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21 December 2018

Mr Anthony CHU  
Clerk to Public Accounts Committee  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road  
Central, Hong Kong  
(Fax: 2543 9197)

Dear Mr Chu,

**LegCo Public Accounts Committee**  
**Consideration of Chapter 1 of the Director of Audit's Report No. 71**  
**Centre for Food Safety: Management of Food Safety**

I refer to your letter dated 11 December 2018, requesting this Department to provide supplementary information on Chapter 1 "Centre for Food Safety: Management of Food Safety" of the Director of Audit's Report No. 71. The relevant information is set out in the attached document.

Yours sincerely,

A handwritten signature in cursive script that reads "Christine Chow".

( Christine CHOW )

for Director of Food and Environmental Hygiene

c.c.:

Secretary for Food and Health	(Fax no. 2526 3753)
Controller, Centre for Food Safety	(Fax no. 2536 9731)
Secretary for Financial Services and the Treasury	(Fax no. 2147 5239)
Director of Audit	(Fax no. 2583 9063)

## Replies

### (a)(i)

Upon completion of the first population-based food consumption survey (first FCS) by the Centre for Food Safety (CFS), the survey has been reviewed although formal evaluation report was not compiled. Nevertheless, the report of the first FCS has included the limitation of the survey and recommendations for improving the survey methodology. The Advisory Panel (AP) established by the CFS for the second population-based FCS (second FCS) had detailed discussion on the limitations of the first FCS, including method for recruiting respondents, low response rate, insufficient manpower, and long time taken to process data (i.e. paragraph 2.3(c) of the Audit Report) etc., and had explored how these areas may be improved in the second FCS.

Taking into account the recommendation of the AP, improvement measures that have been implemented in the second FCS include: (1) Regarding recruitment method, the first FCS had adopted a scientific methodology, i.e. visits to selected households as opposed to random telephone calls for recruitment which was first proposed by the Contractor; the second FCS continues to adopt the recruitment method through visits to selected households to ensure representativeness of the survey data; (2) Regarding response rate, measures that have been undertaken to enhance the response rate include: making the interview content concise (e.g. the Food Behaviour Questionnaire of the first FCS is no longer required), provision of incentives (e.g. Supermarket coupons worth the value of HK\$50 or above were given to respondents upon completion of survey when the main fieldwork came to the final stage in the first FCS whereas in the second FCS, supermarket coupons worth the value of HK\$150 to every respondent upon completion of survey as a standardized practice has been introduced since the commencement of the main fieldwork), and enhanced publicity of the survey (e.g. press conference, reporting at the Legislative Council (LegCo) Panel on Food Safety and Environmental Hygiene, announcing on the CFS website and social media, etc.) (3) Regarding manpower, the tender document of the second FCS has laid down requirements on provision of full-time interviewers as well as requirement on service hour per week to be provided by the Contractor, drawing upon the undesirable experience of recruiting part-time students as interviewers in the first FCS; (4) Regarding data processing, computer-assisted interface is used in

conducting interview to facilitate data input and preliminary data analysis at the same time as the interview is being conducted, so as to improve data processing time in the second FCS, taking into account the experience from the first FCS and overseas experience in similar surveys.

(a)(ii)

The data submitted by the Contractor of the first FCS in April 2008 was unweighted data. After reviewing the submitted data, the AP established for the first FCS advised the Contractor to further submit the weighted data for review. Having compared both sets of data, the AP was of the view that the weighted data could better represent the food consumption pattern of the Hong Kong population. As such, the Contractor then took a series of procedures to process and analyse the full set of data once again.

Drawing upon the experience from the first FCS, the CFS has laid down requirements in the tender document of the second FCS for the Contractor to submit both weighted and unweighted data as well as the tabulation plan so as to facilitate early preparatory work on data analysis. On the other hand, as computer-assisted interface is adopted in conducting interview in the second FCS, data input and preliminary data verification for ensuring data accuracy can be undertaken at the same time as the interview is being conducted, which helps shorten the time for data processing in the later part of the survey.

(a)(iii)

The AP established for the second FCS had deliberated on response rate in the course of preparation for the second FCS, and considered that higher response rates would help to ensure the survey results are representative of the target population for the second FCS; and response rates of similar surveys ranged from 59-80% according to overseas experience. Furthermore, some surveys conducted by the HKSAR Government, e.g. Population Health Survey of the Department of Health, and Thematic Household Survey of the Census and Statistics Department, had response rates of about 70%.

To achieve response rate of 70%, AP's advice has been adopted in the measures undertaken for second FCS and they include: (1) Good time management, i.e. the content of interview has been made concise (e.g. the Food Behaviour Questionnaire of the first FCS is no longer required); (2) Provision of incentives. Thus, supermarket coupons worth the value of HK\$150 has been presented to every respondent upon completion of survey as a standardized practice since the commencement of main fieldwork; and (3) Enhancing the promotion and publicity of the survey. Thus, there have been conduction of press conference, reports at the LegCo Panel on Food Safety and Environmental Hygiene, and announcements on the CFS website and social media, etc. The measures at (1) and (2) have already been reflected in the tender document in the second FCS. Regarding the measure at (3), the AP has well planned ahead for the promotion, publicity and announcement of the survey to be undertaken early around the commencement of the main fieldwork of the second FCS. These are not remedial measures undertaken in response to the audit exercise of the Audit Commission.

(a)(iv)

According to the latest progress report (week 34, up to 10.12.2018), the number of completed cases was 906; the total service hour of interviewers was 4454 hours; the number of service hours recorded in that week was 315 hours, which was higher than the basic requirement in the tender document (210 hours per week).

Comparing with week 15 as mentioned in the Audit Report, the situation has been improved in week 34, including: (1) Regarding survey progress, the number of completed cases per week has increased from 44 cases in week 15 to 70 cases in week 34, i.e. about 60% increase; (2) Regarding the number of service hours provided by interviewers per week, it has been increased from 213 hours in week 15 to 315 hours in week 34, i.e. about 50% increase; and (3) The preliminary response rate has been increased from 42% in week 15 to 47% in week 34.

Based on the latest progress, the Contractor has estimated that the main fieldwork requires about 2 years for completion, i.e. 1 year later than the expected completion date. Notwithstanding, as computer-assisted interface is adopted in conducting interview in the second FCS, data input

and preliminary data verification for ensuring data accuracy can be undertaken at the same time as the interview is conducted, which helps save time for data processing in the later part of the survey and expectantly, the time required for completion may not take 12 months as projected so that the survey may not necessarily be delayed for a whole year. The CFS will continue to urge the Contractor to expedite the survey progress, and undertake early preparation for the later part of the data processing work in order to shorten the time so required and complete the whole survey as soon as possible. The CFS will also enhance the publicity to increase the response rate as necessary.

(a)(v)

The paper questionnaires used in first FCS are provided at **Annex 1**. Paper questionnaires have been replaced by computer-assisted interface in conducting interview in the second FCS and questionnaires are provided at **Annex 2**.

Differences between the questionnaires of the two surveys are as follows:

- (1) There were three parts in the interview for the first FCS. The interview content of the second FCS has been made concise by not keeping “Food Behaviour Questionnaire” resulting into only two parts in the interview and the number of questions in the “Food Frequency Questionnaire” has been significantly reduced (from 112 questions to 36 questions) for the second FCS. These are in line with AP’s recommendation on good time management for increasing the response rate;
- (2) The “24 Hour Dietary Recall Questionnaire” in the second FCS collects more details on information such as cooking method, which aims to enhance the database for better facilitation of food safety risk assessment; and
- (3) Paper questionnaires were used in the first FCS, but in the second FCS, computer-assisted interface is adopted, in which data input and preliminary data verification for ensuring data accuracy can be undertaken at the same time as the interview is being conducted, and it helps shorten the time for data processing in the later part of the survey.

**\*Note by Clerk, PAC: Annexes 1 and 2 not attached.**

(a)(vi)&(vii)

There were provisions in the service contract of the first FCS to protect the Government's rights and compensate the Government for any loss incurred by failure of the Contractor to fulfil the contract requirements. For example, the Government is entitled to withhold payment of the Contract Price if the Contractor fails to observe or perform any provision of the Contract to the Government's satisfaction. In addition, the Government shall be entitled to terminate the Contract by giving a written notice to the Contractor if the Contractor fails to meet the contract requirements. If the Contract is terminated and the Government makes other arrangements for the uncompleted Services from any other sources, the Government may recover from the Contractor the relevant additional expenses incurred.

A Steering Committee, chaired by Consultant (Community Medicine) (Risk Assessment & Communication), was established for the first FCS under the Department, to monitor the progress and performance of the Contractor; provide guidance to the Contractor and follow up the progress and findings of the survey.

In the first FCS, approval was granted by the Financial Services and the Treasury Bureau for the contract variation to extend the contract period, alter the recruitment method and increase contract value. Subsequently, approval was granted by the Director of Food and Environmental Hygiene for the variation of contract for extending the contract period.

(b)

In addition to the monitoring measures stipulated in the Contract, the CFS has been giving instructions to the Contractor for targeting specific improvement areas via meetings, telephone calls and emails, and has demanded immediate remedial measures. The CFS had issued a letter to the Contractor on July 18, 2018 (after week 13) to demand the Contractor to expedite the fieldwork. Upon receipt of the letter, the Contractor increased the number of service hours of interviewers in weeks 14 and 15, and thus the progress of the fieldwork was improved. The CFS then further issued letters to the Contractor on October 18 and Nov 23, 2018, demanding the Contractor to improve the survey progress and rectify the

situation. The letters are provided in **Annex 3**. Having considered the fact that these letters contain sensitive information about the Contractor and the contract activities that are yet to be completed, the relevant information has been appropriately shaded. This Department recommends the Public Accounts Committee not to disclose these letters in the public domain, in order to avoid impact on the execution of the contract.

(c)

Regarding the issue on conducting a separate FCS covering the youth population, the Food and Environmental Department had already conducted a food consumption survey for secondary school students in 2000 i.e. before the first FCS. Data collected in that survey could be used for food safety risk assessment. As such, the first FCS that was conducted in 2005, had not covered the youth population under 20 years old.

For the second FCS, the AP has explored the possibility of lowering the age limit in the scope of survey, but considered there was technical difficulty in practice. The AP found that if the age group of “18-29” would be enlarged to become “15 to 29” for covering the younger population, there would be difficulties in interpreting the survey results due to different eating habits between respondents who were studying and who were working. However, if an independent age group of “12 to 17” was added and further grouped by gender, the sampling ratio of the whole survey would need to be adjusted due to the small population base of these two age-gender groups (as compared with other age-gender groups, including “aged 18-29”, “aged 30-49”, “aged 50-64” and “aged 65 or above” for males and females), and the minimum number of successful respondents estimated by statistical calculation would be increased significantly from 4800 to over 12000. As such, at that time, the AP considered that a separate FCS covering the younger population groups would be more feasible.

Meanwhile, the second FCS is in progress. The CFS has also started the preliminary work for conducting FCS for the younger population by studying the methodology of conducting FCS for the younger population

**\*Note by Clerk, PAC: Annex 3 not attached.**

groups in overseas countries/regions, such as the target population, categorization of age groups, number of respondents, sampling method, data collection method, questionnaire design, etc., for planning of a FCS that is suitable in the local context. Upon completion of the research work, which is expected in 2020, the CFS will take into account the past experience and available resources to further formulate details of the plan for conducting the survey on the younger population.

(d)

To select the substances to be included for the TDS, the following criteria were adopted: (i) recommendations from international authorities (such as WHO); (ii) public health significance and (iii) public concern. The CFS graded the substances as “High”, “Medium” or “Low” against the criteria above-mentioned in order to prioritise substances to be included for the TDS. According to the evaluation report prepared by the CFS under its own initiative, the TDS had covered the majority of the priority substances suggested by international authorities at that time. Nevertheless, taking into consideration factors like the stability of the substances in food is rather low and will decompose with time, use of resources and limitation in testing capacity, certain substances ranked with high priority (including formaldehyde) were not included in the TDS.

While it is impractical to test each and every food item that people eat, a TDS food list was developed to select the representative foods from the food consumption dataset, based on the consumption pattern of the Hong Kong population. In doing so, the number of foods to be analysed could be set within a practicable range. This is also a common practice for conducting TDS internationally. Foods were being selected from the food consumption dataset according to the following criteria: (i) food commonly consumed by the population; and (ii) food that was likely to contain high concentration of certain substances even its consumption may be low. The TDS food list included 150 food items which represented 88% of the average diet of the population. Nevertheless, certain food items that might contain high concentrations of the substances studied had not been covered in the TDS taking into consideration efficient use of resources.



(e)

When conducting future TDS, the CFS will take into account the results of the evaluation conducted under its own initiative and the experience gained in the first TDS, and will consider according priority to including those substances ranked with high priority but had not yet been included in the first TDS. In addition, the CFS will enhance the food list with a view to achieving a more comprehensive and effective coverage of representative foods. Furthermore, the CFS will keep in view the latest practices suggested by international authorities to improve the conduct of the second TDS.

Food consumption data is a pre-requisite for dietary exposure assessment and conducting TDS. The second population-based food consumption survey is being conducted. Upon the completion of the food consumption survey, the CFS will apply the updated food consumption data in conducting the second TDS.

(f)

Every year, the CFS consults the Expert Committee on Food Safety (Expert Committee) on selection of the Risk Assessment Studies (RASs) to be conducted for the next year.

In the meeting held in September 2017, the Expert Committee considered and advised on the RASs to be conducted in 2018. During the meeting, a member of the Expert Committee suggested to introduce a scoring mechanism in future to facilitate the discussion and selection of the proposed RASs by members.

The CFS introduced a new mechanism for the Expert Committee meeting held in September 2018 for selecting RASs for 2019. Under the new mechanism, every proposed RAS will be graded “High”, “Medium” or “Low” against each of the following criteria to facilitate discussion by members:

- a. Whether the subject of the project is of public health significance or concern;

- b. Whether the project helps address risk management problems and provide scientific support to risk managers for identifying risk management options;
- c. Whether the results of the project will provide scientific support to a legislative review; and
- d. Whether the project is of significance in terms of public education, including the development of tailor-made guidelines/practice codes for the trade.

The Expert Committee welcomed the new mechanism in the aforesaid meeting and found it effective.

(g)

The CFS relies on science-based risk assessment and devises risk communication strategies according to the assessed risk level and the public perception of risk.

Basically, the study report, executive summary, presentation slides and press release will be uploaded to the dedicated webpage of the respective RAS.

In addition, the CFS formulates relevant messages and advice according to the needs of target audience. For example, information for the general public is published in the CFS's publication, webpages and social media using easy-to-understand language and recommendations to the trade are provided through guidelines to facilitate them to implement the CFS's advice in their daily operations.

In October 2018, the CFS had posted the related links of supplementary information to the webpage of the corresponding RA studies as recommended by Audit to facilitate the public in obtaining relevant information.

(h)(i)

Preservatives and antioxidants are often used to prolong the shelf-life of foods by protecting against deterioration. While preservatives act against microorganisms, antioxidants counter oxidation.

Fats and oils, particularly the unsaturated ones, as well as foods containing them are most likely to have oxidation problems. When the fats react with oxygen and decompose, unpleasant off-flavours and odours will be developed and cause the foods to become rancid. Rancid foods may not result in food poisoning, but have a bad smell and taste. Some food manufacturers are thus using antioxidants in foods rich in fats and oils to delay the onset or slow down the development of rancidity due to oxidation.

The use of antioxidants in food are regulated under the Preservatives in Food Regulation (Cap 132BD) (The Regulation) in Hong Kong. The Regulation specifies the types of permitted antioxidants and their respective maximum permitted levels in specified foods including vegetable oils and fats. Food additives, including antioxidants, that are allowed to be used in Hong Kong are safe. Consuming foods containing antioxidants at the allowed levels are unlikely to cause adverse health effects.

(h)(ii)

The CFS collected 60 oil samples for testing of antioxidants under the same food surveillance project with satisfactory test results. Besides, the CFS collected about 600 oil samples for testing of antioxidants in 2015 - 2018 (up to November) and all test results were satisfactory.

(h)(iii)

The oil product was packed inside a sealed container. Before delivery to the laboratory, it was stored inside a cabinet of the office of the CFS without direct exposure to sunlight.

(h)(iv)

During processes of inhibiting or delaying oxidation, antioxidants themselves are being oxidized and the level decreases with time. The process of oxidation is affected by a number of environmental factors which mainly include atmospheric oxygen amount, temperature, exposure to light, etc. For fats and oils, they are mostly oxidised by oxygen that penetrates into foods and turn rancid.

Since the concerned oil product is packaged in a sealed container, the amount of oxygen that penetrates into the food is limited. In addition, the concerned product is stored under room temperature and is not exposed to direct sunlight. As such, it is unlikely that the degree of decrement in the antioxidant level of the concerned product, due to environmental factors, would be substantial.

(h)(v)

According to our understanding, there is currently no qualified private laboratory in Hong Kong that can provide services in the testing of antioxidants in food.

(h)(vi)

The new operational guidelines were issued to the CFS staff in October 2018 and implemented with immediate effect (See **Annex 4**). The operational guidelines are internal documents concerning enforcement details of the Department, which are not recommended for disclosure, or else the enforcement work may be affected in the future.

Through the existing Food Surveillance System, the CFS masters information on the collected food samples such as the sampling dates and the test result dates, and can export the sampling information and compile management reports. The CFS is now strengthening the concerned system in order to enhance the supervision and monitoring of the delivery of samples to the laboratory.

— ENDS —

**\*Note by Clerk, PAC: Annex 4 not attached.**