely completion of the FCS (para. 2.12(a));**

(b) **keep in view the need for expediting the conduct of an FCS covering the youth population and take necessary measures to launch the FCS in a timely manner (para. 2.12(b));**

(c) **having regard to the evaluation results of the first TDS, take necessary measures to improve the conduct of TDSs in future (para. 2.18);**

(d) **monitor the operation of the new mechanism for selecting RASs to ensure that it is implemented properly as intended (para. 2.30(a));**

(e) **to facilitate the public's understanding of RAS results, post the links to RAS reports and those to the relevant supplementary information on the same webpages (para. 2.30(b));**

Food Surveillance Programme

(f) **keep under review and, where appropriate, update the FSP (para. 3.13(a));**

(g) **explore, from time to time, room for reallocating food samples designated for the surveillance of low-risk foods (e.g. fruits and vegetables) to other uses (e.g. the surveillance of high-risk food hazards) (para. 3.13(b));**

(h) **provide CFS staff with guidelines on taking food samples from different food outlets and food types (para. 3.22(a));**

(i) **review the need for increasing the proportion of online food samples purchased for microbiological testing (para. 3.22(b));**

(j) **take measures to step up the supervision of sampling work, with a view to preventing recurrence of non-compliance with sampling requirements in future (para. 3.22(d));**

(k) **closely monitor the turnaround time of food sample testing, and take necessary measures to reduce the turnaround time as appropriate (para. 3.28(a));**

(l) **lay down guidelines on the timeliness of delivering food samples to laboratories for testing (para. 3.28(b));**

Management of food incidents and complaints

(m) **closely monitor the time taken between taking food samples and publicising unsatisfactory testing results of the samples, and take necessary measures to minimise the time taken (para. 4.13(a));**

(n) **request traders to provide reports for monitoring the progress of food recall exercises (para. 4.13(c));**

(o) **closely monitor the effectiveness of food recall exercises and take measures to improve the effectiveness as appropriate (para. 4.13(d));**

(p) **provide staff with guidelines on the proper disposal of recalled foods (para. 4.13(e));**

(q) **consider compiling regular management information on food complaints to facilitate monitoring of food complaints and surveillance of food safety (para. 4.23(a));**

(r) **take measures to expedite the investigation of food complaints (para. 4.23(c));**

Communicating with the public on food safety risks

(s) **regarding findings of other organisations' food studies published in the public domain, keep in view the need for the CFS to offer its official views and advice through the most appropriate means, taking into account relevant factors such as public concern and gravity of the matter (para. 5.11(a));**

(t) **make arrangements for viewing of the CFS's food safety talks on the Internet (para. 5.11(b)); and**

(u) **conduct a review of the two charters on food safety (para. 5.16).**

Response from the Government

16. The Director of Food and Environmental Hygiene agrees with the audit recommendations.

PART 1: INTRODUCTION

1.1 This PART describes the background to the audit and outlines the audit objectives and scope.

Food safety in Hong Kong

Food supply in Hong Kong

1.2 In 2017, over 90% of foods for human consumption in Hong Kong were imported. Imported foods, excluding live food animals, accounted for 99% of total food supply in Hong Kong. Imported live food animals accounted for 94% of total supply of live food animals in Hong Kong (Note 1). Table 1 shows the quantity and value of imported foods in years 2013 to 2017.

Note 1: *The percentages were compiled by the Food and Environmental Hygiene Department (see para. 1.4) based on information obtained from the Census and Statistics Department (whose officers are authorised by the Customs and Excise Department to verify whether particulars provided in the trade declarations are sufficiently clear and complete for computing trade statistics) and the Agriculture, Fisheries and Conservation Department (which provides technical assistance and other support to local farmers and fishermen to produce local foods (e.g. pork, poultry and vegetables)).*

Table 1

Quantity and value of imported foods
(2013 to 2017)

Year	Quantity (Note 1)				Value (Note 2) ($ million)
	Live animals (Head)	Eggs in shells (No.) ('000)	Drinks and vinegars (Litre)	Other imported foods (Tonne)	
2013	10,810,170	2,242,906	484,444,046	7,578,092	179,241
2014	9,607,157	2,282,963	517,469,775	8,003,472	197,637
2015	9,073,311	2,317,256	527,485,207	7,436,481	184,950
2016	8,526,581	2,481,464	521,940,382	7,886,418	200,401
2017	7,874,309	2,588,806	537,745,743	8,037,075	205,351

Source: Audit analysis of Census and Statistics Department's published trade statistics

Note 1: Live animals, eggs in shells, and drinks and vinegars are measured in heads, number and litres respectively. Live fish and water are measured in monetary value. Other imported foods are measured in tonnes. Live animals include live food animals and those not for human consumption. The Census and Statistics Department did not separately record figures for imported live food animals.

Note 2: Value refers to the value of all imported foods (including that of live fish and water).

Role of the Food and Environmental Hygiene Department

1.3 According to the World Health Organization (WHO)'s 2015 estimates of the global burden of foodborne diseases, almost 1 in 10 people fell ill every year from eating contaminated food, 33 million of healthy life years were lost and 420,000 people died as a result. In March 2018, the United States Department of Agriculture estimated that major foodborne pathogens cost the United States' economy USD15.5 billion per year in medical care, caused lost time from work and brought losses due to premature death. Nevertheless, the WHO has stated that foodborne

diseases are preventable and can be controlled through an effective food safety system. Ensuring that the food we eat is safe and protected from contamination is an essential element of our health security.

1.4 In Hong Kong, the Food and Environmental Hygiene Department (FEHD), which was set up in 2000, is responsible for food safety in the territory. It has the mission of ensuring that food for sale in Hong Kong is safe and fit for consumption. When the Department was first set up, food safety work was undertaken by its Food and Public Health Branch. Following an organisational review, in May 2006, the Centre for Food Safety (CFS) was established under the FEHD to control food safety in Hong Kong.

1.5 The work of the CFS is to:

(a) ensure that food available for human consumption is wholesome, hygienic, safe and properly labelled;

(b) safeguard public health through testing and control of live food animals; and

(c) advise the public on risk management measures in relation to food and public health matters.

The CFS is headed by the Controller, CFS who reports to the Director of Food and Environmental Hygiene. It has a multi-disciplinary team which includes public health physicians, nurses, veterinarians and health inspectors. An extract of the organisation chart of the FEHD is shown at Appendix A. As at 1 January 2018, the CFS had a total of 640 staff. The total expenditure of the CFS for 2017-18 was $592 million.

Legal framework of food safety control

1.6 The CFS works under the following legal framework of food safety control:

(a) ***Public Health and Municipal Services Ordinance (Cap. 132).*** The provisions in Part V of the Ordinance (enacted in 1960 with subsequent amendments) and its subsidiary legislation (Note 2) cover general protection for food purchasers, offences in connection with sale of unfit food and adulterated food, composition and labelling of food, food hygiene, seizure and destruction of unfit food. The fundamental requirement is that food intended for sale should be fit for human consumption. Any person who sells any food unfit for human consumption shall be guilty of an offence and is liable to a maximum fine of $50,000 and imprisonment for 6 months; and

(b) ***Food Safety Ordinance (Cap. 612).*** The Ordinance (enacted in 2011 with subsequent amendments) provides additional food safety control measures, including a registration scheme for food importers/distributors, and a requirement for food traders (e.g. food importers/distributors, food retailers and online food selling shops) to maintain proper records of acquisition and wholesale supply of food to enhance food traceability. It also empowers the authorities to make regulations for tightening import control of specific food types, make orders to prohibit the import and supply of problem food, and order the recall of such food. A food importer/distributor who fails to register with the FEHD commits an offence and is liable to a maximum fine of $50,000 and imprisonment for 6 months. In addition, a food trader who fails to provide transaction documents commits an offence and is liable to a maximum fine of $10,000 and imprisonment for 3 months.

Under the Ordinances, foods include drink, ice, chewing gum, smokeless tobacco products, and articles and substances used as ingredients in the preparation of food, but do not include live animals or live birds (other than aquatic products), fodder or feeding stuff for animals, birds or aquatic products, and medicine.

Note 2: *The Public Health and Municipal Services Ordinance comprises 17 parts. Part V of the Ordinance makes provisions relating to food and drugs safety control. Controls in specific food safety matters are provided in the subsidiary legislation of the Ordinance (see Appendix B). The other parts of the Ordinance make provisions for other public health and municipal services (e.g. maintenance of sewers and drains, rules relating to public swimming pools and management of public markets and museums).*

1.7 Table 2 shows the number of prosecution cases initiated by the CFS in years 2013 to 2017.

Table 2

Number of prosecution cases initiated by the CFS (2013 to 2017)

Cases prosecuted under	2013	2014	2015	2016	2017	Total
Public Health and Municipal Services Ordinance	499	495	490	766	551	2,801
Food Safety Ordinance	5	12	12	17	9	55

Source: CFS records

Risk-based approach to food safety control

1.8 In accordance with the guidelines of the Codex Alimentarius Commission (Note 3), the CFS adopts a risk-based approach to food safety control. The approach covers:

(a) ***Risk assessment.*** It consists of hazard identification, hazard characterisation, exposure assessment and risk characterisation. By going through these risk assessment processes, hazards (i.e. microbiological, chemical and radiological hazards) associated with food or food ingredients are evaluated and potential risks to the population are assessed, thereby facilitating formulation of appropriate risk management actions (see (b)

Note 3: *The Codex Alimentarius Commission was established in 1963 by the Food and Agriculture Organization of the United Nations and the WHO. The Commission sets up food codes which are a collection of internationally adopted food safety standards and related texts. As at 31 August 2018, the Commission had 189 members (Hong Kong has participated in the Codex Alimentarius Commission since 1998 under the delegation of the People's Republic of China). Members' adoption of the Codex Standards is voluntary and members may formulate their own food safety standards based on local situations.*

below) and risk communication messages (see (c) below) to protect public health;

(b) ***Risk management.*** It includes:

(i) import control. The CFS, through food control offices set up across the territory, carries out import control of foods imported by air, road and sea (e.g. inspecting imported foods and checking their health certificates); and

(ii) food surveillance, managing food incidents and complaints, and monitoring the nutrition labelling scheme through:

- the Food Surveillance Programme (FSP) at the downstream of the food supply chain. Under the FSP, the CFS takes food samples at import, wholesale and retail levels for microbiological, chemical and radiation tests to ensure that foods offered for sale comply with all the legal requirements (see para. 1.6(a)) and are fit for human consumption;

- management of local and overseas food incidents. The CFS assesses the impact of local and overseas food incidents and takes appropriate follow-up actions (e.g. investigating outbreaks of foodborne diseases). In 2013 to 2017, the number of local food poisoning cases referred to the CFS for investigation ranged from around 190 to 290 each year (Note 4). The number of persons affected ranged from around 720 to 1,020. The CFS also handles complaints relating to foods in the territory; and

- monitoring of the nutrition labelling scheme. According to the legislation (see para. 1.6(a)), nutrition labelling setting out energy, and seven specified nutrients (i.e. protein, total fat, saturated fatty acids, trans fatty acids, carbohydrates, sugars

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Note 4: *According to the CFS, food poisoning outbreaks occur in a seasonal pattern in which summer is the peak season. Bacterial foodborne agents are the leading causes of all food poisoning outbreaks.*

and sodium) is mandatory for prepackaged foods unless otherwise exempted. The CFS provides support to the trade to comply with the legislative requirements and promotes the nutrition labelling scheme to the general public through a variety of publicity and education schemes; and

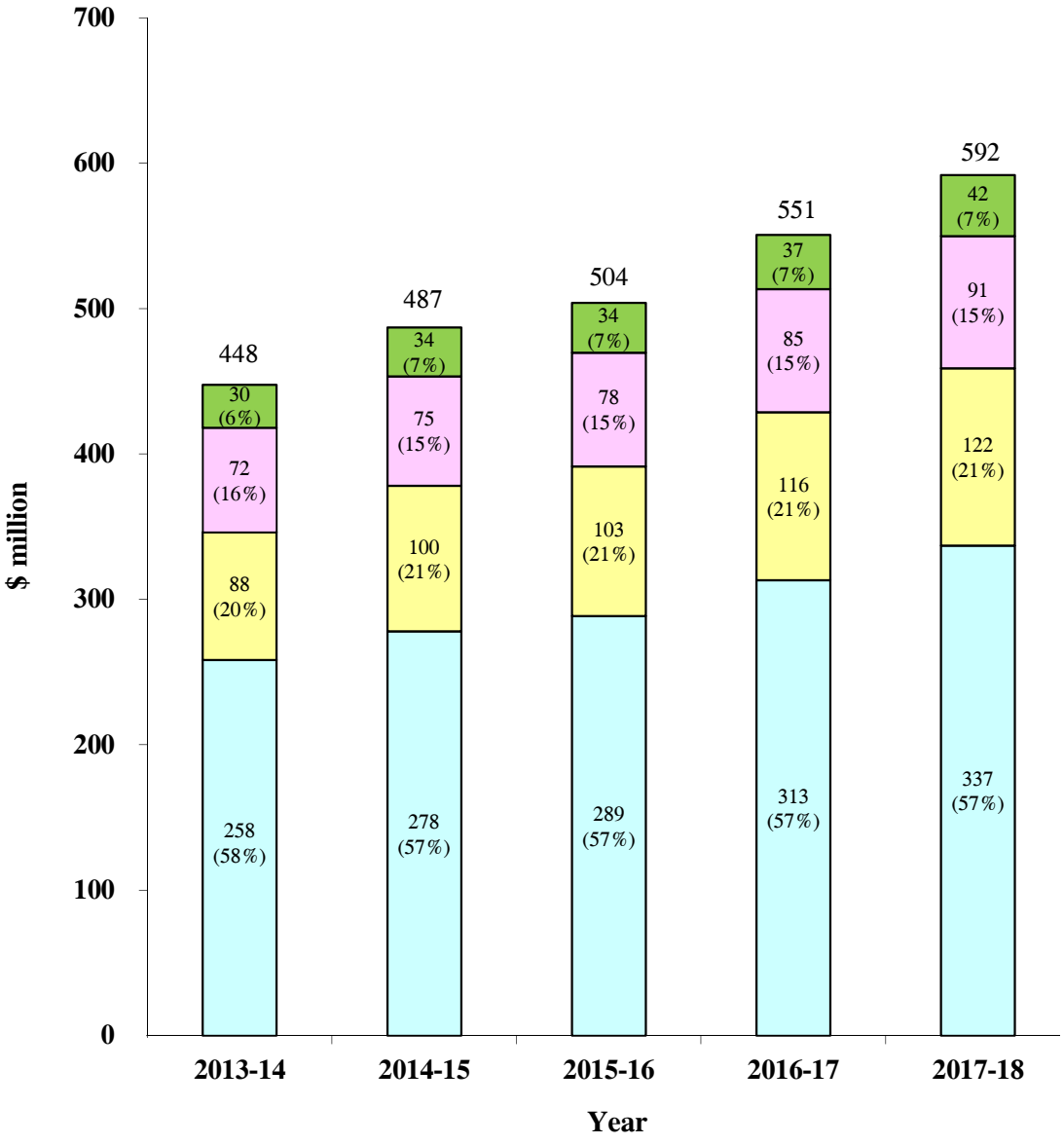
(c) ***Risk communication.*** It is the interactive exchange of information and opinions concerning hazards and risks, risk-related factors and risk perceptions, among the CFS, experts (see para. 1.10), academics, members of the food trade and industry, consumers and the public. The CFS organises various programmes to promote food safety (e.g. communication forums) and disseminates information on food safety to the public through different communication channels (e.g. on its website, social media platforms and publications).

Expenditure on food safety control

1.9 In the five-year period 2013-14 to 2017-18, the expenditure of the CFS had increased by 32% from $448 million to $592 million. A breakdown of the expenditure is shown in Figure 1.

Figure 1

Expenditure of CFS
(2013-14 to 2017-18)



Source: *Audit analysis of CFS records*

Remarks: *The CFS's expenditure comprised staff emoluments and related expenses, and departmental expenses.*

Expert Committee on Food Safety

1.10 In September 2006, to deliberate on matters concerning major food safety control measures, the CFS set up the Expert Committee on Food Safety (the Expert Committee — Note 5). The Committee is responsible for advising the Director of Food and Environmental Hygiene on:

(a) existing or new food safety operational strategies and measures to protect public health;

(b) standards/guidelines relating to food safety and food composition and their suitable adoption in Hong Kong having regard to international practices, trends and developments;

(c) strategies for risk communication to promote food safety and how best to implement relevant risk communication or public education programmes; and

(d) any new directions for any research to be commissioned by the CFS.

Advisory Council on Food and Environmental Hygiene

1.11 In April 2000, the Advisory Council on Food and Environmental Hygiene (Note 6) was established under the Food and Health Bureau to give advice and monitor

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Note 5: *The Committee consists of academics, professionals, food experts, members of the trade and consumer groups, and other experts. For the current term, the Committee comprises 1 Chairman, 1 Vice-chairman, 12 local members, 4 experts from the Mainland and overseas, and 3 ex-officio members (representatives from the Food and Health Bureau, the Agriculture, Fisheries and Conservation Department and the Department of Health). The Chairman, Vice-chairman and members of the Committee are appointed by the Secretary for Food and Health for a term of two years. The CFS provides secretarial support to the Expert Committee.*

Note 6: *The Council consists of academics, professionals and food experts. It comprises 1 Chairman and 16 non-official members (appointed by the Chief Executive for a term of two years), and 4 ex-officio members (i.e. the Permanent Secretary for Food and Health (Food), Director of Agriculture, Fisheries and Conservation, Director of Food and Environmental Hygiene and Director of Health).*

the Government's work on food safety and environmental hygiene. The Council is responsible for:

(a) considering and advising the Secretary for Food and Health on policies relating to food safety, environmental hygiene and veterinary public health, and monitoring their implementation;

(b) advising the Secretary on the regulation of farms, food premises, food hazards and food composition;

(c) receiving reports on the handling of major food and farm incidents; and

(d) advising the Secretary on community education and publicity programmes for promoting public understanding of food safety and public responsibility for environmental hygiene.

Audit review

1.12 The Audit Commission (Audit) has recently conducted a review of the CFS's management and control of food safety (see para. 1.8). The findings of this audit review are contained in two separate Audit Reports, as follows:

(a) "CFS: Management of food safety" (the subject matter of this Audit Report), which reviews matters relating to the assessment of food safety risks, food surveillance programme, management of food incidents and complaints, and communicating with the public on food safety risks (see para. 1.8(a), (b)(ii) and (c) — Note 7); and

(b) "CFS: Import control of foods" (Chapter 2 of the Director of Audit's Report No. 71), which reviews import control matters, taking into account the fact that in 2017, over 90% of foods for human consumption in Hong Kong were imported (see para. 1.2) and that the CFS's annual expenditure

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Note 7: *The nutrition labelling scheme (see para. 1.8(b)(ii)) is not covered in this audit review. In 2011, Audit conducted a review on food labelling and nutrition labelling of infant and special dietary foods (Chapters 3 and 4 of the Director of Audit's Report No. 57).*

on import control of foods accounted for over 50% of its total annual expenditure (see Figure 1 in para. 1.9).

1.13 In this Audit Report, the audit review has focused on the following areas, covering both imported and locally produced foods:

(a) assessment of food safety risks (PART 2);

(b) Food Surveillance Programme (PART 3);

(c) management of food incidents and complaints (PART 4); and

(d) communicating with the public on food safety risks (PART 5).

Audit has found room for improvement in the above areas and has made recommendations to address the issues.

General response from the Government

1.14 The Director of Food and Environmental Hygiene appreciates the work done by Audit in auditing the CFS's work in the management of food safety. She has also said that the CFS has adopted a multi-pronged approach to ensuring food safety in Hong Kong, with reference to the best international practices as far as possible. A comprehensive and risk-based food surveillance strategy is implemented to monitor food safety. Risk management actions are properly taken when unsatisfactory food samples are detected and results are generally announced in a timely manner. Food safety standards are continuously being reviewed with reference to international standards, while regular and timely communication is maintained with stakeholders to promote food safety and disseminate messages about food safety risks. The CFS will take into account Audit's findings to enhance supervision and improve regulatory work, and will continue to ensure that food safety in Hong Kong is maintained at a high standard.

Acknowledgement

1.15 Audit would like to acknowledge with gratitude the assistance and full cooperation of the staff of the CFS during the course of the audit review.

PART 2: ASSESSMENT OF FOOD SAFETY RISKS

2.1 This PART examines the CFS's assessment of food safety risks, focusing on the following areas:

(a) food consumption surveys (paras. 2.2 to 2.13);

(b) total diet studies (paras. 2.14 to 2.19); and

(c) risk assessment studies (paras. 2.20 to 2.31).

Food consumption surveys

2.2 The CFS carries out food consumption surveys (FCSs) and related studies periodically to help assess food safety risks:

(a) ***FCSs.*** An FCS collects data on the types and amounts of foods that people consume. Such food consumption data are necessary for the conduct of food safety studies, i.e. total diet studies (TDSs — see (b) below) and risk assessment studies (RASs — see (c) below);

(b) ***TDSs.*** A TDS estimates the total dietary exposure to particular substances of concern (e.g. certain food contaminants or nutrients) and assesses the associated food safety risks (see paras. 2.14 and 2.15); and

(c) ***RASs.*** An RAS is a comprehensive review and analysis of a food related hazard (e.g. a chemical or microbiological hazard) that is of public health significance (see paras. 2.20 to 2.22).

A population-based FCS is crucial for establishing a comprehensive database for food safety risk assessment and enhancing the risk assessment capacity of the CFS. According to the CFS, the food consumption data collected is used to find out if the public is exposed to any potential dietary risks such as those from contaminants and food additives, and also to understand the size of the risk and which population groups may be most at risk. Such information is vital for the Government in formulating public policies and education strategies to promote food safety in Hong Kong. As at

31 August 2018, two "population-based FCSs" (see paras. 2.3 and 2.4) and one "FCS on secondary school students" (see para. 2.8(a)) had been undertaken since the establishment of the FEHD in 2000.

2.3 ***First population-based FCS.*** In September 2001, an advisory panel was set up to advise on the first population-based FCS (Note 8). In March 2004, the FEHD engaged a contractor (a university) to conduct the FCS. The contractor was required to complete the FCS in 30 months, from March 2004 to September 2006, at a contract price of $3.2 million. In April 2004, a steering committee was set up to monitor the progress of the FCS (Note 9). The FCS was conducted as follows:

(a) ***Respondents.*** According to its design, the FCS covered people aged 20 to 84. There were 12 groups of respondents, comprising 6 groups from each gender. Each group covered a different age range. In total, there would be 5,200 respondents (Note 10);

(b) ***Survey methodology.*** The FCS fieldwork involved the following key steps:

(i) households were selected from the Census and Statistics Department's database. Letters were sent to the households inviting them to participate in the FCS;

Note 8: *Chaired by the Head of the Risk Assessment and Communication Division of the FEHD, members of the advisory panel comprised local and overseas experts, and representatives from the FEHD and other government departments (e.g. the Census and Statistics Department). The panel was dissolved after the completion of the first population-based FCS.*

Note 9: *Chaired by the Head of the Risk Assessment and Communication Division of the FEHD, members of the steering committee comprised FEHD staff. The committee was dissolved after the completion of the first population-based FCS.*

Note 10: *For each gender, the 6 groups of respondents were people aged 20 to 29, 30 to 39, 40 to 49, 50 to 59, 60 to 69, and 70 to 84. Each group was intended to have 400 respondents (except for the group "70 to 84", the intended number of respondents was 600). The expected number of respondents in total was 5,200, i.e. (400 respondents per group × 10 groups) + (600 respondents per group × 2 groups).*

(ii) contractor staff paid a preliminary visit to the households. During the visit:

- a member of each household was identified randomly and recruited as the respondent;
- a "food behaviour questionnaire" on the respondent's behaviour relating to food consumption (e.g. whether the respondent habitually ate poultry skin and fats) was completed; and
- other information such as weight, height and demographic information was also collected;

(iii) the contractor's interviewers visited each respondent to complete two interview questionnaires:

- a "first 24-hour dietary recall questionnaire" on details of the respondent's food consumption (e.g. types and quantities of foods consumed) during the 24 hours starting from 6:00 a.m. of the day before; and
- a "food frequency questionnaire" on the respondent's consumption of selected foods which the CFS had identified to be important for risk assessment purposes; and

(iv) the contractor's interviewers completed a "second 24-hour dietary recall questionnaire" for each respondent, through a telephone interview, 3 to 11 days after the first 24-hour dietary recall questionnaire;

(c) ***Progress of the FCS.*** The FCS was completed in March 2010 with a delay of 42 months. The contract price also increased by $0.8 million from $3.2 million (see para. 2.3) to $4 million. According to the CFS's records, the delay and increase in expenditure were due to the following reasons:

(i) ***Alteration in the method of recruiting respondents.*** According to the survey proposal submitted as part of the tender by the contractor,

respondents were to be recruited through making random telephone calls. Subsequently, the CFS identified a need for improving this method of recruitment, having regard to the views of the advisory panel (see para. 2.3) that random telephone calls might cause sampling errors and bias (because the population for sampling would be incomplete). The survey methodology was altered to incorporate the improved method of recruitment, i.e. respondents were to be recruited during visits to selected households (see b(ii) above). The contractor requested a time extension of 12 months (i.e. extended to September 2007) and a price increase of about $1 million;

(ii) ***Low response rate.*** In designing the FCS, it was assumed that 70% of the invited households were willing to participate in the FCS. It turned out that 13,086 households were invited and 5,008 respondents were recruited. The overall response rate was only 48% (Note 11), lower than the expected rate of 70%. In other words, to secure enough respondents, the contractor needed to invite more households than expected;

(iii) ***Insufficient manpower.*** The contractor was a university. It employed students as part-time interviewers. The drop-out rate of interviewers was high and the contractor eventually employed non-students to supplement the insufficient manpower. It turned out that a longer time was needed to complete the FCS fieldwork than what the contractor had expected; and

(iv) ***Long time taken to process data.*** After the completion of the FCS fieldwork in July 2007, the contractor requested extending the contract from September 2007 (see (c)(i) above) for another 7 months, so as to process the data collected. In April 2008, the contractor submitted processed data to the CFS for acceptance, but

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Note 11: *The response rate was calculated as follows:*

5,008 respondents ÷ (13,086 households invited − 2,682 invalid households) × 100% = 48.1%

Invalid households included, for example, those which did not have members eligible for the FCS.

deficiencies were noted in the data. The contractor again requested extending the contract. Eventually the contract was completed in March 2010; and

(d) ***FCS results.*** The FCS involved 1,429 foods (e.g. different types of vegetables, meats and grains) and 1,591 dishes (e.g. braised pork belly with preserved vegetables). Respondents' data on consumption of the foods and dishes, as well as recipes of the dishes, were recorded. The recipes depicted ingredients and condiments, so that details of consumption of the ingredients and condiments were also recorded, and grouped under the 1,429 foods. Two major findings of the first population-based FCS were:

(i) the mean daily consumption of solid food was 1,120 grams, including, for example, 489 grams of cereals and grains, 324 grams of vegetables and fruits, and 113 grams of meat, poultry and game; and

(ii) the mean daily consumption of liquid food was 1,860 millilitres, including, for example, 1,066 millilitres of water and 376 millilitres of tea.

2.4 ***Second population-based FCS.*** The food consumption data collected by the first population-based FCS was related to the period March 2005 to July 2007 (i.e. when fieldwork of the FCS was conducted). In November 2013, an advisory panel was set up to advise on the second population-based FCS, which would be conducted to gauge the latest food consumption pattern. In May 2017, the CFS engaged another contractor (a consultant) to conduct the second population-based FCS. The contractor was required to complete the FCS in 36 months, from May 2017 to May 2020, at a contract price of $3.9 million. The FCS is presently conducted as follows:

(a) ***Respondents.*** According to its design, the FCS covers people aged 18 or above. There are 8 groups of respondents, comprising 4 groups from each gender. The 4 groups cover people in the age ranges of 18 to 29, 30 to 49, 50 to 64, and 65 or above. In total, there will be at least 4,800 respondents;

(b) ***Survey methodology.*** Fieldwork is to be conducted in a way similar to that of the first population-based FCS. In brief, the key steps are:

(i) households are selected, based on the Census and Statistics Department's database. Invitation letters are sent;

(ii) the contractor's interviewers visit the selected households to recruit respondents, who are requested to complete two interview questionnaires, i.e. a "first 24-hour dietary recall questionnaire" and a "food frequency questionnaire". The "food behaviour questionnaire" (see para. 2.3(b)(ii)) is no longer required. Other information such as weight, height and demographic information is also collected; and

(iii) the contractor's interviewers complete a "second 24-hour dietary recall questionnaire" for each respondent, through a face-to-face or telephone interview, 3 to 11 days after the "first 24-hour dietary recall questionnaire"; and

(c) ***Progress of the FCS.*** According to the contractor's plan which is part of the contract document:

(i) ***Before the main fieldwork (May 2017 to April 2018).*** In this 11-month stage, the contractor would prepare for the FCS fieldwork (e.g. developing systems and procedures, and recruiting and training interviewers);

(ii) ***Main fieldwork (April 2018 to April 2019).*** In this 12-month stage, the contractor would conduct the FCS fieldwork; and

(iii) ***After the main fieldwork (April 2019 to May 2020).*** In this 13-month stage, the contractor would process the collected data and prepare the final report.

As in the first population-based FCS, the CFS has set up a steering committee to monitor the progress of the current FCS.

Need to closely monitor the progress of the second population-based FCS

2.5 According to the CFS's records, the fieldwork of the second FCS started in April 2018 (on 13 April 2018) as planned. Audit examined the progress of the fieldwork as at 30 July 2018 (i.e. 108 days or some 15 weeks after fieldwork commencement), and noted the following:

(a) ***Slow progress.*** According to the contract, the number of respondents completing the survey (referred to as completed cases) should be evenly distributed over the 12-month survey period (see para. 2.4(c)(ii)) (Note 12). It follows that, of the some 4,800 respondents (see para. 2.4(a)) to be surveyed, some 1,400 cases (Note 13) should have been completed by 30 July 2018. However, Audit noted that up to that day, the actual number of completed cases was only 278, falling short of the 1,400 cases by some 1,100 cases (79%). Apart from not meeting the contract requirement, such a progress might not ensure the timely completion of the FCS;

(b) ***Low response rate.*** According to the FCS design which was stated in the contract, some 8,000 households were to be invited with a view to recruiting 4,800 respondents. The underlying assumption was that 70% of the valid households would be willing to participate in the FCS (Note 14). However, according to the CFS's records, the initial response rate was only 42%, falling short of the expected rate; and

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Note 12: *According to the CFS's records, a reason for setting the requirement of even distribution of the number of respondents completing the survey was to cater for the seasonal pattern of food consumption.*

Note 13: *The expected number of completed cases was calculated as follows:*

Expected number of completed cases of the survey of 4,800 × 108 days elapsed ÷ 365 days of the survey = 1,420

Note 14: *On the assumptions that 85% of the invited households were valid (e.g. households having persons eligible for the FCS) and 70% of the valid households were willing to participate in the survey, 8,067 households were to be invited:*

4,800 respondents ÷ 85% ÷ 70% = 8,067 households

(c) ***Insufficient service hours provided by the contractor.*** According to the contract, the contractor's interviewers should provide at least 210 hours of service per week. In the first 15 weeks, the total service hours provided by interviewers were only 1,313 hours, falling short of the requirement of 3,150 hours (i.e. 210 hours per week × 15 weeks) by 1,837 hours (58%). Against the weekly requirement of 210 hours, only the service hours in week 14 (i.e. 237 hours) and week 15 (i.e. 213 hours) met the requirement.

2.6 In late September 2018, the CFS informed Audit of its latest efforts in monitoring the progress of the second population-based FCS and the performance of the contractor, as follows:

(a) the steering committee had all along been taking a proactive approach to closely monitor the progress of the survey and the performance of the contractor in accordance with the relevant contract requirements. Steering committee meetings with the contractor had been conducted regularly to give advice on the progress and the problems encountered by the contractor;

(b) apart from scheduled meetings of the steering committee, three extra meetings with the contractor had also been conducted by the CFS for timely intervention of contractor performance;

(c) the CFS had instituted additional monitoring measures, including:

  (i) requiring weekly progress reports from the contractor for reviewing performance;

  (ii) developing additional statistical indicators for up-close monitoring of contractor performance; and

  (iii) contacting the contractor via telephone and email to give instructions for targeting specific improvement areas, and to demand immediate remedial measures upon reviewing and scrutinising weekly progress reports;

(d) the CFS issued an official letter on 18 July 2018, demanding the contractor to expedite the fieldwork of the survey and to submit a proposal for rectifying the situation immediately. Some improvements had been

observed since then, with a significant increase in the total number of service hours of interviewers per week from 111 hours (in the 13th week) to 213 hours (in the 15th week);

(e) at the steering committee meeting held on 8 August 2018, the contractor proposed a number of measures to rectify the situation; and

(f) at the steering committee meeting held on 11 September 2018, the contractor proposed further modification of the interview method, with reference to the findings of in-house trial runs. Another more detailed and refined proposal on improvement measures was expected from the contractor.

2.7 While noting the CFS's efforts mentioned in the preceding paragraph, to ensure timely completion of the second population-based FCS, Audit considers that the CFS needs to continue to closely monitor the progress of the FCS and the performance of the contractor.

Need to conduct FCSs for the youth population

2.8 According to the CFS, food consumption data of the youth population is necessary for assessing food safety risks faced by children and youths. The CFS's records indicated that:

(a) in 2000, the FEHD conducted an FCS on secondary school students. In the FCS, some 1,000 students were asked about their consumption of a list of 93 foods (which were commonly consumed or higher-risk foods);

(b) in the population-based FCSs, the youth population had not been adequately factored in. The first population-based FCS covered the population aged 20 to 84, while the second population-based FCS would cover the population aged 18 or above;

(c) in October 2015, the advisory panel of the second population-based FCS discussed the feasibility of including the youth population in the FCS under the following two scenarios:

(i) ***Scenario 1.*** An additional age group of "12 to 17" would be included in the FCS. However, the total number of respondents would also need to increase significantly from 4,800 to over 12,000; and

(ii) ***Scenario 2.*** The age group of "18 to 29" would be enlarged to become "15 to 29". However, since eating habits differed significantly between respondents who were studying and who were working, it would bring about difficulties in interpreting the survey results.

After consideration, the advisory panel concluded that a separate FCS covering the youth population would be more feasible.

2.9 As at 31 August 2018, the CFS was still using the data collected by the 2000 FCS (some 18 years ago — see para. 2.8(a)) to help assess food safety risks faced by children and youths. The CFS had not embarked on a separate FCS covering the youth population.

Scope for obtaining more up-to-date food consumption data

2.10 In Hong Kong, the population-wide food consumption data currently in use was that collected by the first population-based FCS, which was completed in 2010. The data so collected was related to the period March 2005 to July 2007 (more than 10 years ago). According to the CFS, an FCS is a time-consuming and resource-intensive exercise. The data currently in use would continue to be so until the food consumption data collected by the second population-based FCS is available in 2020 (see para. 2.4).

2.11 In Audit's view, with rapid socio-economic changes (e.g. changes in food prices and food supplies as well as demographic changes), there could be big changes in the food consumption pattern of the population in Hong Kong. There is merit in obtaining up-to-date food consumption data through more frequent FCSs.

Audit recommendations

2.12 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **continue to closely monitor the progress of the second population-based FCS and the performance of the contractor to ensure timely completion of the FCS;**

(b) **keep in view the need for expediting the conduct of an FCS covering the youth population and take necessary measures to launch the FCS in a timely manner; and**

(c) **consider the feasibility of conducting FCSs more frequently, taking into account the need for more up-to-date food consumption data as well as other competing priorities.**

Response from the Government

2.13 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS has been closely monitoring and will continue to closely monitor the progress of the second population-based FCS currently underway and the performance of the contractor;

(b) as the fieldwork of the second population-based FCS is being conducted, the CFS will take into account the experience gained and take active measures to embark on the FCS for the younger population subject to availability of resources; and

(c) with reference to the experience of other countries which had conducted more than one food consumption surveys with the use of "24-hour dietary recall" (i.e. similar methodology to the CFS's) and on a cross-sectional basis as in Hong Kong, the time intervals were noted as 16 years in Australia, 11 years in Canada and 11 years in New Zealand. The frequency of conducting FCSs in Hong Kong is on a par with international experience. As the CFS is currently engaged in the fieldwork of the second population-

based FCS, the CFS will keep in view the feasibility and the need for obtaining more up-to-date food consumption data taking into account the experience gained and other competing priorities as a whole.

Total diet studies

2.14 A TDS estimates the total dietary exposure to particular substances of concern (e.g. certain food contaminants or nutrients) and assesses the associated food safety risks (see para. 2.2(b)). According to the CFS, a TDS has been recognised internationally as the most cost-effective way to estimate dietary exposure to food chemicals or nutrients for various population groups and to assess their associated health risks. It provides a scientific basis for assessing food safety risks and regulating food supply, and can facilitate risk managers to focus their limited resources on food chemicals or nutrients that may pose the greatest risks to public health. A TDS is also a large and complex exercise. According to the CFS's records, in a TDS:

(a) the local population's day-to-day total dietary exposure to a particular substance is estimated by:

(i) multiplying the concentration of the substance in a relevant food (i.e. a food which may contain the substance) by the population's daily consumption amount of the food; and

(ii) summing up the dietary exposure to the substance from all relevant foods.

Data on food consumption (see (i) above) can be obtained through FCSs, while data on the concentrations of the substance (see also (i) above) in relevant foods can be obtained through a series of steps (Note 15); and

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Note 15: *The steps taken to gauge the concentrations of different substances in foods are:*

(a) determining the foods that represent the total diet of the population;

(b) preparing the foods as they are normally consumed (i.e. table-ready) in a manner consistent with cultural habits; and

(c) analysing the concentrations of the substances in the foods.

(b) in assessing the food safety risk of a particular substance, the total dietary exposure to the substance of the population, as well as various population subgroups, is compared with the relevant safety reference value (e.g. tolerable daily intake) or the relevant nutritional reference value (e.g. recommended nutrient intake) of the substance.

2.15 ***First TDS.*** During March 2010 to December 2014, the CFS conducted the first TDS (so far only one TDS was conducted) as follows:

(a) ***Substances of concern.*** Substances to be included in the TDS were selected based on three criteria, i.e. recommendations from international authorities (e.g. the WHO), public health significance and public concern. A total of 146 substances were selected (Note 16);

(b) ***Relevant foods.*** Foods to be included in the TDS were selected based on two criteria, i.e. foods which were commonly consumed, and foods which were not commonly consumed but contained high concentrations of substances of concern (see (a) above). A total of 150 foods were selected (Note 17);

(c) ***Sampling, preparing foods and analysing.*** The CFS engaged a contractor (at a contract price of $1.2 million) to take samples of the selected foods, and to prepare the foods for analysing concentrations of different substances. The CFS then engaged its Food Research Laboratory and also the Government Laboratory to analyse the prepared foods;

(d) ***Estimation of dietary exposure and assessment of risks.*** These tasks were conducted with the help of an in-house developed computer system; and

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Note 16: *The 146 substances belonged to 7 groups, i.e. pesticide residues (86 substances), persistent organic pollutants (17 substances), minerals (13 substances), macronutrients (11 substances), metallic contaminants (9 substances), mycotoxins (9 substances), and processing contaminants (1 substance).*

Note 17: *The 150 foods belonged to 15 food groups, i.e. alcoholic beverages; cereals and cereal products; condiments, sauces and herbs; dairy products; eggs and egg products; fats and oils; fish and seafood; fruits; legumes, nuts and seeds; meat, poultry and game; mixed dishes; non-alcoholic beverages; snack foods; sugars and confectionery; and vegetables.*

(e) ***Results of the first TDS.*** A total of nine reports on the TDS were published in the period December 2011 to December 2014 on the CFS website. Each report covered the study results of a substance or a group of substances (Note 18). Insofar as these substances were concerned, the population in Hong Kong was unlikely to experience any adverse health effects due to the dietary exposure to these substances.

Scope for enhancing TDSs

2.16 The first TDS was completed in December 2014 (see para. 2.15). The CFS's records indicated that in October 2015, the CFS completed an evaluation of the TDS and prepared an evaluation report. According to the evaluation report, the TDS was conducted smoothly and completed as scheduled within the budget. The objectives of the TDS were fulfilled as it provided a full picture of Hong Kong adults' dietary exposure to contaminants and nutrients.

2.17 Audit, however, noted that the evaluation report had identified scope for enhancing the TDS. For example:

(a) some substances of high concern (e.g. formaldehyde, which is a chemical commonly used in industry for the manufacturing of plastic resins) had not been studied in the TDS;

(b) for the substances studied, some foods which might contain high concentrations of the substances had not been covered in the TDS; and

(c) regarding the food safety and health information derived from the TDS, publicity should be enhanced.

Note 18: *The substances studied in the nine reports were dioxins and dioxin-like polychlorinated biphenyls (December 2011), inorganic arsenic (February 2012), polybrominated diphenyl ethers (April 2012), pesticide residues (June 2012), metallic contaminants (January 2013), acrylamide (July 2013), mycotoxins (December 2013), organochlorine pesticide residues (May 2014), and minerals (December 2014).*

Audit recommendation

2.18 **Audit has *recommended* that the Director of Food and Environmental Hygiene should, having regard to the evaluation results of the first TDS, take necessary measures to improve the conduct of TDSs in future.**

Response from the Government

2.19 The Director of Food and Environmental Hygiene agrees with the audit recommendation. She has said that the CFS has indeed taken its own initiative to conduct an evaluation exercise in 2015 for the first TDS with a view to seeking improvements in future TDSs. In conducting future TDSs, the CFS will take into account the evaluation results and the experience gained in the first TDS.

Risk assessment studies

2.20 An RAS is a comprehensive review and analysis of a food related hazard (e.g. chemical hazards and microbiological hazards) that is of public health significance (see para. 2.2(c)).

2.21 According to the CFS's records, the CFS conducts a number of RASs every year, some by itself (hereinafter referred to as CFS's own studies — Note 19) and some in cooperation with the Consumer Council (CC) (hereinafter referred to as joint studies — Note 20) as follows:

(a) for conducting CFS's own studies or joint studies, the general arrangements are:

Note 19: *Examples of CFS's own studies included "Perchlorate in tea and tea beverages" completed in August 2018 and "Microbiological quality of salads available at the local market" completed in October 2017.*

Note 20: *Examples of joint studies included "Sodium and energy contents of Asian-style noodles-in-soup dishes" completed in February 2018 and "Nutrient content of Hong Kong style savoury dishes" completed in November 2017.*

(i) the CFS prepares an annual plan of RASs which contains studies proposed, and submits it to the Expert Committee (see para. 1.10) for the selection of studies;

(ii) the CFS conducts the studies selected, and reports the progress to the Expert Committee on a regular basis; and

(iii) the CFS publishes study results on the CFS website, which are either study reports for own studies or articles prepared by the CC for joint studies (see (b)(ii) below); and

(b) for conducting joint studies with the CC, the special arrangements which apply are:

(i) the CFS discusses with the CC about joint studies proposed, and obtains the CC's agreement before including them in an annual plan of RASs; and

(ii) on completing a joint study, the CFS forwards the study report to the CC for it to prepare a summary article on the study. The CC publishes the article in the CC magazine "Choice". The CFS also publishes the article (or an extract of it, instead of the study report) on the CFS website.

2.22 In 2008-09 to 2018-19, according to the CFS's records, the Expert Committee endorsed 50 studies, comprising 28 own studies and 22 joint studies (Note 21). As at 31 August 2018, 45 of the 50 studies had been completed.

Note 21: *The 50 RASs covered different areas, i.e. food nutrition (19 RASs), food contaminants (15 RASs), food microbiology (10 RASs), food contact materials (2 RASs), food technology (2 RASs), food additives (1 RAS), and genetically modified foods (1 RAS).*

Need to monitor implementation of the new mechanism for selecting RASs

2.23 According to the CFS, it applied the following criteria in selecting studies for inclusion in an annual plan of RASs:

(a) whether the study was of significance in terms of public health;

(b) whether the study helped address risk management problems and identify risk management options;

(c) whether the study helped provide scientific support to a legislative review;

(d) whether the study was of significance in terms of public education, including the development of tailor-made guidelines/practice codes for the trade;

(e) whether the study was a request from other government departments; and

(f) whether professional capacity was available for conducting the study, having regard to practical feasibility.

2.24 Audit noted that, in September 2017, the Expert Committee commented on the CFS's selection mechanism of RASs. The Expert Committee suggested that the selection of RASs could be improved by introducing a scoring system. Under such a system, the priorities and scores of the proposed RASs in an annual plan should be systematically appraised according to pre-set criteria.

2.25 In late September 2018, the CFS informed Audit that in view of the Expert Committee's suggestion (see para. 2.24), it had introduced during the course of this audit review a new mechanism for selecting RASs, i.e. the scoring system which the Expert Committee suggested. The new mechanism took effect in September 2018, and was used to select RASs for 2019-20. Under the new mechanism, each of the proposed RASs was graded "High", "Medium" or "Low" against each of the criteria applied by the CFS (see para. 2.23). According to the CFS, the Expert Committee welcomed the new mechanism.

2.26 In Audit's view, given that the mechanism has just been introduced, the CFS needs to monitor the operation of the mechanism to ensure that it is implemented properly as intended.

Need to facilitate understanding of study results

2.27 According to the CFS's records, of the 45 completed RASs (see para. 2.22), 20 were joint studies and 25 were own studies. For the 20 joint studies, the CC had prepared summary articles on the studies, which were published in the CC magazine Choice and on the CFS website. Of the 25 own studies, the CFS had published study reports on the CFS website for 23 studies (Note 22). The reports provided details on the objectives, scope, methodologies and results of the studies.

2.28 Audit noted that, for each of the 23 study reports published on the CFS website, the CFS had provided certain supplementary information to enhance the public's understanding. Such supplementary information included press releases (for 21 reports), slide-show presentations (for 14 reports), articles on the CFS's publication "Food Safety Focus" (for 12 reports), guidelines or advice (for 6 reports), and frequently asked questions or other information (for 5 reports) (Note 23). However, Audit also noted that, for 9 of the 23 study reports, the links to the supplementary information and those to the study reports were posted on different webpages of the CFS website, making it difficult for interested parties to locate the relevant information.

2.29 In Audit's view, the study report of an RAS is technical in nature and could be difficult to understand. Posting the links to RAS reports and those to the relevant supplementary information on the same webpages would facilitate the public's understanding of study results.

Note 22: *According to the CFS, the study reports for two own studies, namely "Nutritional labelling on pre-packaged food in Hong Kong" conducted in 2010-11 and "Dietary exposure to perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) of Hong Kong adult population" conducted in 2012-13, were for internal reference only and hence had not been published.*

Note 23: *For an RAS, there might be more than one type of information supplementing the study report.*

Audit recommendations

2.30 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **monitor the operation of the new mechanism for selecting RASs to ensure that it is implemented properly as intended; and**

(b) **to facilitate the public's understanding of RAS results, post the links to RAS reports and those to the relevant supplementary information on the same webpages.**

Response from the Government

2.31 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS has already implemented the new mechanism for selecting RASs (i.e. in September 2018), following the advice of the Expert Committee. The CFS will continue to monitor and ensure proper operation of the mechanism; and

(b) The CFS has posted the related links of supplementary information on the webpages of corresponding RASs as recommended by Audit to facilitate the public obtaining relevant information.

PART 3: FOOD SURVEILLANCE PROGRAMME

3.1 This PART examines the FEHD's FSP, focusing on the following areas:

(a) formulation of the FSP (paras. 3.2 to 3.14);

(b) implementation of the FSP (paras. 3.15 to 3.23); and

(c) completion of testing under the FSP (paras. 3.24 to 3.29).

Formulation of the Food Surveillance Programme

3.2 The CFS's FSP is designed to control and prevent food hazards. It is a key component of the CFS's food safety assurance programme and is aimed to find out the safety of food supply. According to the CFS, it adopts a risk-based approach to formulating the FSP, taking into account risk factors such as past food surveillance results, food incidents occurring locally and overseas, results of risk assessments (see PART 2 of this Audit Report) and views of experts and stakeholders. Every year, the FSP is finalised after consulting the Expert Committee (see para. 1.10). Under the FSP, a number of projects are conducted annually.

3.3 According to the CFS's records, the FSP comprised some 140 projects annually, under which, some 65,000 food samples were taken at the import, wholesale and retail levels of the food chain. The food samples taken for each project were subjected to one of the following types of testing:

(a) ***Microbiological testing.*** This assessed the hygienic quality of food samples (e.g. through the conduct of overall bacterial counts) and the presence of specific pathogens (e.g. Salmonella);

(b) ***Chemical testing.*** This mainly involved the testing of natural toxins (e.g. ciguatera), food additives (e.g. preservatives) and contaminants (e.g. dioxin); and

(c) ***Radiation testing.*** This measured the level of radioactive substances in food samples.

3.4 The number of projects and food samples under the FSP, as determined by the CFS in consultation with the Expert Committee, might differ between years. In 2017, the FSP had 144 projects (see Table 3), which comprised:

(a) 138 projects in which the food samples were taken for surveillance purposes (hereinafter referred to as surveillance projects); and

(b) 6 projects in which the food samples were taken to follow up food incidents, complaints and unsatisfactory testing results of surveillance projects (hereinafter referred to as follow-up projects).

A total of 66,979 food samples were taken under the 144 projects.

Table 3

Food Surveillance Programme
(2017)

Type of projects	No. of projects	No. of food samples taken
Surveillance project		
Routine food surveillance (Note 1)	62	16,017
Targeted food surveillance (Note 2)	138 / 67	60,323 / 37,667
Seasonal food surveillance (Note 3)	8	1,475
Radiation testing (Note 4)	1	5,164
Follow-up project		
Investigation of food incidents	2	1,593
Investigation of food complaints	6 / 2	6,656 / 4,349
Follow-up of unsatisfactory testing results of surveillance projects (Note 5)	2	714
Total	144	66,979 (Note 6)

Source: *CFS records*

Note 1: *Routine food surveillance covered major food groups (e.g. fruits and vegetables, meat, poultry, aquatic products, milk and cereals).*

Note 2: *Targeted food surveillance targeted at specific food hazards (e.g. sulphur dioxide in meat) or food items. It enabled the CFS to undertake a focused and in-depth approach to ascertaining food safety.*

Note 3: *Seasonal food surveillance covered highly popular festive and seasonal food items (e.g. rice dumplings and hairy crabs).*

Note 4: *Radiation testing covered foods sourced from countries other than Japan. All food consignments from Japan are subjected to radiation testing at the time of entering into Hong Kong. Radiation testing for foods from Japan is covered in Chapter 2 "CFS: Import control of foods" of the Director of Audit's Report No. 71.*

Note 5: *Under these follow-up projects, food samples were taken having regard to risk areas revealed by unsatisfactory testing results of surveillance projects.*

Note 6: *A total of 66,994 food samples were taken in 2017 (see Table 4 of para. 3.9), comprising 66,979 samples taken for projects of 2017, 9 samples taken for projects of 2016 and 6 samples taken in advance for projects of 2018 (see para. 3.27 for audit observations in relation to taking advance samples).*

3.5 The FSP defines the scope of projects and how they are to be implemented. In 2017, the FSP set out the following key parameters for each surveillance project and follow-up project (Note 24):

(a) ***Sampling basis.*** The number of samples to be taken from each level of the food chain, as well as the composition of samples by food group (e.g. cereals and grains, and fruits and vegetables), were set out in a sampling plan; and

(b) ***Testing to be conducted.*** The food hazards to be examined (e.g. pesticide residues in food samples) and the type of testing to be conducted (e.g. chemical testing) were set out for each project.

Room for covering more potential food hazards

3.6 Audit examined the FSPs of 2015, 2016 and 2017, and found that under the CFS's risk-based approach to formulating the FSPs, certain potential food hazards had not been covered for surveillance under the FSPs. Such hazards included those:

(a) which were regulated by the law (see Case 1);

(b) which might require the CFS's follow-up actions should the hazards exceed certain thresholds (see Case 2); and

(c) which had resulted in a food safety incident (see Case 3).

Note 24: *For follow-up projects which investigate food incidents and food complaints, the FSP does not spell out how the projects are to be conducted. However, the CFS has laid down guidelines on the management of food incidents and food complaints (see paras. 4.2 and 4.15 respectively). Follow-up actions are to be conducted according to the guidelines. Food incidents and food complaints are examined in detail in PART 4 of this Audit Report.*

Case 1

Food hazards regulated by the law
(2015 to 2017)

1. The Pesticide Residues in Food Regulation (Cap. 132CM) under the Public Health and Municipal Services Ordinance specifies, for 360 pesticides, the amounts of pesticide residues which are allowed to remain in different foods. The amounts are referred to as maximum residue limits (MRLs). For each of the 360 pesticides, the Regulation specifies one or more MRLs. Each MRL is applicable to a specific type of foods. As such, each MRL under the Regulation corresponds to a specific combination of food and pesticide (i.e. a pesticide-food pair), to which the MRL is applicable. At present, the Regulation specifies a list of MRLs for about 7,100 pesticide-food pairs. Of these 360 pesticides, MRLs applicable to cereal and grain products are specified for 212 pesticides (Note).

2. The FSPs of 2015, 2016 and 2017 required that samples of cereal and grain products be taken for pesticide testing. Of the 212 regulated pesticides (see para. 1 above), the FSPs specified the testing of 43, 32 and 42 pesticides in 2015, 2016 and 2017 respectively.

3. On the whole, of the 212 regulated pesticides, testing of 105 pesticides (50%) was conducted in 2015 to 2017, whereas testing of the remaining 107 pesticides (i.e. 212 minus 105) was not conducted.

Audit comments

4. To enhance surveillance, in future, there is merit in including in the FSP testing of the remaining 107 pesticides in cereal and grain products.

Source: *Audit analysis of CFS records*

Note: *These 212 pesticides may also have MRLs applicable to other food commodities.*

Case 2

Food hazards for which thresholds have been set (2015 to 2017)

1. Certain potential food hazards (e.g. the presence of certain toxins in foods) are not regulated under the law. For internal reference, the CFS has set thresholds for 27 such hazards (e.g. in terms of milligrams of the toxin per one gram of the food product). According to the CFS, if a threshold is exceeded, the CFS will take necessary action to follow up the case should it be justified (i.e. taking into account the potential public health risks of these hazards in the light of the CFS's latest knowledge). The CFS refers the thresholds to as "action levels" (Note 1).

2. In the FSPs of 2015, 2016 and 2017, no surveillance projects were formulated for detecting 8 of the 27 hazards. One of the 8 hazards was the presence of "patulin" in foods, which is a natural toxin in damaged or mouldy fruits (Note 2).

3. In 2017, there was a food incident of excessive patulin in foods. In 2018, the CFS started to include patulin testing in a surveillance project of the FSP for the year. However, the remaining 7 of the 27 hazards were not included in the 2018 surveillance projects (Note 3).

Audit comments

4. To enhance surveillance, in future, there is merit in including in the FSP testing of the remaining 7 hazards.

Source: *Audit analysis of CFS records*

Note 1: *The CFS has made reference to international practices in setting action levels.*

Note 2: *According to the CFS, exposure to high levels of patulin over a short period of time may already be harmful (e.g. resulting in bleeding of mucous membranes along the digestive tract).*

Note 3: *The 7 hazards were related to such substances as benzoyl peroxide, brominated vegetable oil, potassium bromate, "3-monochloropropane-1,2-diol", benzylbutyl phthalate, di-isodecyl phthalate and ochratoxin A. These substances are usually present in foods in the forms of additives, contaminants or natural toxins, which can be a health concern.*

Case 3

Food hazards resulting in a food safety incident (2015 to 2017)

1. The presence of veterinary drug residues (e.g. antibiotics) in honey has not been regulated under the law. In the FSPs of 2015, 2016 and 2017, no surveillance projects were formulated for detecting veterinary drug residues in honey.

2. According to the CFS, if any food is found to contain harmful substances, even if the substances are not specifically regulated under the law, the CFS would assess the risk involved and determine if such food is hazardous to health. This is to ensure that all foods for sale are fit for human consumption as stipulated in the Public Health and Municipal Services Ordinance.

3. Accordingly, in April 2018, the CFS followed up a food incident of an alleged presence of antibiotics in honey. The CFS conducted sample testing of the honey in question and found the existence of an antibiotic in the sample. The antibiotic (i.e. metronidazole) was a veterinary drug residue. The CFS considered the result unsatisfactory as the presence of veterinary drug residues (e.g. metronidazole) in honey was a health concern.

Audit comments

4. To enhance surveillance, in future, there is merit in including in surveillance projects of the FSP testing of veterinary drug residues (e.g. metronidazole and other antibiotics) in honey.

Source: Audit analysis of CFS records

3.7 Upon enquiry, the CFS informed Audit in October 2018 that:

(a) regarding Case 1, the Pesticide Residues in Food Regulation came into operation in August 2014. The Regulation specifies the MRLs of 360 pesticides which applies to about 7,100 pesticide-food pairs. As at mid-2017 (i.e. within three years from the commencement of the Regulation), all 360 pesticides had been covered in the CFS's FSP. Nonetheless, it did not mean that all 7,100 pesticide-food pairs had to be subjected to testing regularly, as the selection of specific pesticide-food pairs for testing was based on the CFS's risk assessment and subject to

availability of resources. As at August 2018, the CFS's testing of cereal and grain products against 151 pesticides was completed under the FSP; and

(b) regarding Case 2, the CFS regularly reviewed the types of testing to be conducted, taking into account factors such as past food surveillance results, food incidents occurring locally and overseas and relevant risk analyses (see para. 3.2). Of the remaining 7 hazards mentioned in Case 2, the CFS would include the testing of one hazard (i.e. di-isodecyl phthalate) in the FSP of 2018.

3.8 In Audit's view, to enhance food surveillance, there is merit for the CFS to consider expanding the coverage of the hazards mentioned in paragraph 3.6 for surveillance under the FSPs in future.

Surveillance of a large amount of food items which were not high-risk

3.9 Every year, some 65,000 food samples were taken under the FSP (see para. 3.3). In setting the number of 65,000 samples, the CFS adopted a sampling rate of 9 samples per 1,000 of the population in Hong Kong (Note 25). Audit noted that, from 2015 to 2017, a large proportion of food samples were allocated to surveillance of fruits and vegetables according to the FSPs. The proportion ranged from 44% to 46% over the past three years (see Table 4).

Note 25: *The CFS has adopted the sampling rate since 2006.*

Table 4

Allocation of food samples according to the FSPs
(2015 to 2017)

Food group	No. of samples					
	2015		2016		2017	
Surveillance project						
Fruits and vegetables	29,262	(45%)	29,775	(46%)	29,114	(44%)
Meat and poultry	5,308	(20%)	4,554	(19%)	5,001	(19%)
Aquatic products	4,518		4,704		4,810	
Cereals and grains	2,837		2,994		3,162	
Milk, milk products and frozen confections	7,382	(11%)	9,110	(14%)	9,940	(15%)
Others	8,771	(14%)	8,753	(13%)	8,311	(12%)
Follow-up project						
All food groups	6,354	(10%)	5,524	(8%)	6,656	(10%)
Total	64,432	(100%)	65,414	(100%)	66,994	(100%)

Source: Audit analysis of CFS records

3.10 The large proportion (44% to 46% — see Table 4) of samples allocated to fruit and vegetable surveillance did not appear to have duly taken into account the fact that:

(a) according to the CFS, vegetables were not considered to be high-risk foods; and

(b) in 2013 to 2017, 99.4% to 100% of fruit samples and 99.6% to 100% of vegetable samples were found to be satisfactory. The results were comparable with the overall testing results of the some 65,000 food samples in the same period (i.e. 99.7% to 99.9% of samples were found to be satisfactory).

3.11 Upon enquiry, the CFS informed Audit in late September and October 2018 that:

(a) fruits and vegetables are consumed in large quantities in Hong Kong and of great variety;

(b) in late 2014, the Pesticide Residues in Food Regulation was implemented, covering 360 pesticides and involving a large number of foods. The CFS needed to collect more food samples at least at the initial stage to obtain baseline information on the compliance rate; and

(c) the CFS had regularly reviewed the food hazards for surveillance under the FSP and revised the number of food samples allocated to individual FSP projects accordingly.

3.12 In Audit's view, there is scope for further reallocating some food samples from surveillance of fruits and vegetables to surveillance of other risk areas (e.g. potential food hazards which had not been covered under the previous FSPs — see para. 3.6).

Audit recommendations

3.13 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **keep under review and, where appropriate, update the FSP; and**

(b) **explore, from time to time, room for reallocating food samples designated for the surveillance of low-risk foods (e.g. fruits and vegetables) to other uses (e.g. the surveillance of high-risk food hazards).**

Response from the Government

3.14 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS reviews the FSP on an annual basis and throughout the year as required. The CFS will continue to adopt the risk-based principle to review the FSP:

(i) regarding Case 1, using the risk-based approach, the CFS will determine the priorities of testing cereal and grain products against the remaining 61 pesticides;

(ii) regarding Case 2, the CFS will consider testing the remaining 6 hazards, in consultation with the Expert Committee; and

(iii) regarding Case 3, taking into account the recent findings of veterinary drug residues in honey products in April 2018, it is the CFS's plan to undertake a new project under the FSP of 2019 for testing veterinary drugs in honey samples; and

(b) based on the experience gained in running the FSP in the past few years, and as baseline data is largely collected following the implementation of the Pesticide Residues in Food Regulation with effect from August 2014 and the results are satisfactory, the CFS has already started to reallocate resources to testing other food hazards. More specifically, the CFS has already shifted 1,500 samples in the FSP of 2018 from testing pesticides to testing metallic contaminants in fruits and vegetables. Further reallocation will be made from testing pesticides in fruits and vegetables to testing metallic contaminants of other food types in the FSP of 2019, in support of the operation of the Food Adulteration (Metallic Contamination) (Amendment) Regulation 2018, which is expected to take effect in November 2019.

Implementation of the Food Surveillance Programme

3.15 The FSP sets out a sampling plan for each project as well as the testing required for the project (see para. 3.5). According to the CFS's records:

(a) Health Inspectors are designated as "sampling officers" of specific districts. With the assistance of workmen, sampling officers take food samples through ordinary purchase at food outlets of their districts (Note 26); and

(b) Senior Health Inspectors (or staff of equivalent grades) are designated as "project masters". They oversee sampling officers' work against requirements of the FSP.

Need for guidelines on taking food samples

3.16 Audit examined the implementation of the 2017 FSP and noted that the CFS had not laid down specific guidelines on taking food samples from different food outlets and food types within individual food groups. CFS staff therefore used their experience and discretion to implement the sampling plan. Audit noted that there were wide variations in:

(a) the numbers of samples taken from different types of food outlets (see Case 4); and

(b) the numbers of samples taken from different food types (see Case 5).

In the absence of specific guidelines, there was doubt as to whether food samples had been selected consistently as the FSP intended.

Note 26: *Food outlets include cooked food stalls, food factories, fresh provision shops, frozen confection factories, grocery shops and stores, market stalls, restaurants, Siu Mei and Lo Mei shops, supermarkets, wet markets and wholesale fish/fruit/vegetable markets. When making purchases, sampling officers do not reveal their official identities to the vendors.*

Case 4

Taking samples from different food outlets (2017)

1. According to the 2017 FSP, about 25,000 food samples needed to be taken at the retail level. There were no guidelines on the distribution of samples among food outlets at the retail level. Audit found that a large number of samples (12,107 or 49%) had been taken from supermarkets:

Type of outlets	No. of samples
Supermarkets	12,107 (49%)
Restaurants, cooked food stalls, food factories and others	6,497 (26%)
Grocery shops and stores	4,325 (17%)
Wet markets	2,037 (8%)
Total	24,966 (100%)

2. In contrast to supermarkets, the number of samples taken from wet markets and grocery shops and stores was small, which might not represent an adequate coverage of these two latter types of outlets. Furthermore, Audit also noted that the distribution of samples within a particular type of outlet itself might not be appropriate. For example, in taking 89 samples from the Sai Kung District which had 11 wet markets:

(a) 75 samples were taken from 2 wet markets and 14 samples were taken from another 3 wet markets in Sai Kung; and

(b) no samples were taken from the remaining 6 wet markets in Sai Kung.

Audit comments

3. Guidelines are not provided to CFS staff on the distribution of samples among food outlets at the retail level. Without guidelines, it was difficult for CFS staff (e.g. project masters) to ensure that the number of samples taken from some types of food outlets (e.g. wet markets) was adequate.

Source: Audit analysis of CFS records

Case 5

Taking samples from different food types (2017)

1. According to the 2017 FSP, about 2,000 fish samples were required to be taken. In this respect, "fish" was regarded as a food group, which comprised different food types (i.e. fish types).

2. There were no guidelines on the distribution of samples among different fish types. It turned out that many fish samples taken were yellowtails (217 samples or 11%) and salmons (172 samples or 9%):

Food type (i.e. type of fishes)	Number of samples			Proportion of overall samples
	Import level	Retail level	Total	
Yellowtail	213	4	217	11%
Salmon	125	47	172	9%
Grass carp	Nil	25	25	1%
Golden thread	Nil	20	20	1%
Red snapper	5	14	19	1%
Others	446	1,074	1,520	0.1% to 6%
Total	789	1,184	1,973	

3. Upon enquiry, the CFS informed Audit in late September 2018 that food samples were taken through ordinary purchase at food outlets (see para. 3.15(a)). Sampling officers might have difficulty taking samples from different fish types at the import level, where fish might not be displayed in arrays for selection. Moreover, the number of samples which could be taken from particular fish types would depend on their availability at the import level and retail level.

4. Audit noted that, in contrast to yellowtail and salmon, few samples were taken from such fish types as grass carp (25 samples or 1%) and golden thread (20 samples or 1%), which were common fish types.

Audit comments

5. Guidelines are not provided to CFS staff on the distribution of samples among different fish types. Without guidelines, it was difficult for CFS staff (e.g. project masters) to ensure that the number of samples taken from some fish types (e.g. grass carp and golden thread) was adequate.

Source: Audit analysis of CFS records

Need to better address the food safety concerns of online purchase

3.17 Audit examination of the FSPs indicated that the programmes did not specify the number of food samples to be taken online. According to its practice, the CFS sets aside about 4,000 food samples of surveillance projects every year and acquired the samples through online purchase. The CFS's records indicated that in 2017, of the 60,323 food samples taken under the 138 surveillance projects (see Table 3 of para. 3.4), 3,868 food samples were purchased online for 104 projects, comprising:

(a) 3,587 samples (93%) purchased for 90 projects for chemical testing (e.g. testing of metallic contaminants and preservatives) and radiation testing; and

(b) 281 samples (7%) purchased for 22 projects for microbiological testing (e.g. conduct of bacterial counts).

3.18 Online food purchase has gained popularity in recent years. For example, office employees may order online ready-to-eat food items for delivery to workplaces. There might be risks of bacterial growth and cross-contamination during delivery. Furthermore, according to the CFS, ready-to-eat foods that are required to be refrigerated, such as sushi, sandwiches, cakes and desserts (and which could be ordered online), generally pose great food safety risks. In Audit's view, relative to the potential safety concerns of online food purchase (e.g. food contaminated with bacteria), the proportion of online samples purchased for microbiological testing was on the low side (7% — see para. 3.17(b)).

Need to comply with sampling requirements

3.19 Audit examined 10 surveillance projects in 2017 (involving 5,304 food samples) and found cases of non-compliance with sampling requirements of the FSP in 6 projects:

(a) for the 6 projects (involving 2,687 samples), the FSP required that sampling officers should not take more than two samples from the same shop (Note 27);

(b) of the 2,687 samples, the requirement had not been followed in taking 493 samples (18%) at 104 shops (see Table 5); and

Table 5

Samples taken for 6 projects
(2017)

No. of samples taken from a single shop	No. of shops	Total no. of samples	
3 to 10	100	422	(85%)
11 to 20	3	33	(7%)
21 to 30	Nil	Nil	(0%)
31 to 38	1	38	(8%)
Total	104	493	(100%)

Source: Audit analysis of CFS records

(c) the CFS's records did not indicate that project masters (see para. 3.15(b)) had given consent to deviations from the sampling requirement.

3.20 Upon enquiry, the CFS informed Audit in July, September and October 2018 that:

Note 27: *According to the FSP, for the 6 projects, sampling officers should not take more than two samples from the same premises except with the substantive ground and consent of the project master (see para. 3.15(b)). The objective was to adopt fair sampling by covering more premises.*

(a) during project implementation, sampling officers were not required to report the work done on sampling to project masters. If sampling officers could not purchase a particular food item, they were required to report the case to project masters for advice; and

(b) sampling officers were required to input sampling information into the CFS's computer system before commencement and upon completion of the sampling work.

3.21 In spite of the CFS's procedures, sampling requirements had not always been complied with (see para. 3.19(b)). There was a risk that, during project implementation, sampling officers did not always seek project masters' advice on sampling matters. In Audit's view, supervision of sampling work during project implementation (see para. 3.20(a)) would need to be stepped up.

Audit recommendations

3.22 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **provide CFS staff with guidelines on taking food samples from different food outlets and food types;**

(b) **review the need for increasing the proportion of online food samples purchased for microbiological testing;**

(c) **remind CFS staff to observe the sampling requirements laid down in FSPs; and**

(d) **take measures to step up the supervision of the work of sampling officers, with a view to preventing recurrence of non-compliance with sampling requirements in future.**

Response from the Government

3.23 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS has been reviewing the FSP and with effect from Quarter 1 of 2018, a sampling ratio of 40:60 in "Supermarkets, convenience stores and department stores" to "Other retails" has been adopted for food sampling at the retail level, with reference to statistics on total retail sales of food and beverages in supermarkets/department stores and other retail outlets provided by the Census and Statistics Department, and other risk factors. In the light of Audit's recommendations, the CFS will formulate further guidelines on the sampling ratio of different food outlets under these two broad categories;

(b) sampling officers take food samples through ordinary purchase at food outlets. Collection of a wider variety of fish samples at the retail level is more achievable as food items are readily displayed for sale at the retail level, making it easier to choose at a particular point in time. However, those collected at the import level may not cover a wide variety due to unpredictability in terms of availability and arrival of different types of fish. In view of Audit's comments, the CFS has enhanced regular supervisory check on sample records, monitoring the types of food samples and checking whether food samples were taken in accordance with the sampling requirements with proper documentation. Besides, a briefing on sampling requirements has been conducted. A new monitoring and supervision meeting is introduced to ensure compliance with the sampling requirements; and

(c) the CFS will increase the proportion of online food samples purchased for microbiological testing.

Completion of testing under the Food Surveillance Programme

3.24 Food samples taken under the FSP are subjected to microbiological, chemical and radiation testing (see para. 3.3). In 2017, five laboratories performed

the microbiological, chemical and radiation testing for the CFS (Note 28). According to the CFS's records, food samples collected by sampling officers were delivered to the different laboratories for testing.

Long turnaround time and need to ensure timely delivery of food samples to laboratories

3.25 Audit analysed the turnaround times of the testing done for 10 surveillance projects in 2017 (involving 2,125 food samples and 4,494 testing results). The turnaround time refers to the time lag between the collection of a food sample and the subsequent return of the testing result from the laboratory. Audit found that the turnaround times could be as long as 230 days (see Table 6).

Table 6

Turnaround times of 4,494 testing results (2017)

Turnaround time (No. of days)	No. of testing results
0 to 5	509 (11%)
6 to 10	646 (14%)
11 to 30	1,212 (27%)
31 to 60	1,696 (38%)
61 to 90	347 (8%)
91 to 230	84 (2%)
Total	4,494 (100%)

Source: Audit analysis of CFS records

Note 28: *They were the Government Laboratory which mainly performed chemical testing, the Public Health Laboratory Centre of the Department of Health and a private laboratory which mainly performed microbiological testing, the Man Kam To Food Laboratory of the CFS which mainly performed testing of pesticides in vegetables and harmful substances in milk, and the Fu Hing Street Laboratory of the CFS which mainly performed radiation testing.*

3.26 Audit examined the long turnaround times for 20 food samples and found that for 18 samples, there was a delay in delivering the samples to the laboratories (Note 29). In 9 (50%) cases, the delay ranged from 19 to 55 days. For the remaining 9 cases, the delay ranged from 56 to 203 days. On the whole, for the 18 cases, the delay ranged from 19 to 203 days (see Case 6 for an example).

Note 29: *For the remaining 2 samples, the key reason for the long turnaround time was long time taken in testing by the laboratory.*

Case 6

Delay in delivering a food sample to the laboratory (2017)

1. According to the 2017 FSP, samples of fat and oil were to be taken for a surveillance project. The CFS had agreed with the laboratory to deliver the samples in batches for antioxidant testing.

2. In mid-March 2017, a sampling officer purchased a sample from a supermarket. The sample was required to be delivered in the batch of early April.

3. Meanwhile, the CFS identified a food incident which was not related to the surveillance project. The laboratory needed to urgently handle a large number of food samples for the incident, and cancelled the time slot for delivering the sample of the surveillance project (i.e. early April 2017 — see para. 2 above). The laboratory substituted a new time slot (i.e. October 2017) for the cancelled one. The sample was therefore stored in the FEHD office pending delivery to the laboratory.

4. In October 2017, the sample was sent to the laboratory. A total of 203 days had elapsed since the sample was taken in mid-March 2017 (Note).

5. Upon enquiry, the CFS informed Audit in late September 2018 that the laboratory had other time slots before October 2017. The sampling officer could have made arrangements with the laboratory to expedite the delivery of the sample to the laboratory.

Audit comments

6. The sample taken at the supermarket was sent to the laboratory after a lapse of 203 days. The delay was long, which was not conducive to ensuring food safety.

Source: Audit analysis of CFS records

Note: The testing result was returned to the CFS on 30 October 2017.

3.27 In July 2018, the CFS informed Audit that there were no specific guidelines on the timeliness of delivering food samples to laboratories. According to the CFS, in order to meet the sample delivery schedule, sampling officers might also have taken

samples in advance (instead of nearer to the day of delivery). Audit considers that there is a need to enhance CFS guidelines on the timeliness of delivering samples to laboratories (e.g. covering also the procedures for handling contingencies — see para. 5 of Case 6 in para. 3.26).

Audit recommendations

3.28 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **closely monitor the turnaround time of food sample testing, and take necessary measures to reduce the turnaround time as appropriate; and**

(b) **lay down guidelines on the timeliness of delivering food samples to laboratories for testing.**

Response from the Government

3.29 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS will closely monitor the delivery time of food samples with a view to reducing the turnaround time as far as possible. Frontline staff particularly new-comers will be properly briefed to discharge their duties in accordance with the laid-down operation manual and guidelines and to seek directives from seniors in case of doubt. In addition, the CFS will enhance supervision to ensure compliance with the guidelines; and

(b) the CFS will devise new guidelines on the timeliness of delivering food samples to the laboratory for testing.

PART 4: MANAGEMENT OF FOOD INCIDENTS AND COMPLAINTS

4.1 This PART examines the CFS's management of food incidents and complaints, focusing on the following areas:

(a) management of food incidents (paras. 4.2 to 4.14); and

(b) management of food complaints (paras. 4.15 to 4.24).

Management of food incidents

4.2 The CFS defines "food incident" as any event where, based on the information available, there is concern about actual or suspected threats to the safety or quality of food that could require intervention to protect public health and consumer interests. According to the CFS, it manages food incidents as follows:

(a) ***Identification of food incidents.*** Food incidents are identified through:

(i) ***Food Incidents Surveillance System (FISS).*** Under the FISS, the CFS detects overseas and local food incidents through screening websites of national food authorities, consulting academia reports and media reports, and receiving notifications from authorities (i.e. international, regional or national authorities — Note 30). According to the CFS, the FISS enables it to make prompt decisions on food safety management in response to incidents that would have local impact; and

(ii) ***Gathering other intelligence.*** The CFS also gathers intelligence on food incidents through investigating food complaints, and through

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Note 30: *According to the CFS, examples of authorities include International Food Safety Authorities Network of the WHO, Food and Agriculture Organization of the United Nations, Rapid Alert System for Food and Feed of the European Commission, consulate generals of other countries, and authorities of other countries or places.*

following up other FSP projects which involve unsatisfactory testing results (Note 31); and

(b) ***Risk management actions.*** For food incidents identified:

(i) ***Initial assessments.*** The CFS conducts initial assessments to find out those requiring further actions. Depending on the findings (e.g. the nature and severity of the incidents and the hazards involved), the CFS may take different risk management actions (see (ii) below); and

(ii) ***Further actions for risk management.*** The CFS takes further actions for risk management, either individual actions or a combination of actions, which include:

- ***Incident investigations.*** Collecting further information by various means such as contacting relevant parties (e.g. overseas authorities, consulate generals, local major importers and retailers) and checking local sales and availability of the affected products;

- ***Evidence collection.*** Tracing the sources of the affected products and taking samples for testing;

- ***Control measures.*** Removing the affected products from the shelf, recalling the products (i.e. food recall) and suspending importation of the products, as appropriate; and

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Note 31: *According to the CFS, intelligence gathered from individual cases of food complaints and/or cases of unsatisfactory testing results are to be considered collectively. As such, each single case of food complaint or unsatisfactory testing results does not necessarily correspond to a food incident.*

- ***Public announcement.*** Publicising the food incidents through various means such as Food Incident Post (Note 32), Rapid Trade Alert (Note 33) and press release (Note 34), as appropriate.

4.3 As shown in Table 7, from 2013 to 2017:

(a) food incidents detected through the FISS (see para. 4.2(a)(i)) increased by 28% from 1,339 (in 2013) to 1,713 (in 2017);

(b) the CFS conducted initial assessments (see para. 4.2(b)(i)) on all food incidents identified through the FISS, and took necessary risk management actions (see para. 4.2(b)(ii)) on individual incidents; and

(c) as part of the risk management actions, 6 food recall exercises were conducted in 2013 and 23 were conducted in 2017.

Note 32: *According to the CFS, Food Incident Post, which is available through the CFS's website, presents food incidents that do not have major impacts on local population (e.g. because of limited circulation of the food products concerned). The Post aims to alert individuals who might be in possession of such products through means such as electronic trade or travel.*

Note 33: *According to the CFS, alert messages are sent to members of the trade who have pre-registered with the CFS. This enables the trade to take timely appropriate actions to minimise the public health impact of food incidents (e.g. stop selling the food products).*

Note 34: *According to the CFS, press releases announce food incidents which are of major public health concern locally.*

Table 7

Food incidents and risk management actions
(2013 to 2017)

	No. of food incidents/initial assessments/ risk management actions				
	2013	**2014**	**2015**	**2016**	**2017**
Food incidents identified (Note 1)					
Through the FISS	1,339	1,588	1,865	1,863	1,713
Initial assessment conducted on food incidents identified					
Through the FISS	1,339	1,588	1,865	1,863	1,713
Risk management actions taken (Note 2)					
Contacting authorities for further information	298	59	103	274	232
Contacting local trade and checking local sales	96	78	67	222	201
Issuing Food Incident Post	169	16	6	183	176
Issuing press release	14	50	53	42	41
Issuing trade alert	287	62	32	32	29
Conducting food recall exercise	6	4	5	13	23

Source: *Audit enquiries and CFS records*

Note 1: *During the course of this audit review, Audit enquired about the number of food incidents identified through investigating food complaints and through following up other FSP projects (see para. 4.2(a)(ii)). The CFS informed Audit in October 2018 that the management of food complaints, the FSP and the FISS were separate systems in the CFS. Nevertheless, the same risk management actions (see para. 4.2(b)) might be implemented, if necessary, for unsatisfactory testing results of samples collected under food complaints or the FSP.*

Note 2: *Multiple risk management actions might be taken for a single food incident.*

Long time had elapsed before unsatisfactory testing results were publicised

4.4 According to the CFS, for unsatisfactory testing results of samples collected under food complaints or the FSP, risk management actions (see para. 4.2(b)) might be implemented if necessary (see also Note 1 to Table 7 in para. 4.3). The CFS's records indicated that, in 2017, investigation of food complaints and FSP projects had resulted in 106 cases of which the testing of food samples was found to be unsatisfactory. The records also indicated that it was the CFS's practice to publicise the unsatisfactory testing results.

4.5 Audit noted that, in some of the 106 cases (see para. 4.4), the time taken between the collection of food samples in the first instance and the subsequent publicising of unsatisfactory testing results (i.e. issuing of press releases/food alerts) was long (e.g. more than 60 days). The time taken averaged 19 days, ranging from 1 to 88 days (see Table 8).

Table 8

Time taken between collection of food samples and publicising of unsatisfactory testing results (2017)

Time taken (No. of days)	No. of cases
1 to 5	33
6 to 10	18
11 to 20	13
21 to 30	21
31 to 60	16
61 to 88	4
Not publicised (Note)	1
Total	106

Source: Audit analysis of CFS records

Note: According to the CFS, the sample in question involved milk imported from a European country. The milk fat of the sample was below the legal requirement. Since the brand was newly introduced into Hong Kong and the product concerned was the first consignment imported, under the CFS's hold and test arrangement (i.e. newly imported consignments were only released after the results of relevant laboratory tests were found to be satisfactory), no such product had ever been made available for sale in the market. The case hence posed no health concern. The CFS therefore did not issue a press release to publicise the unsatisfactory testing result.

Need for expediting procedures

4.6 According to the CFS's guidelines, in managing food incidents, two types of food samples are involved:

(a) ***Surveillance samples.*** Food samples are taken through ordinary purchase under the FSP. Such samples help monitor food safety and serve to identify targets for enforcement sampling (see (b) below); and

(b) ***Enforcement samples***. The CFS exercises the power to take samples for analysis as conferred by the Public Health and Municipal Services Ordinance. Under this option, the vendor or manufacturer is informed of the purpose of sampling and that unsatisfactory results of enforcement sampling would result in prosecution.

4.7 Audit noted that, in the 106 cases (see para. 4.5), the long time taken to publicise the unsatisfactory results for some cases was due to the substantial time taken in testing food samples (see Case 7), and/or the delay in publicising the results after the completion of food sample testing (see Case 8).

Case 7

Long time taken in testing food samples (2017)

1. On 4 September 2017, the CFS took food samples under its FSP. A surveillance sample of dried Chinese white cabbage was taken from a stall in Ngau Tau Kok Market for testing.

2. During 6 September to 22 September 2017, there was an unexpected instrument failure at the laboratory. Testing of the surveillance sample was scheduled to be conducted at the end of October 2017.

3. On 30 November 2017, the CFS received unsatisfactory testing results from the laboratory, which indicated that the surveillance sample contained sudan dyes (chemical substances not permitted for use in foods).

4. On 1 December 2017, the CFS issued a press release of the unsatisfactory testing results.

Audit comments

5. When the CFS received the testing results on 30 November 2017, a long time (87 days) had elapsed since the sample was taken on 4 September 2017 (see PART 3 of this Audit Report for audit observations on the turnaround time of sample testing). After such a long lapse of time, the problem food concerned had already been sold out (Note) and might have been consumed by the public.

Source: *Audit analysis of CFS records*

Note: *The CFS intended to take enforcement samples for follow-up actions. However, the problem food concerned had already been sold out. In the circumstances, the CFS closed the case.*

Case 8

Delay in publicising unsatisfactory results after completion of sample testing (2017)

1. The CFS received a food complaint about mud crabs sold at a market stall. On 15 December 2016, the CFS took a surveillance sample of mud crabs in question from the market stall.

2. On 30 December 2016, 15 days after taking the surveillance sample, the CFS received unsatisfactory testing results of the sample from the laboratory. The results indicated that the sample contained a veterinary drug which was prohibited by the Harmful Substances in Food Regulations (Cap. 132AF). However, the CFS did not publicise the unsatisfactory testing results at this moment.

3. On 10 February 2017, 42 days after receiving the testing results of the surveillance sample, the CFS publicised the unsatisfactory testing results through a press release (Note).

Audit comments

4. The unsatisfactory testing results were not publicised until a long time (42 days) had elapsed since the testing results were received. CFS records did not indicate the reasons for the delay.

Source: *Audit analysis of CFS records*

Note: *Also on 10 February 2017, the CFS took an enforcement sample (see Case 9 in para. 4.20).*

Need to better monitor recall of foods

4.8 The 23 food recall exercises in 2017 (see Table 7 of para. 4.3) were conducted voluntarily by traders in response to the food incidents identified through the FISS (Note 35). According to the CFS's guidelines, in a voluntary recall exercise, the Government's role is to monitor the progress of the recall exercise. The guidelines state that:

(a) at the request of the CFS, the trader concerned should provide reports at regular intervals giving essential information (e.g. results of the recall and method of disposal — Note 36); and

(b) the effectiveness of a recall exercise is assessed by the amount of product which has returned as a percentage of the amount of product which left the manufacturer (i.e. the manufacturer's food for sale in Hong Kong), while taking into account the retail turnover of the product.

4.9 Audit examined the records of the 23 recall exercises and noted that the exercises were not entirely effective (see para. 4.8(b) for definition of effectiveness). On the whole, 51% (by quantity) of the products which had left the manufacturers were not returned in the 23 exercises. Table 9 shows that the return percentages in the exercises ranged from 0% (i.e. none) to 100%.

Note 35: *In cases where traders refuse to recall the food voluntarily, the CFS could order a recall. Under the Food Safety Ordinance, the Director of Food and Environmental Hygiene is empowered to make a food safety order for the protection of public health. The order may direct any food supplied be recalled, impounded, isolated, destroyed or otherwise disposed of.*

Note 36: *The essential information includes circumstances leading to the recall, action taken by the trader, extent of distribution of the relevant batch of food, results of the recall (e.g. quantity of stock returned and outstanding), method of disposal or otherwise records of destruction for returned food, and an investigation report (e.g. proposed action to prevent a recurrence of the problem).*

Table 9

Effectiveness of 23 recall exercises
(2017)

Percentage of product returned in the recall exercise	No. of recall exercises
0% to <10%	4
10% to <30%	4
30% to <50%	5
50% to <70%	2
70% to <90%	4
90% to 100%	4
Total	23

Source: *Audit analysis of CFS records*

Remarks: *The effectiveness of a recall exercise was assessed by the amount of product returned as a percentage of the amount of product which had left the manufacturer (see para. 4.8(b)).*

4.10 Upon enquiry, the CFS informed Audit in October 2018 that the "completeness" of a food recall exercise depended on a host of factors. For instance, retailers might have sold out all products to end users, consumers might decide not to return the products to retailers, and depending on the food nature, some perishable foods might have been consumed shortly after purchase.

4.11 In this connection, Audit noted from the records of the 23 recall exercises that the CFS had not requested traders to provide, in accordance with the CFS's guidelines (see para. 4.8(a)), regular reports for monitoring the effectiveness of the recall.

Need to ensure proper disposal of recalled foods

4.12 According to its guidelines, the CFS will make sure that foods recalled in voluntary exercises are properly disposed of (i.e. destroyed or suitably improved). Audit, however, noted that the guidelines had not specified the ways to ensure proper

disposal of recalled foods. As a result, the disposal practices varied between cases. For example, some recalled foods were disposed of by traders under the supervision of CFS staff, while some were disposed of without CFS supervision (see Table 10).

Table 10

Disposal of foods in 23 recall exercises
(2017)

Disposal practice	No. of recall exercises
Disposal under CFS supervision	
Fully supervised by CFS staff	10 (43%)
Partly supervised by CFS staff (Note 1)	2 (9%)
Sub-total	*12 (52%)*
Disposal without CFS supervision	
Disposal conducted by traders Sub-total	*7 (31%)*
Disposal not needed	
Food sold out	3 (13%)
Food recalled but found to be in order (Note 2)	1 (4%)
Sub-total	*4 (17%)*
Total	23 (100%)

Source: Audit analysis of CFS records

Note 1: CFS staff supervised the disposal conducted by importers but did not supervise disposal conducted at the retail level.

Note 2: Being in order, the food was subsequently returned to the trader.

Audit recommendations

4.13 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **closely monitor the time taken between taking food samples and publicising unsatisfactory testing results of the samples, and take necessary measures (e.g. expediting procedures) to minimise the time taken;**

(b) **look into any delay in publicising unsatisfactory testing results after the completion of food sample testing, and take measures to prevent recurrence of delay in future;**

(c) **request traders to provide reports for monitoring the progress of food recall exercises, having regard to the requirements of the CFS's guidelines;**

(d) **closely monitor the effectiveness of food recall exercises and take measures to improve the effectiveness as appropriate; and**

(e) **provide staff with guidelines on the proper disposal of recalled foods.**

Response from the Government

4.14 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS will monitor the time taken between taking food samples and publicising unsatisfactory testing results of the samples, and take necessary measures to minimise the time taken. In general, upon confirmation of the unsatisfactory results, a public announcement would be made promptly, usually within 24 hours;

(b) the CFS will request the traders to provide regular progress reports on food recall exercises according to the CFS's guidelines and monitor the effectiveness of food recall exercises; and

(c) the CFS has reminded staff about the proper documentation and disposal of recalled foods. A guideline will be prepared.

Management of food complaints

4.15 According to the CFS's guidelines on food complaints, food complaints lodged with the FEHD are, in the first place, handled by responsible offices of the districts concerned (i.e. district environmental hygiene offices — Note 37). These offices then forward the complaints to the CFS for investigation. In 2017, 5,569 food complaints were forwarded to the CFS (see Table 11).

Table 11

Food complaints forwarded to the CFS
(2017)

Type of food complaints	No. of complaints		
Unwholesome food	2,606	(47%)	
Deteriorated food	733	(13%)	(38%)
Body parts/excreta of animals or insects in food	653	(11%)	
Foreign substances in food	493	(9%)	
Chemical in food	271	(5%)	
Others (e.g. mouldy food, fake/counterfeit food, and sale of food beyond the expiry date)	813	(15%)	
Total	5,569	(100%)	

Source: Audit analysis of CFS records

Note 37: *The FEHD has 19 district environmental hygiene offices which are located on the Hong Kong Island and outlying islands (5 offices), in Kowloon (6 offices) and in the New Territories (8 offices).*

Need to compile regular management information

4.16 From 2014 to 2017, the number of food complaints forwarded to the CFS increased by 30% (1,275 complaints) from 4,294 (2014) to 5,569 (2017). Audit noted that the increase in certain types of complaints was particularly high. For example, there were 188% increase in "fake/counterfeit food", 93% increase in "deteriorated food" and 77% increase in "body parts/excreta of animals or insects in food" (see Table 12).

Table 12

Food complaints forwarded to the CFS
(2014 to 2017)

Type of food complaints	No. of complaints				Increase in no. of complaints between 2014 and 2017
	2014	2015	2016	2017	
All	4,294	4,696	4,904	5,569	1,275 (30%)
Examples of individual type of food complaints					
Fake/counterfeit food	41	24	13	118	77 (188%)
Deteriorated food	380	611	573	733	353 (93%)
Body parts/excreta of animals or insects in food	368	509	583	653	285 (77%)

Source: Audit analysis of CFS records

4.17 Upon enquiry, the CFS informed Audit in late September 2018 that the year-to-year increase in the number of complaints was gradual. Moreover, for some types of food complaints, the increase was sporadic and some complaints were lodged from habitual complainants.

4.18 While noting the CFS's explanations given in paragraph 4.17, Audit also notes that food complaints are a source of information for identifying food incidents (see para. 4.2(a)(ii)). In Audit's view, systematic analysis of food complaints would help provide useful information for monitoring food complaints and surveillance of food safety. In this regard, Audit noted that it was not the practice of the CFS to compile regular management information on food complaints. For example, there was a lack of management information on:

(a) types of foods complained about;

(b) countries of origins of the foods under complaint; and

(c) blackspots (e.g. outlets whose foods had repeatedly been complained about).

The CFS may consider compiling regular management information on some or all of the above areas as appropriate.

Long time taken for completing investigation of some food complaints

4.19 For the 5,569 complaint cases handled in 2017 (see para. 4.15), Audit analysed the time lag between the complaint dates and the CFS's eventual closing of the complaint cases. Audit found that in some cases the time lag was long. For example, in 3,389 (61%) cases, the time lag was more than 30 days, including 38 (1%) cases where the time lag was more than 240 days (see Table 13).

Table 13

Time taken to close complaint cases
(2017)

Time lag between date of complaint and eventual closing of the case (Note 1) (No. of days)	No. of complaint cases		
0 to 30	2,105	(38%)	
31 to 60	792	(14%)	
61 to 90	628	(11%)	
91 to 120	443	(8%)	3,389 (61%)
121 to 150	383	(7%)	
151 to 180	523	(9%)	
181 to 240	582	(11%)	
241 to 569	38	(1%)	
Unknown (Note 2)	75	(1%)	
Total	5,569	(100%)	

Source: *Audit analysis of CFS records*

Note 1: *According to the CFS, if enforcement action was taken following investigation of a food complaint, the case would not be closed until after the completion of prosecution proceedings.*

Note 2: *Related records could not be located by the CFS for Audit's examination.*

Remarks: *According to the CFS's guidelines on food complaints, the CFS shall give interim reply to a complainant within 10 calendar days upon receipt of the complaint. If the complaint case is still outstanding, progress reply shall be given to the complainant every 30 calendar days until the final reply is given.*

Need to expedite investigation of complaints

4.20 The long time taken to investigate and close some complaint cases (see Table 13 above) was not conducive to ensuring food safety. Case 9 shows, as an example, that there is scope for expediting the investigation of complaints.

Case 9

Investigation of a food complaint case (2017)

1. This is the complaint case about mud crabs mentioned in Case 8 in paragraph 4.7. Further details are given below to illustrate the time taken to investigate the case:

Date	Event
18 August 2016	The district environmental hygiene office concerned received the complaint.
15 December 2016	119 days after the complaint was received, the CFS took a surveillance sample of the mud crabs from the market stall.
30 December 2016	The CFS received unsatisfactory testing results of the surveillance sample from the laboratory. The results indicated the presence of a prohibited veterinary drug.
10 February 2017	42 days after receiving the testing results of the surveillance sample, the CFS took an enforcement sample from the same market stall with a view to collecting further evidence to institute prosecution. (At the same time, the CFS publicised the unsatisfactory testing results of the surveillance sample — see Case 8 in para. 4.7).
14 February 2017	The testing results of the enforcement sample were available and found satisfactory. According to the CFS's records, the enforcement sample was taken from another batch of mud crabs as the original batch was no longer available for resampling as it had been sold out. The CFS completed the investigation.

Audit comments

2. The surveillance sample of the mud crabs was not taken until it was 119 days after the complaint was received. The enforcement sample was also not taken until it was 42 days after receiving the testing results of the surveillance sample.

Source: Audit analysis of CFS records

4.21 Audit further noted that under the Magistrates Ordinance (Cap. 227), information about a food offence has to be laid in the court within six months from the date of offence (Note 38). Audit considers that the CFS should closely monitor and expedite the time taken to complete investigation of food complaints.

4.22 In this connection, Audit noted that the CFS's guidelines on food complaints have stipulated the situations (e.g. food complaints about sushi and raw oyster) under which enforcement samples could be directly obtained (i.e. without first obtaining surveillance samples). There is a need for the CFS to review the guidelines to ensure that they adequately cover circumstances which warrant direct enforcement sampling (e.g. as in Case 9 in para. 4.20).

Audit recommendations

4.23 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **consider compiling regular management information on food complaints to facilitate monitoring of food complaints and surveillance of food safety;**

(b) **closely monitor the time taken to complete investigation of food complaints;**

(c) **take measures to expedite the investigation of food complaints; and**

(d) **review the adequacy of the CFS's guidelines in stipulating situations under which enforcement samples could be directly obtained for testing.**

Note 38: *According to the Magistrates Ordinance, in any case of an offence, other than an indictable offence, where no time is limited by any enactment for making any complaint or laying any information in respect of such offence, such complaint shall be made or such information shall be laid within six months from the time when the matter of such complaint or information respectively arose.*

Response from the Government

4.24 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS has been using its food complaint database for monitoring possible food incidents and surveillance of food safety. The existing database facilitates data search for types of foods being complained about and outlets where there were repeated food complaints. In addition, the CFS has set up since mid-2015 an internal panel led by a directorate officer to provide prompt and professional advice on the handling of more complicated food complaint cases. The CFS would continue to strengthen the role of this panel;

(b) the FEHD has reviewed the operational guidelines to set out the time frame for officers to follow up with the complainant to collect his statement or declaration and document the follow-up actions. The guidelines have been promulgated to all relevant staff for observance since early October 2018;

(c) the CFS already revised relevant guidelines in May 2018, so that the enforcement sample would be obtained right away in case of anticipated difficulties in identifying similar products during the follow-up; and

(d) briefing will be arranged for staff, particularly newcomers, on the operation manual and guidelines. In addition, the CFS has enhanced supervision to ensure compliance with the guidelines.

PART 5: COMMUNICATING WITH THE PUBLIC ON FOOD SAFETY RISKS

5.1 This PART examines the CFS's communication with the public on food safety risks, focusing on the following areas:

(a) communication matters (paras. 5.2 to 5.12); and

(b) charters on food safety (paras. 5.13 to 5.17).

Communication matters

5.2 For managing food safety, the main objective of risk communication is to increase understanding among stakeholders and help them make more informed judgements about food safety issues. The key channels which the CFS uses to communicate with the public and the trade on food safety matters are:

(a) ***Internet and social media.*** The CFS has set up a website (the CFS website) for publishing food safety information and communicating with the public. It has also set up an application for mobile device users to visit an abridged version of the CFS website. In light of the popularity of social media, the CFS has further set up dedicated social media platforms (e.g. the CFS Facebook page) for better communication with the public on various topical food safety issues in a timely manner;

(b) ***Publications.*** The CFS produces various topical or periodic publications, including electronic and printed publications, to inform and advise different stakeholders;

(c) ***Forums for stakeholders.*** The CFS provides forums for the public (i.e. the Consumer Liaison Group) and the trade (i.e. the Trade Consultation Forum) to express their views on food safety matters; and

(d) ***Talks and exhibitions.*** The CFS regularly delivers talks to the public, the trade and schools. It also holds exhibitions on food safety.

Need to better communicate official advice to the public

5.3 Besides the CFS, other organisations (e.g. the CC and universities) also conduct food studies. Audit examined 7 food studies on harmful substances published in January 2017 to June 2018 by two of these organisations. The findings of these studies were matters of public concern (e.g. contaminants and heavy metals detected in foods). Audit found that the CFS, in response to the study findings, had posted messages on its Facebook page and/or articles on its website (see Table 14). The messages and articles provided the public with the CFS's views and advice on the matters. However, the CFS had not issued press releases to further publicise its views and advice.

Table 14

Seven food studies conducted by other organisations (January 2017 to June 2018)

Subject matter (month and year of publishing study)	Harmful substances detected	CFS's response	
		Posted on Facebook page (Note 1)	Posted on website (Note 2)
1. Heavy metals in vegetables (February 2017)	Heavy metals with concentrations within legal limits (However, the concentration of cadmium was on the high side.)	✓	
2. Luncheon meat and canned sausages (June 2017)	Veterinary drug residues	✓	✓
3. Cooking oils (July 2017)	Contaminants	✓	
4. Pre-packaged chilled fruit juices (October 2017)	A contaminant	✓	✓
5. Heavy metals in rice (February 2018)	Heavy metals with concentrations within legal limits (However, the concentration of arsenic was on the high side.)	✓	
6. Pesticides in vegetables (March 2018)	Pesticide residues with concentrations mostly within the legal limits (However, for some samples, the concentrations of some pesticide residues exceeded the legal limits.)	✓	
7. Butter, margarine and related products (April 2018)	Contaminants	✓	✓

Source: *Websites of the organisations and CFS records*

Note 1: *The CFS posted a message on the subject matter on the CFS Facebook page.*

Note 2: *The CFS posted an article on the subject matter in its monthly publication "Food Safety Focus" on the CFS website.*

5.4 In late September 2018, the CFS informed Audit that, besides providing views and advice in response to other organisations' food studies, the CFS also proactively informed the public and provided appropriate advice from time to time, depending on the public health significance and public concern of the issue involved.

5.5 In Audit's view, a press release is a key and effective means of communicating the CFS's views and advice to the public. The provision of official views and advice through a press release is important because:

(a) the CFS is the authority responsible for food safety in Hong Kong. It would be the CFS's duty to communicate relevant information (e.g. official views and advice) to the public on food safety issues revealed by studies in the public domain;

(b) through provision of its official views and advice to the public, the CFS could help clarify any misunderstanding the public may have on the food safety issues (e.g. their gravity);

(c) according to its objective, risk communication is to ensure that the public will better understand food safety issues for making more informed judgements (see para. 5.2). This would call for action to be taken by the CFS on (a) and (b) above; and

(d) the findings of food studies conducted by other organisations are often publicised through the press media, with a wide audience. In contrast, the CFS's current practice (i.e. providing views and advice through its Facebook page and website, without making use of press releases) would limit the spectrum and size of audience, which may also undermine the effectiveness of its communication with the public.

Need to enable viewing of talks on the Internet

5.6 The CFS delivers talks to the public, the trade and schools (see para. 5.2(d)). During the period 2013 to 2017, the number of talks organised for the public had decreased by 34% while the number of attendees had decreased by 28%. For the trade, the number of talks had decreased by 24% while the number of

attendees had decreased by 26%. The number of talks organised for schools generally remained stable (i.e. in the range of 70 to 73). Table 15 shows the details.

Table 15

Food safety talks delivered by the CFS
(2013 to 2017)

Food safety talk		2013	2014	2015	2016	2017	Percentage increase/ (decrease) between 2013 and 2017
For the public	No. of talks	73	50	55	44	48	(34%)
	No. of attendees	3,692	2,403	3,630	2,192	2,669	(28%)
For the trade	No. of talks	59	78	62	56	45	(24%)
	No. of attendees	2,474	3,355	2,575	1,841	1,820	(26%)
For schools	No. of talks	73	72	70	72	70	(4%)
	No. of attendees	11,850	13,010	14,791	16,951	14,996	27%
Overall	No. of talks	205	200	187	172	163	(20%)
	No. of attendees	18,016	18,768	20,996	20,984	19,485	8%

Source: Audit analysis of CFS records

5.7 Upon enquiry, the CFS in August 2018 informed Audit that the public's habits of obtaining information had been changing from relying on traditional means (e.g. attending talks and reading printed materials) to accessing online information through computers and mobile devices. This accounted for the decrease in the number of talks. In this connection, Audit noted that the CFS had not made arrangements to facilitate people viewing its talks on the Internet (e.g. online broadcasting and placing recorded talks on the Internet).

Need to improve attendance at food safety exhibitions

5.8 According to the CFS's records, the CFS holds three types of exhibitions on food safety:

(a) ***Standing exhibitions.*** They are held at the FEHD's Health Education Exhibition and Resource Centre. The centre is open to the public all year round except Mondays, Thursdays and public holidays;

(b) ***Roving exhibitions.*** They are held once a week at venues located across the territory (e.g. FEHD markets, government buildings and shopping malls); and

(c) ***Community organisation exhibitions.*** The CFS loans exhibition boards and materials to community organisations for them to hold exhibitions.

5.9 During the period 2013 to 2017, the total number of attendees at food safety exhibitions had decreased by 11%. For the roving exhibitions, a 52% decrease in the number of attendees was recorded (see Table 16).

Table 16

Food safety exhibitions
(2013 to 2017)

Exhibition		2013	2014	2015	2016	2017	Percentage increase/ (decrease) between 2013 and 2017
Standing exhibitions	No. of attendees	108,479	111,284	112,287	102,586	93,724	(14%)
Roving exhibitions (Note)	No. of exhibitions	141	136	149	150	150	6%
	No. of attendees	30,750	26,540	21,173	18,597	14,895	(52%)
Community organisation exhibitions	No. of exhibitions	24	9	12	11	13	(46%)
	No. of attendees	11,416	29,319	5,463	6,020	25,800	126%
Overall	No. of attendees	150,645	167,143	138,923	127,203	134,419	(11%)

Source: *Audit analysis of CFS records*

Note: *Each roving exhibition covered three topics (e.g. prevention of cross-contamination and natural toxins). The numbers of exhibitions and attendees were counted on a per topic basis. Therefore, for a roving exhibition with 100 attendees, since there were 3 topics, the numbers of exhibitions and attendees were counted as 3 and 300 respectively.*

5.10 Audit considers that there is a need for the CFS to take measures to improve attendance at food safety exhibitions. In this regard, Audit noted that the opening hours of roving exhibitions were not entirely convenient to the public. Roving exhibitions were held only on weekdays from 10:00 a.m. to 4:00 p.m. There was room for better facilitating attendance by people who were engaged on weekdays (e.g. most employees and students).

Audit recommendations

5.11 **Audit has *recommended* that the Director of Food and Environmental Hygiene should:**

(a) **regarding findings of other organisations' food studies published in the public domain, keep in view the need for the CFS to offer its official views and advice through the most appropriate means, taking into account relevant factors such as public concern and gravity of the matter;**

(b) **make arrangements for viewing of the CFS's food safety talks on the Internet; and**

(c) **closely monitor the attendance at food safety exhibitions and take necessary measures (e.g. enhancing publicity and improving exhibition hours) to improve the attendance.**

Response from the Government

5.12 The Director of Food and Environmental Hygiene agrees with the audit recommendations. She has said that:

(a) the CFS agrees that it should provide food safety advice to the public on issues of public concern to help the public understand the gravity of the problem or otherwise and/or clarify any misunderstanding arising from the third party's food studies. However, the CFS considers that the means or channels to furnish such advice and information should be subject to individual circumstances and merits of individual cases. Depending on the public health significance of the issues, the CFS seeks to communicate its views and advice to members of the public proactively in a timely manner, though not necessarily in the form of a press release, but often through diversified channels including its website, the social media and publications. The CFS respects academics' and the CC's efforts in conducting food safety related studies, and considers that a press release is only one of the means for the CFS to convey its advice to the general public. As a matter of fact, issuing the CFS's advice through the social media may often attract more public attention;

(b) the CFS has been all along providing food safety education and publicity materials through various channels including electronic means and multimedia. The CFS will enrich its multimedia materials on the Internet; and

(c) with the increasing popularity of the use of mobile devices and social media as a means of communication, the CFS has been putting more efforts in communicating with members of the public through this means in recent years. On food safety exhibitions, the CFS will adopt more flexible exhibition hours and enhance publicity as appropriate.

Charters on food safety

5.13 According to the CFS's records, the CFS has implemented the following two charters to promote food safety:

(a) ***Food Safety Charter.*** The charter was introduced in 2008. It aims to provide facilitation for the trade to incorporate food safety measures in day-to-day practices, and to promote the "Five Keys to Food Safety" (Note 39). Signatories (e.g. restaurants and food production premises participating in the charter) should be committed to providing safe and healthier foods by making reference to the CFS's guidelines, keeping updated on food safety development and enhancing food safety. Signatories should fulfill their commitments by providing training to staff and developing practice guidelines; and

(b) ***"Reduce Salt, Sugar, Oil. We Do" Charter.*** The charter was introduced in December 2014. It aims to call for the active participation of Food Safety Charter signatories to help members of the public reduce the intake of salt, sugar and oil when dining out. Signatories should make reference to the CFS's "Trade Guidelines for Reducing Sodium in Foods" and "Trade Guidelines for Reducing Sugars and Fats in Foods" in preparing foods, and

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Note 39: *The Five Keys to Food Safety are the five simple and effective keys advocated by the WHO to prevent foodborne diseases. They are "Choose" (choose safe raw materials), "Clean" (keep hands and utensils clean), "Separate" (separate raw and cooked food), "Cook" (cook thoroughly) and "Safe Temperature" (keep food at safe temperature).*

should encourage patrons to make requests for foods prepared with less salt, sugar or oil.

Scope for improving implementation of charters

5.14 Audit noted that implementation of the charters was less than satisfactory:

(a) ***Limited number of signatories.*** For the Food Safety Charter, the number of signatories had decreased from 2,000 in 2012 to 1,800 in 2015, and then to 1,400 in 2018 which accounted for about 5% of the number of all food premises (Note 40). For the "Reduce Salt, Sugar, Oil. We Do" Charter, the number of signatories had remained at 37 (Note 41) in recent years. The limited numbers of signatories might undermine the effectiveness of the charters;

(b) ***Promotion of the charters could be improved.*** For example, while a function for searching signatories was provided in the CFS mobile application for the Food Safety Charter, a similar function was not provided for the "Reduce Salt, Sugar, Oil. We Do" Charter; and

(c) ***Performance of signatories required monitoring.*** Audit randomly selected 9 signatories (Note 42) of the Food Safety Charter for visits, and found that:

(i) 2 signatories were no longer in business; and

(ii) of the remaining 7 signatories, only 3 displayed the charter's certificate or stickers as required under the charter.

Note 40: *The 1,400 signatories had signed the charter for a term of three years (i.e. 2016 to 2018). As at 31 December 2017, according to the CFS's records, there were about 25,900 licensed food premises (e.g. bakeries, restaurants and food factories).*

Note 41: *The 37 signatories included 15 chain bakeries and 14 chain restaurants.*

Note 42: *The 9 signatories were selected from 3 districts, located in Hong Kong, Kowloon and the New Territories.*

5.15 As at 31 August 2018, the CFS had implemented the Food Safety Charter for more than 10 years and the "Reduce Salt, Sugar, Oil. We Do" Charter for more than 3 years. No reviews, however, had been conducted on the implementation of the charters.

Audit recommendation

5.16 **Audit has *recommended* that the Director of Food and Environmental Hygiene should, taking into account the audit observations (see para. 5.14), conduct a review of the two charters on food safety.**

Response from the Government

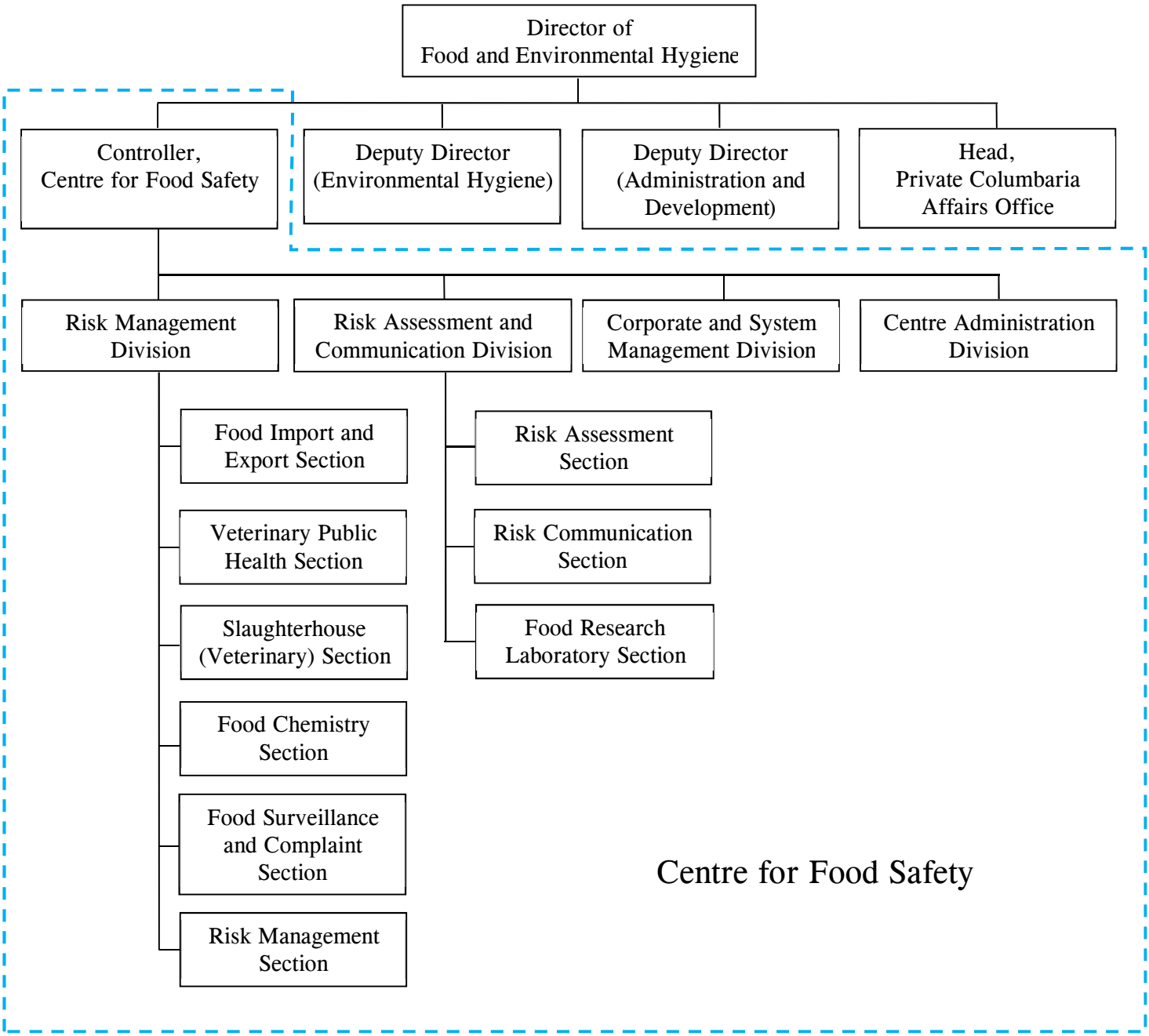
5.17 The Director of Food and Environmental Hygiene agrees with the audit recommendation. She has said that:

(a) while the Food Safety Charter is a voluntary scheme and part of the CFS's public education initiatives for promoting food safety among the trade, food safety is upheld in food premises also by licensing requirements and inspection by the FEHD. The CFS will continue to endeavour to promote the Food Safety Charter to members of the food trade; and

(b) as for the "Reduce Salt, Sugar, Oil. We Do" Charter, the CFS agrees that there is room for improvement in sustaining the momentum of soliciting more restaurants and food production premises to support salt and sugar reduction. It is also important to publicise more widely those restaurants which have supported the CFS's call for salt and sugar reduction. Having reviewed the implementation of the "Reduce Salt, Sugar, Oil. We Do" Charter, the Food and Health Bureau and the CFS are launching new initiatives to more proactively enlist the support of the trade to provide more food/dishes with reduced salt and/or sugar, or to welcome customers' requests for reduction of salt and/or sugar in food when placing orders. The CFS has started these new initiatives in recent months and expects to see more positive feedback from the trade.

Appendix A
(para. 1.5 refers)

Food and Environmental Hygiene Department: Organisation chart (extract) (30 June 2018)



Source: FEHD records

Appendix B
(Note 2 to para. 1.6(a) refers)

Subsidiary legislation of the Public Health and Municipal Services Ordinance

(a) Colouring Matter in Food Regulations (Cap. 132H)

(b) Dried Milk Regulations (Cap. 132R)

(c) Sweeteners in Food Regulations (Cap. 132U)

(d) Food Adulteration (Metallic Contamination) Regulations (Cap. 132V)

(e) Food and Drugs (Composition and Labelling) Regulations (Cap. 132W)

(f) Frozen Confections Regulation (Cap. 132AC)

(g) Harmful Substances in Food Regulations (Cap. 132AF)

(h) Imported Game, Meat, Poultry and Eggs Regulations (Cap. 132AK)

(i) Milk Regulation (Cap. 132AQ)

(j) Mineral Oil in Food Regulations (Cap. 132AR)

(k) Preservatives in Food Regulation (Cap. 132BD)

(l) Slaughterhouses Regulation (Cap. 132BU)

(m) Pesticide Residues in Food Regulation (Cap. 132CM)

Appendix C

Acronyms and abbreviations

Audit	Audit Commission
CC	Consumer Council
CFS	Centre for Food Safety
FCSs	Food consumption surveys
FEHD	Food and Environmental Hygiene Department
FISS	Food Incidents Surveillance System
FSP	Food Surveillance Programme
MRLs	Maximum residue limits
TDSs	Total diet studies
RASs	Risk assessment studies
WHO	World Health Organization