Reconstruction from the Great East Japan Earthquake

Minister for Reconstruction
Kazunori Tanaka
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Great East Japan Earthquake and TEPCO Fukushima Daiichi Nuclear Power Station Accident in 2011

(1) Scale

- Date: March 11, 2011 at 14:46 JST
- Epicenter: 130 km off the Pacific Coast of Tohoku Region
- Scale: Magnitude 9.0
  (The largest earthquake ever recorded in Japan)

(2) Damage (as of September 2019)

- No. of human casualties:
  - Deceased 19,689
  - Missing 2,563

- No. of damaged buildings:
  - Completely destroyed 121,995
  - Half destroyed 282,939
  - Partially destroyed 748,109

Seismic intensity distribution
(Seismic intensity from 4 to 7)
163 countries and areas as well as 43 international organizations expressed their intention of assistance
24 countries and areas plus five international organizations dispatched rescue teams
We have received relief supplies and donations from 128 countries, areas and organizations

(Source: https://www.mofa.go.jp/j_info/visit/incidents/index.html)
- Dimension of areas under evacuation order is about 2.5% of the whole prefecture.
- People in 97.5% of the prefecture can lead a normal life.

(source: Fukushima Prefectural website)

(created by the Reconstruction Agency based on materials from Fukushima Prefecture and the Support Team for Residents Affected by Nuclear Incidents)
Providing Health and Living Support for the survivors

Fine-tuned response to challenges arising in each reconstruction phase

- Number of evacuees decreased from maximum 470,000 to approx. 48,000 (as of Jan 2020)

- As evacuees moved from shelters to temporary houses, public houses and eventually permanent houses, the number of inhabited temporary houses decreased from maximum 124,000 to current 7,500.

- As evacuation is prolonged and public housing construction develops, support for health care, isolation prevention and community creation becomes important.

![Graph showing number of evacuees and residents in temporary houses over time.](source: Reconstruction Agency)

<table>
<thead>
<tr>
<th>No. of residents in temporary houses</th>
<th>April 2017</th>
<th>April 2018</th>
<th>April 2019</th>
<th>Sep 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of residents</td>
<td>71,203</td>
<td>28,954</td>
<td>10,266</td>
<td>7,465</td>
</tr>
<tr>
<td>No. of houses</td>
<td>33,525</td>
<td>14,409</td>
<td>5,261</td>
<td>3,885</td>
</tr>
</tbody>
</table>

(source: Cabinet Office)
Left: Watching services by counselors helping livelihood

Right: Gathering on preparing an event at new location with aim to build a new community
The air dose rates in Fukushima Prefecture are about the same level as other major cities overseas.

Source: Created by the Reconstruction Agency based on Fukushima Prefecture “Steps for Revitalization of Fukushima (27th)”.

Typical region with high natural radiation level

Source: UNSCEAR2008 Report

Fukushima Innovation Coast Framework (Facilities for Decommissioning Research)

Administration Building

Conducting R&D on analysis/evaluation of solid radioactive waste and methods for processing/disposal of fuel debris towards the decommissioning of Fukushima Daiichi NPS

Lab-1

Dec. 2019

Naraha Center for Remote Control Technology Development

Conducting development and demonstration test of remote control equipment (robots, etc.) for the decommissioning of Fukushima Daiichi NPS

Okuma Analysis and Research Center

Accelerating basic and fundamental research on decommissioning in the medium-to long-term as a research base where domestic and foreign wisdom gathers

Collaborative Laboratories for Advanced Decommissioning Science (CLADS) (Tomioka Town)
Fukushima Innovation Coast Framework
(Fukushima Robot Test Field, Minamisoma City & Namie Town)
Fukushima Innovation Coast Framework (Fukushima Hydrogen Energy Research Field (FH2R), Namie Town)
Tokyo 2020 Olympic and Paralympic Games in the Affected Prefectures


* J-Village was used by TEPCO as its operational base for dealing with the Fukushima Daiichi Nuclear Power Station accidents in 2011. Such usage was ended in March 2017. It resumed full operation as a sporting facility in April 2019.
Many municipalities in the three disaster-affected areas are host towns.

Interactions between residents and Olympians and Paralympians from overseas are also planned to take place after the Games.
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.

<table>
<thead>
<tr>
<th>Derived intervention levels (DIL) for radioactive cesium (unit Bq/kg)</th>
<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 (GPG7119.14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking water</td>
<td>10</td>
<td>Infant foods</td>
<td>1,000</td>
<td>Food</td>
</tr>
<tr>
<td>Milk</td>
<td>50</td>
<td>Dairy Produce(Milk)</td>
<td>1,000</td>
<td>1,200</td>
</tr>
<tr>
<td>Infant foods</td>
<td>50</td>
<td>Infant food</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>General foods</td>
<td>100</td>
<td>Other food</td>
<td>1,250</td>
<td></td>
</tr>
<tr>
<td><strong>Upper limit for radiation dosage from food per year(^2)</strong></td>
<td>1mSv</td>
<td>1mSv</td>
<td>1mSv</td>
<td>5mSv</td>
</tr>
<tr>
<td><strong>Assumption on the proportion of food supply that is contaminated with radiation per year(^2)</strong></td>
<td>50%</td>
<td>10%</td>
<td>10%</td>
<td>30%</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.

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>Brown rice (produced 2018)</th>
<th>Total No. of 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>
<td></td>
</tr>
<tr>
<td>Livestock products</td>
<td>2,531</td>
<td>0</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Cultivated edible plants &amp; Mushrooms</td>
<td>699</td>
<td>0</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Marine Fishery products</td>
<td>3,422</td>
<td>0</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Inner water-cultivated fish</td>
<td>34</td>
<td>0</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Wild edible plants &amp; Mushrooms</td>
<td>683</td>
<td>1</td>
<td>0.15%</td>
<td></td>
</tr>
<tr>
<td>Inland water Fishery Products</td>
<td>724</td>
<td>3</td>
<td>0.41%</td>
<td></td>
</tr>
</tbody>
</table>

* IAEA: International Atomic Energy Agency

Source: Adapted from “Initiative to strengthen measures on negative reputation impact” by the Reconstruction Agency

Source: Created by the Reconstruction Agency based on Fukushima Prefecture “Steps for Revitalization in Fukushima (24th)
Reference
1. Support to victims

Continued support to victims—Mental and nursing care, “reconstruction of the heart” project in order to create community and motivation in life, counseling service on housing and living

2. Reconstruction of houses and towns

- Arrangement of public housing and residential areas in preparation for rebuilding victims’ houses (to be completed by March 2021)
- Transportation and logistics network as development bases, such as roads, railways and ports

3. Revival of industry and workplaces

- Assistance for seafood processing industry and tourism industry that still face damaging rumors
- Support for resuming shopping districts so as to restore lively neighborhood
- Support for reviving industry and workplaces as well as attracting new enterprises in order to return locals to 12 municipalities in Fukushima and rebuild life there

4. Reconstruction and revival of Fukushima

- Designation of Special Reconstruction and Restoration Bases in Difficult-to-Return Areas
- Preparation of living environment for return in areas where evacuation order lifted
- Acceleration of reconstruction and recovery from the nuclear accidents by way of interim storage facilities, Fukushima Innovation Coast Framework, independence support by a joint private and public team, response to damaging rumors
Moving to Higher Ground (Miyako City, Iwate Pref.)

After the disaster (May 2011)

Construction in progress (Nov 2014)

Houses are being built on the new land area (Nov 2016)
What are the “Recovery and Reconstruction Games”?

Although the 2020 Games are referred to as the “Tokyo” Olympic and Paralympic Games, one of the key pillars promoted at the time of the bid was the support the Games would provide to recovery and reconstruction from the Great East Japan Earthquake, as an event that would involve all of Japan.

**In other words**

The Games are an excellent opportunity to bring the world's attention to three disaster-affected prefectures (Iwate, Miyagi, Fukushima).

**Torch Relay**

⇒ To arrive at Matsushima base in Miyagi Prefecture

⇒ Prior to the Torch Relay, the torch will be on public display in Iwate, Miyagi and Fukushima prefectures.

⇒ The starting point will be J-Village in Fukushima.

⇒ The Torch Relay will take place three days each in the three prefectures, passing through areas that are symbols of recovery and reconstruction.

**Games**

⇒ Before the opening ceremony, some Olympic matches and sporting events will be held.

- Miyagi Prefecture: Football @ Miyagi Stadium

- Fukushima: Baseball/Softball @ Azuma Baseball Stadium

- Iwate: Rugby World Cup matches @ Kamaishi Unosumai Memorial Stadium
Introduction in different media

↓ Below
“Best in Travel 2020, Top Regions,” Lonely Planet

(Source: https://www.lonelyplanet.com/best-in-travel/regions)

↑ Above
“Where to go on holiday in 2020: the alternative hotlist,” The Guardian


→ Right
“Here are the best trips to take in 2020,” National Geographic

(Source: https://www.nationalgeographic.com/travel/features/best-trips-2020/)

3. Tōhoku, Japan

Japan will be buzzing in 2020 as the world celebrates Tokyo for the Olympic Games. It’s always a popular destination for travelers, who go to see the 2011 tsunami in Sendai, visit the UNESCO World Heritage site of the Tōhoku region’s snow monkeys, explore the ancient capital, Nagano, and soak in the hot springs of Hakone and Lake Toya. Tōhoku is an area rich in history and culture, offering a wealth of traditional crafts, festivals, and cuisine. From the snow-covered peaks of the Japan Alps to the sandy beaches of the Pacific, Tōhoku has something for everyone. Whether you’re a nature lover, a history buff, or just looking for a relaxing getaway, Tōhoku has it all. For those interested in sustainable tourism, Tōhoku offers a range of options, from eco-friendly accommodations to off-the-beaten-path cultural experiences. From the stunning landscapes to the friendly locals, Tōhoku is a region that truly has something for everyone. Whether you’re planning a trip or simply dreaming of a destination, Tōhoku is a place you won’t want to miss.

(Source: https://www.lonelyplanet.com/best-in-travel/regions)

Tohoku, Japan

Why go now: Escape the Olympic crowds naturally

What to know: Less than three hours by train from Tokyo, home of the 2020 Olympic Games, Tohoku should get a gold medal for best unknown travel wonderland. Comprising the six northernmost prefectures on Japan’s main island of Honshu, this region features pristine forests, glaciers and crater lakes, thousand-year-old temples and shrines, and venerable local festivals — yet less than a quarter of international travelers come here. Walk the Michishibin Coastal Trail, which runs for 600 miles from Aomori to Fukushima. The latter was devastated by the 2011 tsunami, and the newly opened trail is a stirring symbol of the area’s rebirth. For skiers, Tohoku regularly records some of the planet’s heaviest snowfalls, and resorts such as Appi Kogen are exhilaratingly uncrowded.

When to go: Year-round How to go: Base yourself at Koganezakai Parofushi Onsen, in Aomori, which offers 70 rooms and an open-air hot spring with views over the Sea of Japan.