

**For discussion
on 13 July 2021**

Legislative Council Panel on Food Safety and Environmental Hygiene

**Findings of the Second Hong Kong Population-based
Food Consumption Survey**

Purpose

This paper sets out the major findings of the Second Hong Kong Population-based Food Consumption Survey conducted by the Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department and its relevant follow-up work.

Food Safety Risk Assessment

2. The CFS adopts a food safety regulatory strategy based on the risk analysis model recommended by the World Health Organization and the Food and Agricultural Organization of the United Nations. Through risk assessment, management and communication, the CFS endeavours to achieve focused food safety control, effective prioritisation of work and optimal resource utilisation, with a view to enhancing food safety in Hong Kong.

3. Risk assessment basically involves scientific evaluation of the food safety risk that the population may face due to their exposure to various harmful substances through daily food consumption. Food consumption data (i.e. the types and amounts of food consumed) of the local population is a cornerstone of this assessment work. Through comprehensive analysis of data on the food consumption of the population and the level of different hazards present in food, the CFS assesses and quantifies the possible exposure to these hazards by dietary intake for estimating the potential food safety risk to the population. Based on relevant scientific data, the CFS also formulates and implements appropriate risk management measures such as

the Food Surveillance Programme, and works out suitable food safety messages for communicating to the public (including citizens and the food trade).

Population-based Food Consumption Surveys

4. The First Hong Kong Population-based Food Consumption Survey was conducted between 2005 and 2007. Its findings were widely applied in the relevant work of the CFS, including completion of a Total Diet Study (TDS) covering a wide range of chemicals in 2014 based on the food consumption data. The CFS also set work priorities with reference to the findings of the TDS, such as enhancing the advice on fish consumption for pregnant women and women planning for pregnancy in view of the dietary exposure to mercury among women of childbearing age, amending the Food Adulteration (Metallic Contamination) Regulations (Cap. 132V) in 2018 with respect to the maximum levels of mercury in foods, and stipulating in the amended Regulations a maximum level for cadmium in polished rice that was more stringent than the standard of the Codex Alimentarius Commission having regard to the local consumption data of cooked rice for protecting the food safety of the local population.

5. Considering the evolution of dietary habits of the public over time and with reference to the frequency of conducting similar surveys in other places (ranging from intervals of 11 years in Canada and New Zealand to 16 years in Australia), the CFS commenced the Second Hong Kong Population-based Food Consumption Survey (2nd FCS) in 2018 to understand the up-to-date food consumption pattern of the local population, particularly the types and amounts of food consumed. Data collection was conducted between April 2018 and February 2020, with a total of 3 752 respondents (i.e. 78% of the target of 4 800 respondents) aged 18 or above successfully interviewed.

6. The 2nd FCS was a household survey targeting the Hong Kong adult population. Individual households were first randomly selected, followed by random selection of one member from each selected household as the interviewee. The survey adopted the internationally-recognised “24-hour dietary recall” method on two non-consecutive days by inviting the

respondents to recall all food and drinks consumed over the previous day of each interview and prompting follow-up questions with reference to the responses given, with a view to collecting comprehensive information on the daily diet and intake amounts of the respondents. The survey also used a “food frequency questionnaire” as a supplementary tool to further understand the respondents’ consumption of certain foods, including seasonal food (e.g. longans and lychees) and festive food (e.g. Chinese New Year pudding and mooncake), etc. In addition, the basic demographic information (including gender and age) and body weight data of the respondents were also obtained to facilitate interpretation of food consumption information. In order to estimate and analyse the food consumption pattern of the local population, a statistical grossing up process was adopted with respect to the data collected.

Findings of the 2nd FCS

7. The 2nd FCS provides the latest set of food consumption data comprising the daily consumption of 30 food groups, 160 food subgroups and over 1 500 food items by the local population. The key findings are summarised as follows:

- i. The average daily consumption of **solid food and liquid food** (including water) were 1.15 kg and 1 741 ml respectively.
- ii. The average daily consumption of **cereals and grains products** was 395.31 g, of which 61.2% (242.12 g per day) was from rice. Pasta and noodle from all raw ingredients (rice, wheat, etc.) constituted another 36.4% (143.72 g per day).
- iii. The average daily consumption of **bakery wares and Chinese pastry**, a food group closely related to cereals and grains products, was 45.56 g. About 70% was from bread and roll (31.51 g per day).
- iv. The average daily consumption of **vegetables and fruits** were 202.65 g and 120.31 g respectively. Leafy vegetables

and brassica vegetables contributed over half (112.04 g) of the daily consumption of vegetables. Another 16.8% (34.05 g) was from fruiting vegetables as well as squashes and gourds, while slightly less than 10% (19.83 g) was from root vegetables/tubers. Citrus fruits contributed around one-third (41.10 g) of the daily fruit consumption, and another 26.0% (31.29 g) was from pome fruits.

- v. The average daily consumption of **meat and poultry** were 78.36 g and 32.12 g respectively. Around 70% of the consumption of meat was from pigs other than offal (54.77 g). Another 24% was from cattle/calves other than offal (18.63 g). For poultry, over 95% of the amount consumed was from chickens other than offal (30.63 g). The average daily consumption of **fish** was 43.54 g.
- vi. The average daily consumption of **egg and egg products** was 26.44 g, of which over 95% was from chicken eggs. The average consumption of **milk and dairy products** was 24.86 g per day, of which over three-quarters (19.56 g) was from milk, milk beverage and dried milk.
- vii. Among the local favourites, the average daily consumption of **dim sum** was 48.05 g, whereas that of **siu-mei and lo-mei** was 15.34 g.

8. The findings of the 2nd FCS were released on 29 June 2021, including publication of the survey report on the CFS website¹ and upload of the food consumption data in the survey report to the DATA.GOV.HK website (<https://data.gov.hk>) established by the Office of the Government Chief Information Officer for downloading and utilisation by the public and academic institutions. The CFS will also inform relevant Government departments of the results and data of this survey to facilitate their related work and studies.

¹ The survey report is accessible on the CFS's website:
www.cfs.gov.hk/english/programme/programme_firm/programme_fcs_2nd_Survey.html

Way Forward

9. As the regulatory authority of food safety in Hong Kong, the CFS will apply the latest set of food consumption data in its relevant work, including conducting day-to-day food safety risk assessments and studies, reviewing the sampling strategy of its routine Food Surveillance Programme, as well as assessing and proposing amendments to local food safety standards and regulations, etc. The CFS will also commence a food consumption survey for the younger population covering secondary and primary school students within this year and plan ahead for the future TDS, with a view to updating and understanding the exposure to individual harmful substances through dietary intake among different population groups in Hong Kong.

Advice Sought

10. Members are invited to note the content of this paper.

Food and Health Bureau
Food and Environmental Hygiene Department
July 2021