

**Advisory Council on Food and Environmental Hygiene**

**Response Measures against Discharge of Wastewater  
from Fukushima Nuclear Power Plant**

**Purpose**

The Government of Japan plans to discharge in the summer of 2023 the wastewater generated in the process of cooling the reactors at the Fukushima nuclear power station (FNPS) into the ocean after treatment. This paper briefs Members on the response measures to be taken in Hong Kong to protect food safety and public health.

**Discharge of Wastewater from Fukushima Nuclear Power Station**

2. Following the incident at the Fukushima nuclear power plants due to the Great East Japan Earthquake in Japan on 11 March 2011, nuclear reactors at Fukushima suffered meltdowns. Water was pumped into the ruined reactors to cool down the melted fuel, which was mixed with rain and groundwater. As the wastewater had direct contact with active raw materials of the nuclear reactor, it contains a high concentration of radioactive substances. The cooling water was collected, treated using Advanced Liquid Processing System (ALPS) and stored in storage tanks on site. According to the Government of Japan, more than 1.3 million tonnes of the ALPS treated wastewater were gathered in over 1 000 tanks on-site at the Fukushima nuclear power plants.

3. In April 2021, the Government of Japan announced the plan to discharge the wastewater generated in the process of cooling the reactors at the FNPS into the ocean after treatment<sup>1</sup> in about two years' time (i.e.,

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<sup>1</sup> The Japanese authorities explained that the wastewater will be treated and purified to remove radioactive substances, so that its radiation level will meet Japanese and international safety standards (except for tritium) before it is discharged into the ocean. However, since tritium cannot be eliminated through purification, the tritium level in the treated wastewater will still exceed the Japanese regulatory level and could not meet the international safety standards. The existing proposal put forward by the Japanese

in 2023). The plan has aroused concern from the international community and the public. Many stakeholders are concerned whether the discharge of wastewater into the ocean would have serious impact on the marine ecosystem, the food chain and food safety.

### **HKSAR Government's position**

4. HKSAR Government has repeatedly expressed grave concern about the impact of the discharge plan on food safety, and has indicated clearly to the Japanese authorities that they should not discharge the treated wastewater from the FNPS into the ocean unilaterally without the consensus of the international community so as to avoid bringing about irreversible impacts on the environment. Once Japan commences the discharge, the HKSAR Government will immediately take stringent measures to prevent the potentially affected Japanese food products from entering Hong Kong, so as to ensure food safety and public health in Hong Kong.

5. Since issues such as pollution to the ocean are international issues in the realm of foreign affairs, the Environment and Ecology Bureau (EEB) has, after the announcement of the discharge plan by Japan, relayed the opinions and concerns of various sectors to the Office of the Commissioner of Ministry of Foreign Affairs (OCMFA) in Hong Kong. The HKSAR Government has been maintaining liaison with the OCMFA to relay the latest concerns and opinions of various sectors on the discharge plan and the follow-up work of the HKSAR Government.

6. In response to the discharge plan the Administration has set up an interdepartmental taskforce. Comprised of EEB and relevant government departments including the Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department, the Agriculture, Fisheries and Conservation Department (AFCD), the Hong Kong Observatory (HKO), the Department of Health (DH) and the Government

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authorities is to lower the concentration of tritium by dilution. According to the Government of Japan, the treated wastewater will be diluted by more than 100 times through injection of a large volume of seawater into the discharge facility, such that the concentration of tritium will be lowered to one-fortieth of the Japanese regulatory level (i.e., 1 500 Bq/litre), before the treated wastewater is discharged into the sea through an undersea tunnel.

Laboratory (GL), the taskforce seeks to assess the impact of the discharge on food safety and formulate comprehensive response measures to protect food safety and public health.

### **Review by International Atomic Energy Agency (IAEA)**

7. The IAEA has set up a Task Force to conduct reviews on whether the discharge plan can meet the safety standard of the IAEA, and whether it would have negative impact on human health and the ecosystem. Members of the Task Force include experts from Mainland China, Argentina, Australia, Canada, France, the Marshall Islands, the Republic of Korea, the Russian Federation, the United Kingdom, the United States and Vietnam.

8. The IAEA Task Force reviewed the wastewater treatment system of the Tokyo Electric Power Company and the relevant technical issues, including how to determine the volume and upper limit of discharge, how to handle abnormal situations or crisis caused by external factors, and how to ensure the safe operation of the discharge system continuously etc. The Task Force also reviewed the regulatory arrangements to be implemented by the Nuclear Regulation Authority of Japan as an independent regulatory authority and performed independent sampling and analysis of the treated wastewater from FNPS and the surrounding environment, so as to ensure the accuracy of the radioactive content of the wastewater and the environmental samples.

### **Response measures**

9. IAEA released its final report for its review on the safety of Japan's wastewater discharge plan on 4 July 2023. The inter-departmental taskforce is reviewing the final report and will make further risk assessment regarding the discharge plan. The HKSAR Government is seeking more information and relevant scientific evidence from Japan as to how safety of the discharge can be maintained. We will take all necessary measures to safeguard food safety and public health in Hong Kong.

### *Stringent import control on aquatic products from relevant prefectures*

10. According to the statistics of the Census and Statistics Department, the major food imports from Japan amounted to about 2% of

the total food supply in Hong Kong in 2022. Various types of meat (except chilled beef), vegetables and milk products imported from Japan amounted to less than 5% of the food in the local food market, while aquatic products accounted for 6.75% of local consumption. Although Hong Kong is not highly dependent on Japanese food products in terms of quantity, a lot of local people are fond of Japanese food and there are numerous Japanese restaurants across the territory. As such, it is crucial for the Government to impose an effective import control.

11. Specifically, as the proposed discharge plan is expected to last for 30 years, it is a real issue that worries the public as to how the Japanese authorities will ensure the effective operation of the treatment facility continuously, and that the discharge plan will not pose any potential risks to food safety and the marine ecosystem. Based on existing information, food products that have higher risks of being affected by the discharge plan are mainly aquatic products from Fukushima and its nearby coastal prefectures. The HKSAR Government has repeatedly indicated to the Japanese authorities that once Japan commences the discharge, the HKSAR Government will immediately put in place control measures, including imposing import control against aquatic products from high-risk prefectures of Japan to ensure food safety and public health.

12. Food safety is of an issue of paramount importance affecting public health. The Government is responsible for ensuring that food sold in Hong Kong is safe and fit for consumption. The HKSAR Government will formulate and announce the import control measures against relevant food products from Japan based on scientific and risk assessment after taking into full consideration of IAEA's final report, the opinion of Mainland experts, further risk analyses and other relevant information.

*Enhanced testing on imported food to provide dual protection*

13. As for Japanese food products which are still allowed to be imported, enhanced testing arrangement will still be applied to achieve dual protection.

14. CFS has gradually stepped up radiological tests on imported Japanese food products since mid-April, especially those on aquatic products and targeted testing of radioactive substances. CFS has also expanded the scope of testing in mid-June to cover all aquatic products imported from all prefectures of Japan, and has stepped up radiological

tests on other processed food imported from Japan. The GL has procured necessary equipment and completed the preparations for stepping up testing to facilitate the work, including developing testing methods for different radionuclides with reference to the relevant Codex guidelines, etc.

15. From the issue of Food Safety Order in March 2011 to June 2023, CFS tested more than 780 000 samples of imported Japanese food products (e.g., milk, vegetables and fruits etc.), including about 125 000 samples (about 16%) of aquatic products and related products, seaweeds and sea salt, and found that the radiation levels of all samples did not exceed the guideline levels of the Codex. The CFS has been releasing the results of the radiological tests on its website.

#### *Stepping up monitoring of radioactivity in local fishery products and Hong Kong waters*

16. Once Japan commences the discharge, AFCD will step up monitoring of radioactivity in local fishery products, including collecting samples from fishery products sold through the Fish Marketing Organization and samples from cultured fish at fish culture zones in local waters for radiological testing. The testing frequency will increase from once per month to once per day, subject to review after six months. The testing results would be announced on a daily basis. Furthermore, HKO has always been monitoring the environmental radiation levels in Hong Kong and announcing the results to the public. In response to any discharge plan to be implemented by Japan, HKO will step up its radiation monitoring in Hong Kong waters. HKO will notify AFCD directly of any abnormal results detected in the radiation monitoring of seawater samples collected in local waters. In the meantime, HKO has established communication channel with the Ministry of Ecology and Environment for timely mutual notification in case abnormal results are detected in the surveillance.

#### *Informing the trade*

17. The HKSAR Government has been maintaining close liaison with local importers of Japanese food products and catering operators such that they would be better informed of the latest position of the discharge plan and the possible import control measures which the Government may implement to safeguard food safety. Online meeting and trade

consultation forum were convened in end-June 2023 to enable them to make early preparations, such as sourcing from alternative food suppliers.

*Stepping up information dissemination to ensure public confidence*

18. In addition to stepping up testing arrangements, we will enhance the dissemination of testing results as well as information on the safety of Japanese food to members of the public and the trade to dispel public concerns and misunderstandings. As aforementioned, CFS is currently releasing results of the radiological tests on imported Japanese food products on its website and in the monthly food safety report. Once Japan commences the discharge, CFS will release the results of radiological tests on its website on every working day and issue press releases on a regular basis. HKO and AFCD will announce testing results online on a regular basis. A one-stop webpage will be set up in the EEB website with the view to fostering better understanding of the public on the latest information on the safety of imported Japanese food.

**Next step**

19. The IAEA has just issued the final concluding report. EEB and relevant government departments are now studying the report in detail. We will finalise and announce the import control measures against relevant food products from Japan based on scientific and risk assessment after taking into full consideration of IAEA's final report, opinion of Mainland experts, further risk analyses and other relevant information.

**Advice Sought**

20. Members are invited to note the content of this paper and provide comments.

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Food and Environmental Hygiene Department  
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