To All Concerned in Overseas

Remarks from the chairperson of Food Safety Commission of Japan (FSCJ) - About the assessment of the effect of food on health of radioactive nuclides in foods –

1. On October 27, 2011, Food Safety Commission of Japan concluded the assessment of the effect of food on health of radioactive nuclides in foods, which was requested by the Minister of Health, Labour and Welfare, after deliberation on a large number of scientific knowledge from domestic and abroad by the experts along with receiving public comments on the draft of the assessment.

2. As for this assessment, FSCJ conducted the deliberation in an objective, neutral, and fair manner on the basis of current scientific knowledge. This assessment report is not drawing a plain line to show “until what mSv/year through foods produce no health concern.” However we tried to indicate our assessment using all knowledge as far as we could reach to explain what is evident and what is not evident at this time. The fundamental idea, outline, the basis for the assessment is shown on accompanying sheets.

3. I hope appropriate management measures will be taken by risk management ministries in accordance with FSCJ’s assessment, along with careful consideration of the situation of detected radioactive materials in foods and the actual foods intake of Japanese people.

4. We received more than 3,000 opinions, comments and information during public comment period. We consider they are showing that people have intense interest and concern over radioactive contamination in foods, and we are taking those comments seriously. Now FSCJ is committed than ever to offer scientific information as much as possible and to conduct careful risk communication to the public for serving as an aid for understanding, together with risk management ministries.

2011 October 27

Chairperson
Food Safety Commission of Japan
Naoko Koizumi

1. History of the assessment

Regarding radioactive contamination of food associated with the accident at Fukushima Dai-ichi Nuclear Power Station, the Ministry of Health, Labour and Welfare (MHLW) adopted Indices for Food and Beverage Intake Restriction as provisional regulation values, and management measures based on that values have been taken since March 17, 2011. These provisional regulation values were established urgently without an assessment of the effect of food on health by FSCJ; thus, on March 20, 2011, the Minister of Health, Labour and Welfare requested FSCJ for the assessment, and FSCJ compiled “Emergency Report on Radioactive Nuclides in Foods” on March 29, 2011.

Also since April 21, 2011, “Working Group (WG) for an assessment of the effect of radioactive nuclides in food on health” with experts on radioactive materials has had in-depth and meticulous deliberation on the remaining tasks.
The WG verified numerous literatures on the effect from radiation in Japan and overseas, and after nine meetings the WG concluded the assessment draft.
Public comments were collected since July 29, 2011, to August 27, 2011, they came to over 3,000 opinions, comments and information.

Some of them are indicating literature information, thus we reviewed the literatures.
After careful consideration of all of them, we decided the assessment conclusion did not need to be changed, therefore we finalized this assessment report on October 27.

2. Fundamental idea for the assessment

Below is FSCJ’s fundamental idea for this assessment.

(1) The assessment of the effect of food on health should be conducted to assess the effect on health through food consumption. Basically, scientific basis for the assessment should not be changed depending on whether the time is emergency situation or normal condition.

(2) The assessment of the effect of food on health should be conducted on the safe side based on the concept of risk analysis on food safety, i.e. separation of risk assessment and risk management as well as valuing accurate scientific knowledge and the most conservative value of barometers showing the possibility of health effect.

3. Outline of the assessment

On this assessment, based on current scientific knowledge, FSCJ discussed added exposed dose through contaminated food consumption. FSCJ concludes that more than around 100 mSv of the extra cumulative effective dose: cumulative effective doses of radiation during lifetime, could increase health risk. The amount does not include radiation from natural environment and medical

exposure.

During childhood, susceptibility to radiation posing a possibility to develop thyroid cancer and leukemia may be higher than adult. And health effects from the extra cumulative exposure below 100 mSv are difficult to be verified based on the current available knowledge.

As previously described, this extra cumulative dose is premised on being exposed to radiation only through food consumption. However, the literatures which served as the basis for the extra cumulative dose did hardly comprehend the data on health effect by oral ingestion of radioactive materials, therefore it was difficult to conduct the assessment based on solely the data of oral ingestion. Consequently, for assessing we analyzed actual epidemiological data on exposure includes both external and internal. However, we did not intend to assess the external exposure itself.

This assessment by FSCJ as a body to evaluate the effect on health, did not conclude “if people exposed to 100mSv from both internal and external exposure during lifetime it may cause health concern.” Exposure not through food consumption (e.g. external exposure) has to be dealt appropriately by relevant authorities. And FSCJ does not intend to recommend making any change or review on the measures taken in Japan based on ICRP recommendations or other authorities’ suggestion.

4. The basis for the assessment

(1) The numerical data on the dose which determinably effects on health by being exposed to the extra radiation in addition to the radiation in normal life were considered to have diverse conclusions. Basically the effect of food on health has to be assessed based on risk analysis method on food safety.

Therefore, although we are aware of literatures which conclude chronic and low-dose exposure has less impact compared to instantaneous exposure, we conducted this assessment without regard to that conclusion since none of them were authentic enough for the basis for the assessment among other various literatures.

A study in India reporting on the chronic and low-dose exposure (cumulative radiation dose is estimated to be 500 mGy) was considered authentic as epidemiological data, but based on risk analysis method on food safety, we also employed the data of exposure in Hiroshima and Nagasaki. Hence we decided to take a conclusion: “more than around 100 mSv of the extra cumulative dose during lifetime” for this assessment.

* An study was recognized as authentic which reports no identification of increased cancer risk in high background radiation area in India where people are exposed to 500 mGy or higher of cumulative radiation dose from low-dose and low-dose rate, however the epidemiological data of Hiroshima and Nagasaki was taken for support for the assessment conclusion on the effect of food on health.
* By employing the epidemiological data of Hiroshima and Nagasaki, FSCJ concludes that more than around 100 mSv cumulative effective dose of radiation during lifetime, could increase health risk.
* Regarding time period of exposure, although FSCJ is aware of literatures which conclude: compared to the impact from high exposure over a short time, the impact from low exposure over a long time has less influence. However, we abstracted this point because none of the literatures can show quantitative data for the basis for the assessment.

(2) The definition of “Around 100 mSv”

(a) This is rough value. Furthermore, it is not threshold.

Health effects from the extra cumulative exposure below 100 mSv are difficult to be verified based on the current available knowledge. Because there is a limitation to verify the health effect arising from additional radiation exposure including carcinogenesis and other influences since; there is a difficulty to distinguish explicitly the effect of radiation and other effects; population of epidemiological studies were not large enough and; inaccuracy of estimated radiation exposure.

So, even if people are exposed to more than “around 100 mSv” of the extra cumulative exposure, it will not necessarily mean they will have adverse health effect. Instead, this is the value which the risk management ministries have to consider for appropriate management.

(b) This value does not depend on whether the situation is emergency or normal for food.

(c) This value should not be applied to the administrative regulating value (intervention dose level) for reducing exposure through food consumption, but should be applied to the extra exposure calculated based on the monitoring data on the consumption of food containing radioactive materials.

5. Relationship with risk management

(1) By “Emergency Report on Radioactive Nuclides in Foods” which FSCJ published on March 29, 2011, we showed our view for emergency situation. On the other hand, this assessment report indicates cumulative dose during lifetime therefore, this does not contradict the view of the Emergency Report.

(2) It can be imagined that the appropriate measures taken by the risk management ministries based on the judgment whether the time is usual or emergency, as well as considering the practicability of

the measures, international authorities' responses or other conditions may lead to more than around 100 mSv of cumulative exposure for lifetime. FSCJ regards those risk management measures as not contradicting this assessment.

(3) I hope appropriate management measures will be taken by risk management ministries in accordance with FSCJ's assessment, the situation of detected radioactive materials in foods and the actual food intake of Japanese people.

(4) Now FSCJ is committed than ever to offer scientific information as much as possible and to conduct careful risk communication to the public for serving as an aid for understanding, together with risk management ministries.