Eliminating Negative Reputation Impact

~ Reconstruction from Nuclear Disaster & the History of Safety and Revitalization of Fukushima ~

March, 2019
Status of the Areas under Evacuation Order in Fukushima

- Dimension of areas under evacuation order is about 2.7% of the whole prefecture.
- People in 97.3% of the prefecture can live a normal life.

**Areas of Evacuation Order**

- **Dimension of Fukushima Prefecture**: 13,783 km² (3rd largest in Japan)
- **Dimension of under Evacuation Order**: 370 km²

### About 2.7% of the whole prefecture

Source: Created by the Reconstruction Agency based on materials from Fukushima Prefecture and the Support Team for Residents Affected by Nuclear Incidents
Changes in Air Dose Rate

The average air dose rate at 1m in height from the ground surface at a distance within 80km from TEPCO Fukushima Daiichi Nuclear Power Station decreased by about 77%* compared to levels in November 2011.

*The target area is divided into 250-m grid meshes and the value is calculated from the ratio of the measurement results in the central point of each grid mesh. The rate of reduction may differ when other comparative methods are used.

Source: Nuclear Regulation Authority, “Measurement Results of Monitoring by Aircraft in Fukushima Prefecture and Nearby Prefectures”
Most recent data: http://radioactivity.nsr.go.jp/en/
The air dose rate of major cities in Fukushima Prefecture is about the same level as other major cities overseas.


Source: Created by the Reconstruction Agency based on Fukushima Prefecture “Steps for Revitalization in Fukushima (24th)"
Japan has the world’s strictest level of standards for managing radioactive contamination of food. Foods exceeding the standards are not allowed to be distributed.

### Standards for Radioactive Contamination of Food

<table>
<thead>
<tr>
<th>Japan Food Sanitation Act</th>
<th>Codex (CAC)(^3) CODEX STAN 193-1995</th>
<th>EU Council Regulation (EURATOM) 2016/52</th>
<th>USA Guidance Levels for Radionuclides in Domestic and Imported Foods (CPG7119.14)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Derived intervention levels (DIL) for radioactive cesium (unit Bq/kg)</strong></td>
<td>Drinking water 10, Milk 50, Infant foods 50, General foods 100</td>
<td>Infant foods Liquid food 1,000 (Drinking water), Dairy produce (Milk) 1,000, Infant food 400, Other food 1,250 except minor food</td>
<td>Food 1,200</td>
</tr>
<tr>
<td><strong>Upper limit for radiation dosage from food per year</strong></td>
<td>1mSv</td>
<td>1mSv</td>
<td>1mSv</td>
</tr>
<tr>
<td><strong>Assumption on the proportion of food supply that is contaminated with radiation per year</strong></td>
<td>50%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

1: The DILs shown are the upper limits allowed for food to be distributed in the supply chain. DILs are set for monitoring purposes and are not standards for determining whether food is safe or not for consumption. As different countries assume different proportions of their food supply is contaminated with radiation during computation, these numbers by themselves are not comparable.

2: While the Codex Alimentarius Commission (CAC), EU and Japan all adopt 1mSv per year as the upper limit for radiation dosage from food, Japan used the assumption that a higher ratio of foodstuff could be contaminated with radiation, resulting in the lower values for DILs.

3: The CAC was jointly set up by the Food and Agricultural Organization of the United Nations (FAO) and the World Health Organization (WHO) in 1963. The CAC oversees the Codex Alimentarius, a set of international standards for food, to protect consumers’ health and to promote fair international food trade. As of August 2018, member states of CAC include 188 nations and the EU.

Source: Adapted from "Initiative to strengthen measures on negative reputation impact" by the Reconstruction Agency
Safety of Food in Fukushima Prefecture

- Announcement of results of thorough monitoring of agriculture, forestry, and fishery products prior to shipment.
- Very few foods have exceeded the standard limit (100 Bq/kg).
- No rice has exceeded the standard limit since the 2015 harvest.
- Necessary measures are in place to ensure that foods are not distributed in the market if found to have exceeded the standard limit.

**Testing of all rice produced** *(August 21, 2018 to October 31, 2018)*

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total No. samples</th>
<th>No. of samples exceeding standard limit</th>
<th>Proportion of samples exceeding standard limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown rice (produced 2018)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All bags of rice produced</td>
<td></td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

**State of monitoring by Fukushima Prefecture of agricultural, forestry and fishery products** *(April 1, 2018 to October 31, 2018)*

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total No. samples</th>
<th>No. of samples exceeding standard limit</th>
<th>Proportion of samples exceeding standard limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables &amp; Fruits</td>
<td>2,051</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Livestock products</td>
<td>2,531</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Cultivated edible plants &amp; Mushrooms</td>
<td>699</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Marine Fishery products</td>
<td>3,422</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Inner water-cultivated fish</td>
<td>34</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Wild edible plants &amp; Mushrooms</td>
<td>683</td>
<td>1</td>
<td>0.15%</td>
</tr>
<tr>
<td>Inland water Fishery products</td>
<td>724</td>
<td>3</td>
<td>0.41%</td>
</tr>
</tbody>
</table>

IAEA* recognized the efforts of Japan in monitoring food products to ensure food safety.
*(Based on IAEA’s response to the report submitted by Japan in June 2018)*

Based on information available to date, the Joint FAO/IAEA Division understands that the measures to monitor and respond to issues regarding the radionuclide contamination of food are appropriate, and that the food supply chain is controlled effectively by the relevant authorities.

*IAEA: International Atomic Energy Agency
Source: Created by the Reconstruction Agency based on Fukushima Prefecture “Steps for Revitalization in Fukushima (24th)”
Reducing the Impact on Surrounding Environment

Improvements in Radioactivity in the Surrounding Sea Area

- With several measures in place, the impact on the surrounding environment has been greatly reduced. Improvements have also been made to the working conditions, e.g. Workers can work wearing less protective gear.
- The current condition of the power plant is stable and the likelihood of a meltdown or accident is kept at the lowest possible level. Measures are in place to handle such incidents if they ever occur.

Radiation Dosage Onsite

- Monitoring posts set up at the boundaries of the site record radiation levels constantly.
- The additional effective dose from the whole facility on the site is maintained to be less than the regulatory limit, 1mSv/year. (measured at the site boundary)

Level of Radioactivity in Surrounding Sea Area (Cs137)

At time of accident: approx. 10,000 Bq/L

WHO guideline for drinking water (10Bq/L)

NOW: Radioactivity has stabilized at a level lower than WHO's guideline for drinking water.

Improvements in Working Conditions

- More areas can be accessed in general work clothes
  - With decontamination etc., workers can work wearing general work clothes instead of protective gear at 96% of the working site.
  - The site currently receives many visitors and the need for protective gear has been greatly reduced.

Provision of Warm Food Onsite

- Since Aug 2015, workers are able to enjoy warm food at the large scale resting area onsite.

*Pictures and graphs are from TEPCO.
New Stage towards Reconstruction & Revitalization

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Reconstruction Agency

http://www.reconstruction.go.jp/english/