

# HIGHLIGHTING *Japan*

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## TOHOKU: TRADITIONS AND NEW DIRECTIONS

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**TOHOKU: TRADITIONS  
AND NEW  
DIRECTIONS**

**N**ine years after the Great East Japan Earthquake of March 2011, recovery in the Tohoku region of northeast Japan is progressing. We take a look at some of the recovery initiatives, while also taking in some of the landscapes and traditions that continue to define Tohoku.

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**ON THE COVER**  
Tohoku: Traditions and New Directions  
Photo: Courtesy of J-Village

**EDITORS' NOTE**  
Japanese names in this publication are written in Japanese order: family name first, personal name last.

## JAPAN-EU LEADERS VIDEO TELECONFERENCE MEETING



Japan-EU Leaders Video Teleconference Meeting

On May 26, 2020, Mr. Abe Shinzo, Prime Minister of Japan, held a Japan-EU Leaders Video Teleconference Meeting with H. E. Mr. Charles Michel, President of the European Council and H. E. Dr. Ursula von der Leyen, President of the European Commission.

This meeting marked the first talk to be held among the three leaders since the formation of new EU leadership in December last year. The exchange of opinions that followed focused on countermeasures against the spread of the novel coronavirus disease (COVID-19), including economic measures aimed at recovery, while the leaders affirmed the collaboration between Japan and the EU. The overview of the talk is as follows.

The three leaders asserted Japan

and the EU would cooperate closely as strategic partners with shared fundamental values and adopt even greater roles and responsibilities to measures against COVID-19 infection.

The EU stated that Europe would endeavor to implement economic measures following its Roadmap for Recovery in order to reliably achieve economic recovery. Prime Minister Abe responded by firstly explaining Japan's economic measures, then expressed the increased importance of constructing and expanding a highly secure and reliable telecommunications infrastructure from the perspective of maintaining economic activity during the current global crisis. He also added that, for reasons of guaranteeing security, it was essential to manage appropriately the con-

struction of a resilient supply chain and direct investment by foreigners, as well as continuing to make progress in fields such as digital transformation of the economy including 5G and beyond 5G research and development, while maintaining cooperation between Japan and the EU.

With regard to Japan-EU Relations, Prime Minister Abe conveyed his support for the strong and united EU as strategic partners with shared fundamental values. And he also expressed the effective application of Japan-EU Economic Partnership Agreement (EPA) would prove even more important in ensuring steady economic recovery of both sides following the COVID-19 crisis, as well as his determination to develop greater cooperation under Japan-EU Strategic Partnership Agreement (SPA), such as sustainable connectivity, quality infrastructure, and global issues. The EU stated that the Japan-EU relationship is closer than ever based on EPA and SPA, and bilateral cooperation should be deepened in the wide fields including green deal and digital which the EU emphasizes. The three leaders shared the view to arrange to convene at the next Japan-EU Summit once the COVID-19 situation has been resolved.

### FOR INFORMATION

For information for foreign nationals regarding Japan's measures against COVID-19 infection, please visit "Coronavirus related information" in A Daily Life Support Portal for Foreign Nationals on the Ministry of Justice website at [www.moj.go.jp/EN/nyuukokukanri/kouhou/m\\_nyuukokukanri10\\_00001.html](http://www.moj.go.jp/EN/nyuukokukanri/kouhou/m_nyuukokukanri10_00001.html)

The Japan National Tourism Organization also provides advisory information to people from overseas on its website at [www.japan.travel/en/coronavirus/](http://www.japan.travel/en/coronavirus/)



# Tohoku: Traditions and New Directions

A little over nine years have passed since the Great East Japan Earthquake of March 2011, and recovery in the hard hit Tohoku region is progressing steadily. We interview Ishida Masaru, Director-General of the Reconstruction Agency of the Japanese government, to hear his thoughts on the overall state of recovery in the affected areas and the challenges that still lie ahead. We introduce some inspiring examples of reconstruction, such as the redevelopment of Onagawa Town in Miyagi Prefecture and the reopening of J-Village in Fukushima Prefecture, the national training center for football. We take a look too at some of the remarkable landscapes, culture and food that help to define the “North East” of Japan, Tohoku.

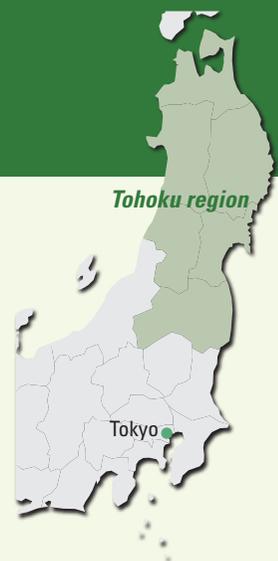


Photo: Tanaka Satoshi

# The Tohoku Region, Moving into the Future

**A**BOUT nine years have passed since the Great East Japan Earthquake of March 2011, and the recovery of people's lives, infrastructure and industry in the affected areas in the Tohoku region is progressing. We spoke with Ishida Masaru, Director-General of the Reconstruction Agency of the Japanese government, about the overall state of the recovery and recovery initiatives in the affected areas.

**About nine years have passed since the Great East Japan Earthquake. Tell us about the state of the recovery and about government support in Iwate, Miyagi and Fukushima Prefectures in the Tohoku region which were severely damaged.**

Right after the earthquake, there were approximately 470,000 evacuees. As of April 2020, the number of evacuees was about 44,000. Reconstruction of housing for victims is progressing, with 30,000 public housing units and 18,000 houses in the residential area completed for housing to move to higher ground. Additionally, the reconstruction of infrastructure, including roads, ports, railways, agricultural facilities and seafood processing facilities in areas that were damaged by the tsunami and earthquake, has mostly been completed. Construction is currently progressing on the Reconstruction Roads, which run from north to south along the Sanriku Coast on the Pacific Ocean, and the Reconstruction Support Roads, which connect the coastal and inland areas from east to west, both networks of which support the local economies of affected areas. Approximately 70% of the total 570 km of roads have been opened, and the remaining sections are planned to open this year. Reconstruction of the affected areas is progressing steadily.

As there are a variety of problems following long-term life as evacuees in the affected areas,

as well as new lifestyles in public housing, many initiatives are being carried out, such as consultations on health and rebuilding life for affected people, support for everyday life, support for community creation, and more. At the same time, initiatives are being carried out to advance the rejuvenation of industries, including opening up new markets for seafood products, reviving tourism geared towards overseas visitors, dispelling negative reputational damage to agricultural, forestry and fishery products, and so on.

**Tell us about a recent example that symbolizes the recovery of the affected areas.**

One would be the Rugby World Cup match held in Kamaishi City, Iwate Prefecture, in September 2019. The match was held at the Kamaishi Unosumi Memorial Stadium, built on the site of former elementary and junior high schools that were completely destroyed by the tsunami, and this event showed the world a glimpse of an affected area where recovery is progressing.

Another was when the Takata Matsubara Tsunami Reconstruction Memorial Park partly opened in Rikuzentakata City, Iwate Prefecture, in September of the same year. Inside the park, facilities were built to pass on the memories of the damages and lessons learned from the earthquake. In December of the same year, part of the Minamisanriku Town Reconstruction Memorial Park opened in Minamisanriku Town, Miyagi Prefecture, and the entire park is set to open in autumn of this year.

Additionally, full operations resumed in March 2020 along the JR Joban Line, which was partially suspended within Fukushima Prefecture due to the Great East Japan Earthquake, and the opening of the entire line connecting Tokyo with Miyagi is an accomplishment symbolizing the recovery of



the affected areas.

**Tell us about the state of radiation levels in Fukushima Prefecture, where the Fukushima Daiichi Nuclear Power Station accident occurred, as well as the safety of agricultural, forestry and fishery products and initiatives towards recovery.**

The radiation levels in major cities within Fukushima Prefecture are currently at about the same level as other major cities elsewhere in Japan and overseas. Additionally, the areas under evacuation order total just 2.4% of the entire prefecture, and currently, normal life is possible in the majority of areas.

As for food products in particular, agricultural, forestry and fishery products undergo a strict inspection before shipment, and products that exceed standard levels are not circulated into the market. The standard level of radioactive material in foods is set at 100 Bq/kg – stricter than the 1,000 Bq/kg defined by the Codex Alimentarius Commission, an international organization that establishes international standards for food safety and quality – and there have been almost no agricultural, forestry or fishery products that have exceeded this standard in recent years.

Various initiatives are being carried out in Fukushima Prefecture for industry recovery. One of those is the Fukushima Innovation Coast Framework, which aims to create a new industrial infrastructure. Focusing on the coastal regions of the prefecture, this Framework is moving forward through inviting new corporations to the prefecture, as well as advancing cutting-edge research and development related to the decommissioning of the Fukushima Daiichi Nuclear Power Station and in the fields of technology, robotics, energy, agriculture, medicine, aerospace and more. As part of the Framework, both the Fukushima Robot Test Field in Minamisoma City and Namie Town, which allows robotics research and demonstration experiments on unmanned aircraft and disaster response robots, and the Fukushima Hydrogen

Energy Research Field in Namie Town, which features the world's largest hydrogen production unit, opened in March of this year, respectively.

**What kinds of initiatives are being carried out in the affected areas in preparation for the Tokyo Olympics and Paralympics, which have been postponed until 2021?**

The government defined the Olympics and Paralympics in Tokyo as the “Olympic Games for Recovery,” and this policy has not changed, irrespective of the postponement. The government takes initiatives in collaboration with the affected areas so that the Olympics and Paralympics act as a boost for recovery, and will show the world a glimpse of the affected areas which are recovering thanks to warm support from all over the world. Many local governments that were affected by the earthquake have already become “Arigato (*thank you*)” Host Towns for Supporting Reconstruction, interacting with countries and regions that have supported the affected areas. In addition to using recycled materials from the temporary housing built in the affected areas as part of the torch for the Olympic Torch Relay that will travel around the affected areas and all over Japan, victory bouquets for medal recipients will also be made mainly using flowers grown in the affected areas.

I hope that many people from overseas will come and visit the affected areas leading up to and after the Olympics and Paralympics once the novel coronavirus pandemic has ended. We will continue to better distribute information in the future on a wide variety of topics, including the charming nature, culture and food of the affected areas. ▮

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Interview by SAWAJI OSAMU

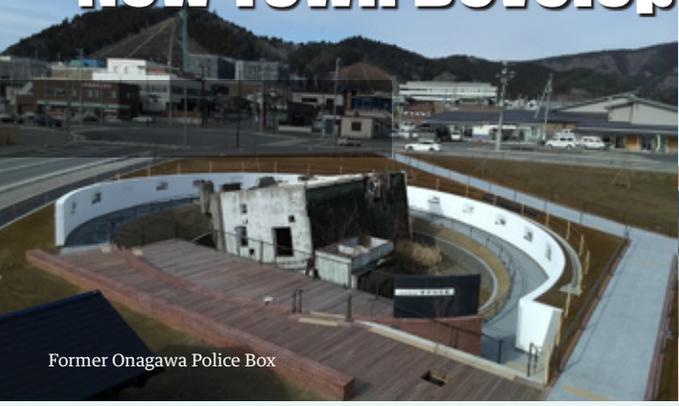
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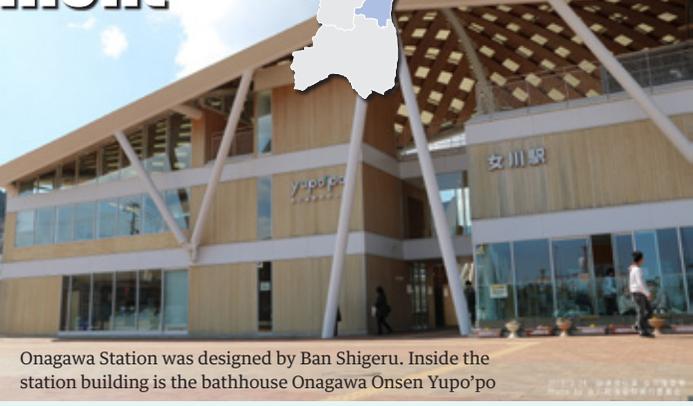
# Tsunami Recovery and New Town Development



Onagawa Town



Former Onagawa Police Box



Onagawa Station was designed by Ban Shigeru. Inside the station building is the bathhouse Onagawa Onsen Yupo'po

**Heavily damaged by the tsunami which followed the Great East Japan Earthquake of March 2011, Onagawa Town in Miyagi Prefecture has achieved safety and renewed vigor by rebuilding its urban district in a compact form.**

## SAWAJI OSAMU

**O**NAGAWA Town in Miyagi Prefecture is located on the Pacific coast of the Tohoku region of northeast Japan, which is characterized by its many intricate small inlets and bays. An abundance of fishery products are caught year round off Onagawa in waters

All photos: Courtesy of Onagawa Town

close to the island of Kinkasan, one of the world's most productive fishing grounds. Onagawa has thus developed as a port town based on the fishing and marine product processing industries.

However, the Great East Japan Earthquake that occurred on March 11, 2011 inflicted devastating damage on the town. A tsunami close to 15 meters high left 827 people dead and missing among a population of about 10,000, and destroyed almost all the buildings along the coast.

About six months after the earthquake, the town decided on the restoration plans and started building a new port town based on the basic vision of disaster reduction. Before the earthquake, many residents of

Onagawa lived on the limited area of flat land surrounded by mountains along the coast. To reestablish itself as a town where people can live in safety, the planners cut into the mountains, developed residential areas, raised the embankment of the flat land with the cut soil, concentrated educational, medical, transport, commercial and administrative centers around Onagawa Station, and reconstructed a compact central urban district. The intention was to reproduce a town that could continue to create liveliness, even amid the acceleration of depopulation, by concentrating the flows of people from residential areas to a central urban district.

Onagawa Station of Japan Railways reopened in March 2015, four years after the earthquake. The new station building, featuring a white roof based on an image of a black-tailed gull in flight, was designed by world-famous architect Ban Shigeru. Inside the station building is the hot spring facility Onagawa Onsen Yupo'po. The wall of the bathhouse is decorated with a beautiful tile painting by Senju Hiroshi, a renowned Japanese painter. An observation deck on the third floor affords a view of Onagawa Town and Onagawa Bay. Onagawa Station made a new start as the gateway to the town.

In addition, in December 2015, Seapal-Pier Onagawa, a commercial facility based on the concept of “a town with a park from which people can enjoy seeing the sea,” opened along a brick promenade linking Onagawa Station and the port of Onagawa,



The central area of Onagawa Town immediately after the earthquake

This is a revised version of the article that appeared in the May 2019 issue of *Highlighting Japan*.

and in December 2016, Local Market Hama Terrace, a tourism and specialty store dealing in fresh fish, processed fishery products and other local specialties, also opened for business. These facilities are not only places where people both inside and outside the town can gather to enjoy the landscape surrounded by mountains and the sea, but also serve as landmarks on an evacuation route, a brick road leading to high ground in case of disaster.

Doi Hideki, an official of Onagawa Town, says, “Inside the two facilities, not only did business recommence after the earthquake, but new businesspeople from both inside and outside the town also established about thirty-five shops such as restaurants, souvenir shops and daily commodities shops. This has made the place livelier than it was before the earthquake.”

In February 2013, students from Onagawa Junior High School played a central role in launching the “Onagawa Inochinosekihi” project of building stone monuments, inscribed with lessons from the earthquake, at all twenty-one beaches in the town under the slogan of “Protecting lives 1,000 years on.” To date, twenty monuments have been built.

Construction of “Remnant from the Great East Japan Earthquake: The Former Onagawa Police Box” was completed in February 2020. The police box was the first reinforced concrete construction to be toppled by a tsunami in Japan, and a rare case worldwide. Onagawa Town wants to pass on to future generations the memories and lessons of the Great East Japan Earthquake as well as the people’s path out of despair toward recovery, and wishes that the people of the future won’t have to experience the same sadness and suffering. That is why this “Former Onagawa Police Box” was saved as a remnant of the disaster.

Nine years have passed since the Great East Japan Earthquake, and as new facilities and the town scenery are coming back to life, with fishery facilities, businesses, local government offices, lifelong learning centers and libraries in place, the people of Onagawa are united in heart and marching into the future with firm determination. 



# J-Village: A Symbol of Restoration

**Following the Great East Japan Earthquake in March 2011, J-Village in Fukushima Prefecture, formerly the national training center for football, was used exclusively as an operational base to deal with the disaster at the Fukushima Daiichi Nuclear Power Station. However, in July 2018, J-Village was reborn and restarted as a symbol of restoration, and is currently regaining the appearance it had before the disaster, with about 490,000 visitors in 2019.**

## UMEZAWA AKIRA

**J**-VILLAGE in Naraha Town, which faces the Pacific Ocean in eastern Fukushima, was unveiled in 1997 as Japan's first national training center for football. The Argentina National Team used the facility as their training camp at the time of the 2002 FIFA World Cup, which was jointly hosted by Japan and Korea.

When the Great East Japan Earthquake struck the area on March 11, 2011, it was used as an operational base to cope with the disaster at the Fukushima Daiichi Nuclear Power Station, which was managed by Tokyo Electric Power Company. Takana Yusuke of J-VILLAGE Inc. explains:

“Immediately after the disaster occurred, J-Village was converted into a hub to enable the relevant people to congregate, including the members of the Self-Defense Forces, fire departments and Tokyo Electric Power Company who were involved in the disaster response operations. They prepared everything here before traveling to the accident site by bus.”

Workers' dormitories were constructed on the premises, and the turf fields were graveled to create parking spaces. J-Village had no choice but to suspend its business after the earthquake.

However, the appointment of Tokyo as the host city of the 2020 Summer Olympics and Paralympics prompted the venue's reopening. In January 2015, Fukushima Prefecture drew up the J-Village Restoration and Redevelopment Plan with a view to resuming the operation of J-Village as a symbol of restoration before the 2020 Summer Olympics and Paralympics. They initiated the process for reopening with a new mission covering five core areas: (1) Show people in Japan and overseas how Fukushima Prefecture has risen to the challenge of restoration; (2) Lead the restoration and regeneration of the area; (3) Contribute to the promotion of sports; (4) Nurture top athletes; and (5) Contribute to the health

# TOKYO 2020 OLYMPIC TORCH RELAY



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promotion of the local residents.

After restoration work carried out over seven years and four months, J-Village resumed operation on July 28, 2018 after an extended closure. Approximately 1,000 people attended the commemorative ceremony to celebrate the resurrection of J-Village, including Hisako, Princess Takamado, Honorary Patron of the Japan Football Association; the Governor of Fukushima Prefecture, members of the football community and residents of Fukushima Prefecture.

One stadium with spectator stands, seven natural turf pitches, two artificial turf pitches, and a roofed all-weather practice field have been rebuilt as the new J-Village, which occupies approximately 49 hectares in total. The practice field of approximately 10,000 square meters is the largest indoor practice field in Japan, and it is suitable for multiple sports including football and rugby. A seven-story hotel with a convention hall that can accommodate up to 300 people was also constructed to meet the demand from businesses, including the Fukushima Innovation Coast Scheme drawn up by the government and Fukushima Prefecture to create robot and energy-related new industries and employment

1 The Olympic flame on display at J-Village, April 2020

Photo by Tokyo 2020

2 The J-Village Sports & Community Hotel

3 The J-Village stadium and natural turf pitch

4 Children gather for a sports event

Photos: Courtesy of J-Village

opportunities, as well as conferences held to bring decommissioning experts together.

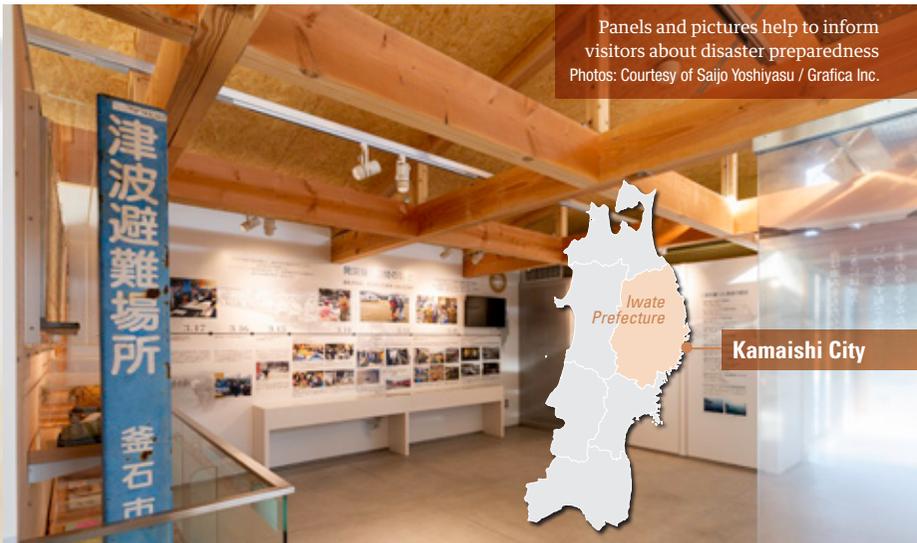
In 2019, J-Village attracted approximately 490,000 visitors. Among them was the Argentina National Team, which used the venue as a training camp during the Rugby World Cup held in Japan from September to November 2019. It was also decided that the Olympic torch relay inside Japan would start in J-Village, ahead of the 2020 Tokyo Olympics. However, this plan was revised due to the postponement of the games, and a public exhibition of the Olympic flame was held in J-Village in early April, with appropriate COVID-19 infection control measures in place, shining a light on the future.

“We hope to welcome people from around the world here by cooperating with the local residents, and show them how Fukushima has risen to the challenge of restoration,” Takana says.

J-Village has made a new start as a place where the joy of sports can be shared with people around the world. **■**

This is a revised version of the article that appeared in the October 2019 issue of *Highlighting Japan*.

Kikuchi Nodoka  
Photo: Courtesy of Kikuchi Nodoka



Panels and pictures help to inform visitors about disaster preparedness  
Photos: Courtesy of Saijo Yoshiyasu / Grafica Inc.

Kamaishi City

## Sharing Stories of Disaster Preparedness

**Kamaishi City, Iwate Prefecture was one of the hardest hit areas during the Great East Japan Earthquake in March 2011. The Inochi o Tsunagu Miraikan was recently established there as a center for disaster preparedness education, passing on the history of the tsunami disaster to future generations. Kikuchi Nodoka, a storyteller at the Miraikan, shares her experience of the disaster that hit her hometown with visitors from Japan and overseas. She explains how important it is to protect your life in a disaster.**

### UMEZAWA AKIRA

**I**N March 2019, the Inochi o Tsunagu Miraikan was established in Unosumai Town, Kamaishi City, Iwate Prefecture. Adjacent to Unosumai Station on the Sanriku Railway Rias Line, the facility is designed to pass on the history of the disaster to future generations and promote disaster preparedness education. During the initial year of its establishment, the center has seen a total of over 68,000 visitors, including disaster prevention

experts from the local communities as well as from all over Japan and around the world.

The facility has an exhibition room with displays including panels and photographs that introduce the destruction in Kamaishi, the history of recovery from the disaster, the initiatives to promote disaster preparedness education, and items such as a clock that stopped ticking at the moment the tsunami hit. Visitors can access a virtual tsunami system using

computer graphics technology.

One of the exhibits chronologically introduces evacuation protocols and detailed routes taken by 570 students at Kamaishi Higashi Junior High School and Unosumai Elementary School. Both schools were completely destroyed by the tsunami, but all of the students escaped the surging sea by running 1.6 kilometers for 30 minutes to the surrounding hills. This evacuation gathered a lot of media attention as a successful example of disaster management education.

“The tsunami will come soon after the shaking stops. I must evacuate to the surrounding hills as quickly as I can. As soon as this idea entered my mind, my body reacted, thanks to the routine emergency drills that I had experienced before,” says Kikuchi Nodoka, a storyteller at the Inochi



o Tsunagu Miraikan.

Kikuchi was a third-year student at Kamaishi Higashi Junior High School when the Great East Japan Earthquake struck on March 11, 2011. She, her classmates and teachers fled to the surrounding hills to escape the surging sea as a siren wailed continuously across the area. They ran for their lives along with the students from the adjacent elementary school, with whom they had conducted regular evacuation drills to ensure that they survived in an emergency.

The Sanriku region, where Kamaishi is located, has a history of significant seismic activity and devastating tsunami damage. In an attempt to prepare the children for another disaster, the Kamaishi Government advocates disaster management education. Consequently, 1,927 elementary students and 999 junior high school students survived the 2011 disaster, a survival rate of 99.8%, but meanwhile, the city was entirely devastated. In the city, approximately 1,100 people were killed or listed as missing.

“Many of the schoolchildren in the city survived the tsunami, but so many people in our region died. I have come to realize that our generation must address regional disaster management issues seriously,” Kikuchi says.

Having worked as a storyteller at the facility since its establishment, Kikuchi shares her experience and disaster-prevention education with visitors. She has been invited to address audiences

at conferences and symposiums focused on disaster prevention initiatives. Through these activities, Kikuchi shares lessons learned from the disaster.

“Through a number of activities, I have built up a network of people engaged in regional disaster management activities across Japan,” Kikuchi says. “Going forward, I will stay active in passing the insights and expertise learned from my colleagues on to the youth in local communities.”

The Inochi o Tsunagu Miraikan holds exhibitions on new themes almost every month. Last November, for example, the facility hosted an exhibition displaying photos of Unosumai Town before the disaster which attracted visitors from across the region. People appreciated the exhibition as it reminded them how the town once looked at a time when recovery efforts including the development of new facilities and roads as well as land readjustment projects are changing the city’s landscape significantly.

Also displayed in the exhibition hall is a typical example of an evacuation shelter space allocated to a family of four in the wake of the disaster, which was reproduced with reference to the memories of the evacuees and photographs taken on site.

Struck by the exhibition showing that the tsunami evacuees had

to stay in a small living space surrounded by cardboard partitions with limited supplies, overseas visitors to the facility found their visit to be a significant opportunity to understand the need for improvements in evacuation shelter and relief supplies delivered to those affected.

International rugby fans visited the Inochi o Tsunagu Miraikan before and after the games when the 2019 Rugby World Cup was held in Japan.

“I was so glad that so many people from around the world came to visit the facility. I was deeply touched when I saw visitors in tears at the exhibits as if they were also disaster victims.”

When asked about the challenges confronting disaster prevention, Kikuchi says without hesitation, “It’s indifference. You cannot forget the people who sacrificed their lives to save other citizens who were not prepared for the disaster. Quite a few of the tsunami victims included ordinary citizens with a keen interest in disaster prevention calling for evacuation as responsible members of local community organizations.” Indifference puts you and the people around you at risk. I will stay committed to local community development and make people realize the great importance of disaster prevention.” 

*Natto with miso soup and rice*  
Photo: June. / PIXTA

# The Fermented Foods of Tohoku



**Tohoku is home to many food products made from locally harvested ingredients that have been fermented. Initially produced out of necessity in response to the challenges of its harsh winter climate, the fermented foods of Tohoku have become an essential part of the region's dietary culture.**

## SAWAJI OSAMU

**A**LL over the world, there are many foods made by fermenting ingredients through the natural processes of microorganisms. In Europe, for example, there are the fermented milk products of Greece, Italy and France; in Asia, there are the fermented grain spirits of China and fish sauces of Vietnam and Thailand. In Japan too, many types of fermented foods and drinks have been produced, including miso, soy sauce, sake, *natto* (soy beans), rice vinegar, *tsukemono* (pickles) and *katsuoabushi* (dried bonito).

Koizumi Takeo, the Fukushima-born son of a sake brewer and emeritus professor at Tokyo University of Agriculture, has researched fermented foods from

around the world. According to Professor Koizumi, “No other country has as many types of fermented foods as Japan. This is because Japan is humid and the conditions are well suited to reproducing the microorganisms that ferment food materials. Since Japan also has abundant food materials such as fish, vegetables and grains, there are naturally more types of fermented food.”

One of the main advantages to fermenting foods is that such foods can be stored for long periods of time. In the days before refrigerators, fermentation was necessary to preserve food. The Japanese eat a great deal of fish, so there are numerous fermented foods using fish. Well-known examples are *shiokara*, made of cut, salted and fermented squid and its intestines; and *narezushi*, made of fish pickled and fermented together with rice. The Tohoku region in northeast Japan has a particularly wide variety of fermented food. According to Professor Koizumi, one reason is its harsh winter climate. Since people could not harvest farmed products in the winter because of the cold and snow, they made fermented foods that could be preserved to eat during the winter



A variety of *tsukemono* in a *tsukedoko* pickling bed  
 Photo: Hattori Shige / PIXTA

Soybeans (left) are fermented with salt and rice *koji* (right) to make *miso* paste (center)  
 Photo: Hattori Shige / PIXTA

months. The people of Tohoku produce a wide variety of *tsukemono* (pickles), for example. They have historically pickled vegetables such as *daikon* radish, cucumber, Chinese cabbage and eggplant in a *tsukedoko* (bed) of miso, soy sauce and *koji* (rice malt). Vegetable *tsukemono* contain abundant vitamins made by microorganisms, are rich in dietary fiber and extremely healthy.

“Tohoku was traditionally an agricultural region,” explains Professor Koizumi. “People sweat from farm work in the summer and lose salt. *Tsukemono* contain a great deal of salt that replenishes people’s supply. The people of Tohoku needed fermented food in order to survive.”

The people of Tohoku eat a lot of *natto*, which is made by fermenting soybeans. According to the Family Income and Expenditure Survey by the Statistics Bureau of the Ministry of Internal Affairs and Communications, the highest expenditure on *natto* among all major cities in Japan (average from 2017 to 2019) was in Fukushima in Fukushima Prefecture, followed by Morioka in Iwate Prefecture, with fourth place taken by Yamagata in Yamagata Prefecture - all in Tohoku. According to Professor Koizumi, today, the people of Tohoku commonly eat *natto* on rice as do people in other areas, but during and before the Meiji period (1868-1912), they ate it in their miso soup. Since the Nara period (710-794), the Tohoku farmers grew rice in the fields and soybeans on the ridges between them. Soybeans are the main ingredient of tofu and miso. The people of Tohoku put tofu in their miso soup together with *natto*.

“Prior to the Meiji period when Japan modernized, the Japanese people, including those of Tohoku, ate scarcely any meat, but soybeans have

as much protein as meat. People were thus able to obtain plenty of protein from miso soup, *natto* and tofu without having to eat meat, which is why the people of Tohoku were able to build stamina to get through the cold winter,” says Professor Koizumi.

Of the many kinds of fermented foods in Tohoku, Professor Koizumi highly recommends that inbound visitors to Japan try *iburigakko* from Akita Prefecture. *Iburigakko* is daikon pickled in *nukazuke* (salted rice bran) and smoked with wood. There are many food products around the world that are smoked, such as coffee, whisky and ham, but *iburigakko* is the world’s only smoked fermented pickle.

“Many fermented food products have a unique smell and taste and may not suit the palates of people overseas who are not used to them,” says Professor Koizumi. “But *iburigakko* has a familiar wood smoke smell and I believe people of other nationalities would have no problem eating it.”

The combination of climate, agricultural produce and fermentation have led to the creation of countless distinctive, delicious and nutritious foods in northeast Japan. **7**



Slices of the smoked fermented *daikon* radish known as *iburigakko*  
 Photo: midori\_chan / PIXTA

This is a revised version of the article that appeared in the February 2013 issue of *Highlighting Japan*.



# The Deep Mochi Culture of Iwate



**Mochi is a traditional Japanese food enjoyed around the country. In Iwate Prefecture, however, a unique culture of mochi has developed and been passed down from generation to generation for some 400 years.**

**SATO KUMIKO**

**M**ochi, which is traditionally prepared by steaming glutinous rice, pounding it in a wooden or a stone mortar until it becomes sticky, and rounding or flattening it, has been considered a sacred food since ancient times. Even today, all over Japan, eating or offering mochi is a custom associated with significant events such as the New Year. In Iwate

- 1 A typical example of a *mochi honzen* full-course dinner
  - 2-4 Mochi dishes presented at the Nationwide Local Mochi Specialties Summit
  - 5 Numerous mochi dishes
  - 6 Mochi dishes presented at a regional event
- Photos: Courtesy of Ichinoseki City (1, 5); Courtesy of Executive Committee of the National Mochi Festival (2-4, 6)

Prefecture, however, some places have such a characteristic culture of mochi cuisine that they have a mochi calendar that requires local people to eat mochi on particular days throughout the year.

Ichinoseki City and Hiraizumi Town were once the territory of the Sendai domain that ruled the stretch of land from what is now southern Iwate Prefecture to Miyagi Prefecture and northern Fukushima Prefecture during the Edo period (1603-1867). The first lord of the domain, Date Masamune, is known as an outstanding samurai general who laid the foundations of the domain's prosperity with numerous policies.

According to Sato Koki, Chairman of the Ichinoseki Mochi Culture Promotion Council, "Based on an order from the Sendai domain, farmers were required to make mochi and offer it to the gods on Days 1 and 15 of every month. I think that it was one of the domain's policies on cultural promotion featuring locally produced glutinous rice." This practice spread to ordinary citizens as well, to the extent people were eating mochi more than sixty days a year, including at seasonal events, leading to the creation of the "mochi calendar."

"The protocol associated with mochi cuisine originated from samurai culture, which places importance on etiquette. Even today, detailed etiquette exists for mochi cuisine on ceremonial occasions. Because my wife is from a different part of Sendai domain than I am, she was confused early on in our marriage," says Sato.

*Mochi honzen* was a full-course dinner eaten at banquets and other such occasions by the samurai of the Date domain. Honzen cuisine is a formal meal for celebratory and similar events, said to have originated with the samurai etiquette of the Muromachi period (1333-1573). Although the Sendai domain complied with this protocol, it also invented mochi honzen, a formal meal based on mochi. The meal included a range of mochi dishes such as *zoni*, a soup containing *anko* (red bean paste) and mochi, as well as *zunda* (mashed beans) and *june* (mochi mixed with ingredients like perilla and freshwater shrimp).

Mochi honzen meals are hosted by a person called the *otorimochiyaku*. After the *otorimochiyaku* says, "I am very happy to have all of you here today," people enjoy eating their mochi meal while following instructions from the *otorimochiyaku*.

"Our food culture seems unique in the eyes of people in other regions. The local people said that mochi was everywhere around the country. But we came to consider that mochi culture in Ichinoseki and Hiraizumi could be said to be a local food culture that is peculiar to this region," says Sato.

The Ichinoseki Mochi Culture Promotion Council, which was established in 2010, holds seminars to teach mochi culture through lectures and practice, and since 2012 has held the Nationwide Local Mochi Specialties Summit, gathering characteristic local mochi from all over the country in one place. (The next summit will be held as the National Mochi Festival in the spring of 2021.) In 2016, Ichinoseki and Hiraizumi were designated as "SAVOR JAPAN" (farm stay areas communicating food culture overseas) by the Ministry of Agriculture, Forestry and Fisheries of the Japanese government.

In recent years, mochi dishes in Ichinoseki and Hiraizumi, which were originally adorned with colorful seasonal ingredients, are said to include an even greater variety of ingredients including cheese, tomato and curry, and now number more than 300.

"Mochi dishes have become extremely casual. However, we would like to properly pass the background of the creation of the culture of mochi cuisine and our long-standing tradition to future generations," says Sato.

At specialty restaurants and Japanese-style inns in Ichinoseki and Hiraizumi, you can eat casual *mochi gozen* (a bowl of mochi) or, if you make a reservation, authentic mochi honzen meals following the traditional etiquette, including a message from the *otorimochiyaku*.

If you ever have the opportunity to visit Ichinoseki or Hiraizumi, why not enjoy more than 400 years of culinary history and culture along with all its flavors? 

# Towada-Hachimantai

## A Joy for All Seasons

The Oirase Keiryu mountain stream  
Photo: Tanaka Satoshi



Towada-Hachimantai National Park

**Blessed with deep forests, crystal clear mountain streams, waterfalls and a mighty lake, Towada-Hachimantai National Park is a place of magnificent natural beauty all year round. This scenic part of the Tohoku region is also well known for its various hot springs.**

### SANO KENTARO

**T**OWADA-HACHIMANTAI National Park is located in mountainous northern Honshu (main island of Japan) and is divided into two main areas – the Towada-Hakkoda area, location of Lake Towada, the Oirase-Keiryu mountain stream and the Hakkoda mountain range; and the Hachimantai area, with Mt. Hachimantai, Mt. Akita-Komagatake and Mt. Iwate. Situated in one of the most prominent volcanic regions of Japan, this National Park has a varied topography and diverse ecosystem produced over a long period by volcanic

phenomena and the heavy snowfall in winter.

Lake Towada, for example, is a double caldera lake formed by volcanic activity that commenced approximately 200,000 years ago. The trees surrounding the crater rim help form a primeval landscape which changes throughout the year, being draped by a sea of clouds in spring and summer, colorful leaves in autumn, and snow and ice in winter.

The “Maiden Statue” that stands on the shore of Lake Towada is by the prominent sculptor and poet Takamura Kotaro (1883-1958). Although it has a secluded location, the statue is a popular attraction and a symbol of the lake.

A ravine shaped by the Oirase River has been designated as a special place of scenic beauty and a natural monument by the Japanese government, together with Lake Towada from which the Oirase River flows. Stretching about 14 kilometers, the ravine is a treasure trove of deciduous broad-leaved trees; graceful in spring, lush in the early summer and of matchless



A gondola passes over the Hakkoda mountains in autumn



The spacious *hiba sennin-buro* bathhouse at Sukayu Onsen Ryokan  
Photo: Tanaka Satoshi

beauty in the autumn when the leaves change their color. There is a promenade along the Oirase Keiryu mountain stream which cuts through the giant trees and along which are scattered waterfalls and fantastically shaped rocks covered with moss.

A national road along the ravine is another course covered with trees that affords magnificent views over the towering mountains of Hakkoda. The course is dotted with marshes, including Suiren Marsh, which is surrounded by frost-covered trees in winter, and Jigoku Marsh, where hot water with a temperature of more than 90 degrees centigrade gushes out.

The highest peak in the Hakkoda mountain range is Mt. Odake with a height of 1,585 meters. The mountain range stretching south spans a group of volcanos from Mt. Takada-Odake and Mt. Akakuradake to Mt. Kushigamine, Mt. Komagamine, Mt. Norikuradake and Mt. Yokodake. The mountain trails and ropeway, which operates all year round, offer panoramic views of an ever-changing tapestry of colorful leaves and, in the winter, frost-covered trees.

There are natural forests, fields of alpine plants along mountain ridges and wetlands in the Hakkoda mountain range, which is a popular ski resort. In the New Year, one road through the area becomes a snow corridor with walls more than five meters high. The mountain range is full of landscapes that are both graceful and grand.

At the foot of the mountains are numerous hot springs, such as Jogakura, Sukayu, Sarukura, Yachi and Tsuta, which are popular for relaxation and

therapeutic purposes. There are various intriguing legends about the discovery of the hot springs, including wounded deer and monkeys found soaking in the hot water. The traditional wooden buildings of the Japanese-style inns have a special charm.

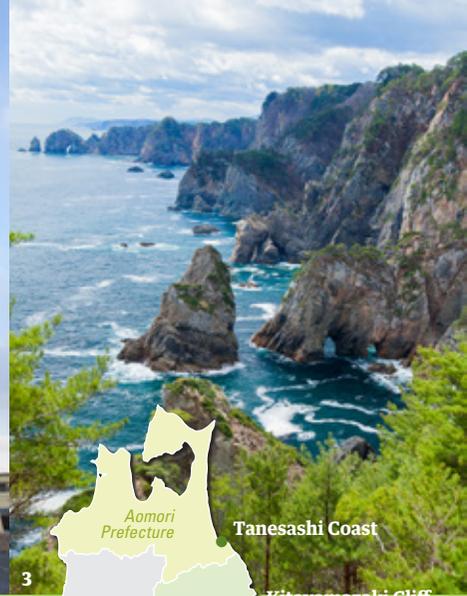
Sukayu Onsen Ryokan (Sukayu Hot Spring Inn) has been visited by people seeking hot spring cures since the Edo period (1603-1867). This hot spring on a hill surrounded by Japanese beeches is famous for its *hiba* (cypress) *sennin-buro*, a gigantic bathhouse big enough for “one thousand people.” There are four bathtubs filled with hot spring water from four different fountainheads in the bathhouse, which is the size of a 160 tatami-mat room (265 m<sup>2</sup>). The Inn welcomes day visitors as well as long-term guests seeking a hot spring cure.

Such inexhaustible charms attract people to Towada-Hachimantai National Park all year round. 



The “Maiden Statue” by Takamura Kotaro

This is a revised version of the article that appeared in the November 2017 issue of *Highlighting Japan*.



# Eco-tourism in the “Reconstruction” National Park



**Sanriku Fukko (Reconstruction) National Park, which extends about 250 kilometers north and south from southern Aomori Prefecture to the Oshika Peninsula in Miyagi Prefecture, aims to pass down the reconstruction from the Great East Japan Earthquake from generation to generation. To this end, a more than 1,000-kilometer-long nature trail called the “Michinoku Coastal Trail” has newly opened, extending from the National Park into Fukushima.**

**SANO KENTARO**

**S**ANRIKU Fukko (Reconstruction) National Park with its beautiful and varied rias coastline was originally designated in 1995 as the Rikuchu Coast National Park. In 2010, the year before the Great East Japan Earthquake of 2011, the park attracted about 4.07 million visitors. In 2013, the park was designated as Sanriku Fukko (Reconstruction) National Park with a mission to

contribute to the reconstruction of the Sanriku area.

If you drive one and a half hours northeast from Sendai, the largest city in the Tohoku region, you will reach a beautiful spot called Kamiwarizaki in Minamisanriku Town that faces the Pacific Ocean. The name “Kamiwarizaki” was derived from the legend that God became angry at a quarrel between two villages and ripped a huge rock apart, separating the villages.

North of Minamisanriku in Rikuzentakata City, Iwate Prefecture, there used to be a place known as Takatamatsubara, a two-kilometer stretch of pine forests on a white beach. Afforestation began about 350 years ago, when trees were planted to protect the shoreline. It was a place of scenic beauty, where about 70,000 pine trees grew, and it attracted 1.09 million tourists in 2009 before the earthquake. The tsunami washed away Takatamatsubara, forests and all. Miraculously, however, a sole pine tree remained and became a form of emotional support for the local

- 1 The Kamiwarizaki rocks at Minamisanriku Town
- 2 The “Miracle Lone Pine Tree” at Takatamatsubara
- 3 The Kitayamazaki Cliffs at Tanohata Village

Photos: Tanaka Satoshi (1, 2); K@zuTa / PIXTA (3)

people. Unfortunately, this last pine tree withered, but following treatment and reinforcement, the tree has been preserved as the “Miracle Lone Pine Tree,” a monument that symbolizes the reconstruction efforts from the damage caused by the earthquake. A project to plant 40,000 pine trees by 2021 is under way to restore Takatamatsubara.

On the Suesaki Peninsula in Ofunato City, which is located on the northeastern side of Takatamatsubara, are two popular tourist destinations: the Goishi Coast, where stone-shaped round pebbles like go stones extend along the peninsula; and the Anatoshiiso Rock Arch, where there are many triangular rocks protruding from the surface of the sea.

Traveling on north from Ofunato to Miyako City, the landscape with a wild coastline until then changes dramatically and you will see Jodogahama Beach with a grove of pine trees atop sharply pointed white rhyolite rocks in an extremely transparent blue sea with gentle waves.

Sanriku Beach is known for its numerous fishing grounds, and Yamada Bay, where oyster cultivation is active, is located south of Jodogahama Beach. The bay was seriously damaged by the tsunami, but local fishermen have made great efforts and the oyster cultivation rafts are floating in the bay again. The oysters harvested in Yamada Bay have a firm body. You can enjoy steaming open and eating fresh oysters in their shells in oyster huts erected along the beach.

Sanriku Fukko (Reconstruction) National Park offers so many beautiful landscapes. The Tanesashi Coast in Hachinohe City, Aomori Prefecture, which is located in the northernmost part of the park, features a wide lawn of natural grass that stretches along the beach; Tanohata Village in Iwate Prefecture, about 70 kilometers to the south, is the location of the Kitayamazaki Cliffs, where cliffs some 200 meters high extend for eight kilometers. Ten kilometers further south again, set in untouched nature, is the overwhelming Unosu Cliff, which is shaped like the teeth of a saw.

The Michinoku Coastal Trail opened in June 2019 on the completion of work which began with



The pine tree-topped rocks at Jodogahama Beach (top); Yamada Bay oysters (bottom)

Photos: Tanaka Satoshi

the designation of Sanriku Fukko (Reconstruction) National Park in 2013. The trail connects Tanesashi Coast in Hachinohe City with Matsukawaura in Soma City, a scenic spot in northern Fukushima Prefecture, and extends over 1,000 kilometers through twenty-eight municipalities in four prefectures. The trail runs from the National Park to the disaster area of Fukushima through the coastal area of Miyagi. In connecting disaster areas, the trail aims to pass down the reconstruction efforts from the damage caused by the Great East Japan Earthquake from generation to generation. Trail walkers can enjoy the rich natural environment of Sanriku and interact with local people along the way.

Sanriku Fukko (Reconstruction) National Park is being reborn as an even more attractive park. 

This is a revised version of the article that appeared in the March 2018 issue of *Highlighting Japan*.

Untouched discarded food products from households  
Courtesy of Kyoto City



# Japanese “Mottainai” Culture

## Reducing Food Loss and Waste



Publicity for the Consumer Affairs Agency’s “No-Foodloss Project”  
Courtesy of Consumer Affairs Agency of the Japanese government

**“Food loss” has become a global problem. Japan has set a national target of halving food loss and waste compared to 2000 by 2030. To this end, a number of actions have been taken to reduce potential “discarded” food that can still be eaten.**

**SAWAJI OSAMU**

**T**HERE is a huge amount of “food loss and waste” around the world every day. According to a report by the Food and Agriculture Organization of the United Nations (FAO) in 2011, global food loss and waste reached 1.3 billion tons annually. Around a third of the world’s food was lost or wasted every year.

Immense resources and energy are used to produce, consume and dispose of food, so if food loss and

waste can be cut, this would also contribute to a decrease in greenhouse gas emissions. As such, the Sustainable Development Goals (SDGs) adopted by the UN in 2015 includes the following target: “By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.”

According to statistics in April 2020 presented by the Ministry of Agriculture, Forestry and Fisheries

and the Ministry of the Environment of the Japanese government, food loss and waste in Japan in 2017 was an estimated 6.12 million tons. Of that, 3.28 million tons came from the food manufacturing industry, food service and other businesses, while 2.84 million tons came from households. In an effort to curtail this food loss and waste, the Act on Promotion of Food Loss and Waste Reduction was enforced in October 2019. The Act specifies that people should actively engage in cutting food loss and waste, that all of society should foster an attitude of not letting food go to waste, facilitate use of food that can still be eaten without discarding it, and that a wide range of actors cooperate to promote a reduction in food loss

“The Kitchen of the Consumer Affairs Agency” introduces waste-avoidance recipes on the popular Cookpad website  
 Courtesy of Consumer Affairs Agency



and waste.

Based on the abovementioned act, the Basic Policy on Promotion of Food Loss and Waste Reduction was approved by the Cabinet in March 2020. The basic policy expects consumers to take actions like only buying what they can use up, not wasting ingredients that can be eaten, and controlling the amount of dishes they order when eating out. It also expects the agriculture, forestry and fisheries sector to promote use of non-standard and unused products and food-related industries to extend food products' best-before dates through innovation in packaging technology.

National and local governments are accelerating these expectations through activities

such as education on food loss and waste and by supporting the efforts of actors in food-related industries. The targets are to increase the proportion of consumers aware of and acting to reduce the food loss and waste to 80% (76.5% as of January 2020) and to halve food loss and waste from both businesses and households.

## DISASTER MANAGEMENT AND FOOD LOSS & WASTE REDUCTION

Various bodies take actions to reduce food loss and waste in Japan. The effective use of stockpile food for disasters is one example. Japan suffers from a lot of natural disasters, including typhoons and earthquakes, so the Japanese government recommends each household stockpile a week's worth of food to prepare for such disasters. However, if large amounts of ready-made meals and cans are stored only for the case of emergency, then they might be disposed of because they cannot be consumed before their expiration dates. Thus, as a way to stockpile food without causing waste, the Consumer Affairs Agency of the Japanese government has introduced the concept of a “rolling stock method” whereby consumers buy a bit more of the foods that they nor-

mally eat and then replenish them when they eat. By picking things nearing their expiration dates for regular meals, consumers can reduce food loss and waste.

The following are examples of initiatives launched in Japan.

Tokyo Metropolitan Government donates emergency stockpile foods like crackers and instant rice to social welfare corporations and other groups and distributes them to citizens at events when they are about to expire.

At the student cafeteria of Dokkyo University in Soka City, Saitama Prefecture, food stockpiled by the university for emergencies has been used in cafeteria meals when items near their expiration dates, as a way to increasing students' and teachers' awareness about disaster management and food loss and waste.

In Toki City, Gifu Prefecture, the municipal board of education stockpiles retort-pouch curry which does not need tableware and can be eaten without cooking for teachers and children at elementary and junior-high schools, but periodically they also use it as a lunch menu item. This attempt is a part of disaster management education and an effective use of stockpiles. ■



A chicken dish made from soon-to-expire emergency stockpile food, served at the student cafeteria of Dokkyo University  
 Courtesy of Dokkyo University



Retort-pouch curry (center), an emergency stockpile food, served at elementary and junior-high schools in Toki City, Gifu Prefecture  
 Courtesy of Toki City

# Low-Cost Bioplastic to Reduce Plastic Waste

▣ Biodegradable baby tableware produced under patent license of Komatsu  
Courtesy of iiwan© (HOEI Industry Co. Ltd.)

**Against a background of growing concerns about marine litter and microplastic pollution, a Japanese company has developed a technology for the mass production of eco-friendly and biodegradable plastic products at low cost. The technology enables the low-cost manufacturing of polylactic acid products from corn starch or sugarcane and is attracting attention around the world.**

## UMEZAWA AKIRA

**P**LASTIC products made from oil, such as PET bottles and food trays, are widely used around the world. Disposal of these plastics affects ecosystems because if the products are burned, they contribute to global warming, and if they flow out into the sea, they create marine litter and microplastic pollution. The World Economic Forum announced in 2016 that by 2050, the amount of plastics drifting in the sea around the world is projected to surpass the amount of fish in terms of weight.

In this situation, biodegradable plastics are attracting attention as

a replacement for the current plastics made from oil. Biodegradable plastics are considered to lessen the environmental load because they are ultimately decomposed into carbon dioxide and water by microorganisms in the natural world. Polylactic acid, one of the biodegradable plastics, which is made from corn starch or sugarcane, began to be used as a material for products such as dishes and garbage bags about twenty years ago. However, polylactic acid was hard to process and products made from it were so expensive that they did not become popular at all.

Komatsu Michio, the president

of Komatsu & Associates, a professional engineer's consulting firm in Iwaki City, Fukushima Prefecture, overcame the processing challenges and developed a technology of mass-producing polylactic acid products at lower cost than by using existing methods. The main reason why polylactic acid is hard to process is that it is far more viscous



▣ Biodegradable plastic products including baby tableware on display at a reception celebrating the 83rd birthday of His Majesty the Emperor of Japan at the Lyon Consulate Office in France  
Courtesy of Komatsu Michio



than plastics made from oil. Generally speaking, to process plastics, a method called injection molding is used, which involves heating and melting plastics, injecting the molten plastics into a mold, putting them into a shape, waiting for them to cool down and solidify, then ejecting them from the mold. In the case of highly viscous polylactic acid, however, the materials do not flow to the end of a mold cavity by normal injection molding, and the article cannot be molded well.

To solve this problem, Komatsu focused his attention on a super critical phenomenon. Matter can exist as a solid, liquid or gas according to the temperature and pressure conditions. But if you keep applying pressure and heat to matter, it will enter a super critical phase in which it is indistinguishable from a gas or a liquid.

“Matter in a super critical phase is called super critical fluid and has both the diffusiveness of a gas and the solubility of a liquid. By mixing carbon dioxide in a super critical phase into melted polylactic acid, we succeeded in increasing the fluidity of polylactic acid,” explains Komatsu.

Molding polylactic acid had another significant issue. Ordinary plastics gradually solidify when they cool down, whereas a heat-resistant grade of polylactic acid contracts rapidly when it reaches a certain temperature. Once it

reaches this state, it is caught in the mold core and impossible to eject. Because of this, it takes a lot of time and effort to get the molded article out, and articles cannot be produced at the same pace as ordinary plastics.

Komatsu also overcame this issue by making use of his experience of working as a mold expert for a leading electronic parts manufacturer.

“I put an infrared temperature sensor in a mold and measured the temperature of the polylactic acid in units of thousandths of a second. After repeating the measurements many times, I found that as soon as the temperature falls to 110°C, the polylactic acid begins solidification. I found that the polylactic acid could be detached easily by capturing that timing and injecting air into the gap between the mold and the polylactic acid article,” says Komatsu.

Komatsu demonstrated his technology at K 2019, the world’s largest trade fair for plastics and rubber, in Düsseldorf, Germany in October 2019. Specifically, Komatsu demonstrated a technology for molding thin champagne glasses developed in collaboration with plastic injection molding machine manufacturers in Japan. The demonstration attracted a lot of attention from visitors.

In April 2020, Komatsu won the Technology Award 2020 from The Japan Society for Die and Mold

- 1 Biodegradable plastic products on display at the K 2019 plastics and rubber trade fair in Düsseldorf, Germany
- 2 Komatsu Michio holds a champagne glass made from polylactic acid in front of the technology he demonstrated at K 2019

Photos: Courtesy of Komatsu Michio

Technology, a prestigious award granted in the field of die and mold technology. His technology has been granted numerous patents in Japan and overseas.

In January 2018, the European Union (EU) proposed putting an all-out ban on all inter-regional disposable plastic containers by 2025 and declared that it would aim to make all inter-regional plastic packages recyclable by 2030. The demand for biodegradable plastics as materials to cope with these environmental regulations is expected to grow. Orders for Komatsu’s biodegradable baby tableware, for example, are pouring in from Europe and other countries as well as Japan.

“We still have an issue in terms of the high material costs. But we have recently seen an increase in the number of polylactic acid manufacturers and production volumes, which leads to lower costs. In this situation, I think that products using polylactic acid will gradually become popular. I will be extremely happy if the technology I developed helps preserve the natural global environment,” says Komatsu. 

# “Love-to-Eat” Sausages for the Community

Michal Taberski, a Polish man residing in Daisen City, Akita Prefecture, contributes to the community by manufacturing high-quality sausages and other meat products using locally raised pork.

## SATO KUMIKO

**R**ED-PACKAGED Polmeat products line the ham and sausage sections of Akita supermarkets. They are from IMI Corporation, headquartered in Daisen City, located in the southeastern part of Akita Prefecture. The red package is inspired by the flag of Poland, the home country of Michal Taberski, CEO of IMI Corporation. Alongside Taberski's name and photo on the package is the company's slogan, “Taberuno daisuki.” *Taberu* means to eat and

*daisuki* means to love.

Taberski is well-known in Daisen. When he walks along the street, people do not hesitate to talk to him because they know how friendly he is. He responds in fluent Akita dialect. “I would never consider myself a foreigner here,” Taberski says with a laugh.

In 2001, after graduating from university, Taberski married a Japanese woman who worked in Poland. Subsequently, he moved to Akita Prefecture, where his wife's parents live. He held sev-

 Michal Taberski



■ Servings of Taberski's meat products, which number almost fifty in total

eral jobs and learned Japanese and Japanese business culture before deciding to start a meat processing business. "In Poland, I ate tasty ham and sausages every day. Some small and mid-sized companies in Japan make very tasty food. However, products from these companies are expensive and most customers cannot afford to eat them every day. I thought about delivering good food to Japanese customers at reasonable prices," he says.

Taberski loves cooking and even makes his own cheese and pickled herring in oil so his family can enjoy the flavors of Poland. In 2013, he began to remodel the garage of his home and manufacture ham and sausages. Since his factory was established in 2014, sales of his company have doubled every year.

Polmeat's product line-up consists of nearly fifty different items. "We implement improvements again and again to proudly present our products everywhere," says Taberski confidently. Most of the items follow the traditional manufacturing processes of Poland. Some use Akita's traditional soy sauce for seasoning, while others contain sliced and mixed

*iburigakko*, local Akita cuisine prepared by smoking pickled radish. Polmeat products are made from *tochuton* pigs raised in Daisen in pursuit of tasty meat. Product development is driven by staff members' suggestions for making products unique to the prefecture and in collaboration with local food producers. "Akita Prefecture has heavy snowfall and is blessed with abundant meltwater, which is why we have tasty rice, Japanese sake and many wonderful ingredients," says Taberski.

Currently, Taberski is partnered with Omagari Agricultural High School. By inviting and accept-

ing students for practical training, the project for developing human resources will affect the future of Akita Prefecture. "When starting my business, I received grant money from the government and support from many people. I would like to repay society twofold," says Taberski. "As a business manager, I take responsibility for company growth to make the people of Akita Prefecture proud and to provide employees with a happy workplace. It would be great if local people were thankful for having our business in their community as they look back. I hope to make this happen by working hard." 



■ Taberski gives a lecture at Omagari Agricultural High School



- Clear Japanese sake produced using the *kimoto* method  
Courtesy of Daishichi Sake Brewery Co., Ltd.

# Sake:

## Created Naturally with the Wisdom of Brewmasters

**Fukushima Prefecture is home to many famous and long-standing *kuramoto*, or Japanese sake breweries. We interviewed the 10th-generation head of one *kuramoto* to learn about the tradition of sake brewing in Fukushima and how local brewmasters' wisdom is being passed down to future generations.**

### SAWAJI OSAMU

**S**AKE production in present-day Fukushima Prefecture is said to have started over 300 years ago under the Aizu Domain. The Aizu region is surrounded by mountains, the snowcapped peaks of which are the source of pure, mineral-rich water that is well suited both for the production of sake and the cultivation of rice from which sake is brewed. The climate is also quite cold, preventing the growth of unwanted bacteria that lower the quality of sake. Sake breweries, or *kuramoto*, soon opened up in areas around Aizu as well, creat-

ing a center of sake production in Japan. The brewing tradition continues in Fukushima, where over sixty *kuramoto* are currently producing sake.

Fukushima has many traditional dishes that pair well with sake, and one of the biggest draws to the prefecture is the ability to enjoy sake together with these local foods. Examples include *kozuyu* (also called *zakuzaku*), lots of vegetables in a broth made from dried scallops; *ika ninjin*, thinly sliced dried squid mixed with carrots; and *anpo gaki*, sweet jelly-like dried persimmons.



- Brewers grind the yeast starter using the traditional *yamaoroshi* technique  
Courtesy of Daishichi Sake Brewery Co., Ltd.

“What makes the sake of Fukushima Prefecture special is that the various sakagura - from long-established breweries to new ones - make a wide variety of sake, each using their own methods. Someone once commented, ‘Fukushima is like a department store of sake.’”

So says Ohta Hideharu, the 10th-generation head of Daishichi Sake Brewery Co., Ltd. which is located in the city of Nihonmatsu in central Fukushima. Established in 1752, the brewery is one of the long-standing sakagura representative of Fukushima Prefecture and one of the very few in Japan still to use the “kimoto method” of sake brewing.

The kimoto method, which was developed during the Edo period (1603-1867), is what makes the Daishichi Sake Brewery’s sake special. In sake production, there is a process for creating “*moto*” (yeast starter) containing large quantities of yeast required for fermenting alcohol. At the Daishichi Sake Brewery, steamed rice, *koji* and water are mixed inside a shallow tub, and sake brewers perform a job called *yamaoroshi*, in which they grind the mixture into a mash using long wooden paddles. Lactic acid bacteria, which exist within the brewery, are then naturally incorporated into the *moto*, where they start producing lactic acid. This sour environment dispels all other unwanted microorganisms, so that the yeast, after it has been added, can proliferate in a clean and pure environment. This production method requires much time and effort, but the sake cre-



■ In a process known as *tokomomi*, a brewer kneads *koji* spores into a bed of steamed rice  
Courtesy of Daishichi Sake Brewery Co., Ltd.

ated using it has a soft, smooth flavor that is bursting with umami.

Daishichi Sake Brewery’s sake has received high praise both in Japan and abroad for pairing well not only with Japanese food, but with French, Chinese and other international foods as well. The sake has been served at banquets hosted by the Dutch royal family, as well as at the 2000 Kyushu-Okinawa Summit and the 2008 Hokkaido Toyako Summit.

“The skills of sake brewers, which have been passed down over many years, bring out the power held in natural microorganisms, leading to the creation of sake with deep flavors,” says Ohta.

The sake of Fukushima Prefecture is highly evaluated by connoisseurs. At the Annual Japan Sake Award, for example, brands from Fukushima received more Gold Awards than any other prefecture for seven years in a row, up until 2018. Their popularity and success owes partly to the influence of the Fukushima Prefectural Sake Academy, which opened in 1992 offering a three-year course in all aspects of sake production. The Academy is operated by the Fukushima Prefecture Sake Brewers Cooperative and many of its graduates are active as sake brewers in the prefecture.

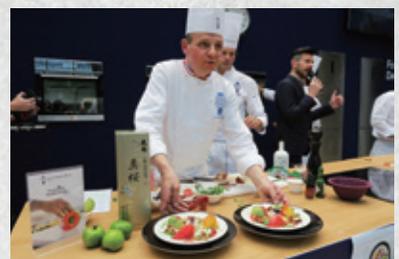
“The improvement in the qual-

ity of Fukushima’s sake is the result of many years of personnel development,” says Ohta. “Fellow graduates of the Sake Academy raise each other’s technical level while working hard. Fukushima suffered harmful rumors due to the Great East Japan Earthquake,

but through cooperating and producing even more delicious sake, the sakagura were able to regain customers’ trust. We will also overcome the novel coronavirus crisis through everyone’s efforts.”



■ Two specialties of Fukushima: *Ika ninjin* and *kozuyu*  
Courtesy of Fukushima Prefecture Tourism & Local Products Association



■ Éric Briffard, Executive Chef at Le Cordon Bleu Paris, pairs sake with French food at the 2019 “Taste of Paris” festival  
Courtesy of Daishichi Sake Brewery Co., Ltd.

□ Five-storied Pagoda of  
Mount Haguro  
Courtesy of Yamagata  
Prefecture

# A Five-storied Pagoda Among the Mountains of the Gods

**The Dewa Sanzan in Yamagata Prefecture have been worshipped as holy mountains since ancient times. The wooden Five-storied Pagoda of Mount Haguro, built about 650 years ago among these mountains, presides among old cedar trees and offers peace to those who visit with its simple beauty in harmony with nature.**

**SAWAJI OSAMU**

**I**N Japan, where mountains make up three-quarters of the country's land, mountain worship has been practiced since ancient times, with people

revering mountains as sacred places where gods dwell. *Shugendō*, which combines mountain worship with religions such as Buddhism and Taoism from main-

land Asia, originated in the Heian period (794-1185), and began to expand all over Japan. Rigorous spiritual training was practiced by ascetic mountain priests, known as *yamabushi*, on the mountains deemed sacred for Shugendō.

The Dewa Sanzan, or the Three Mountains of Dewa, which lie in the central part of Yamagata Prefecture, are among the representative sacred mountains. The Three Mountains of Dewa are Mount Haguro, Mount Gassan and Mount Yudono. Prince Hachiko, son of Emperor Sushun, is said to have undergone ascetic training here at the end of the sixth century, marking the beginnings of the worship of the Dewa Sanzan. The belief that one can gain happiness in this world at Mount Haguro, experience the world of the afterlife at Mount Gassan, and gain new life and be reborn at Mount Yudono, was developed here. This belief spread to many people via the *yamabushi* who traveled around the country, and by the Edo period (1603-1867), many worshippers made the pilgrimage to the Dewa Sanzan from all over Japan. The celebrated poet Matsuo Bashō (1644-1694) left behind a haiku about Mount Haguro.

*Suzushisa ya / hono mikazuki  
no/haguroyama*

Coolness- / the crescent moon  
faint / over Black Feather  
Mountain

– From *Bashō's Haiku: Selected Poems of Matsuo Bashō* (Trans. David Landis Barnhill)

Standing at the base of Mount Haguro is the Five-storied Pagoda

of Mount Haguro, a National Treasure. When Buddhism was brought over to Japan in the sixth century, pagodas were built in Nara and Kyoto, the capitals at the time, and construction of these pagodas spread across Japan along with Buddhism.

The Five-storied Pagoda of Mount Haguro is said to have been built in the tenth century, and it is thought that the current pagoda was rebuilt in 1372. The pagoda stands among a forest of cedar trees over 300 years old off to the side of the path that leads to the summit of Mount Haguro. The pagoda lies beyond the Zuishin Gate, the entrance to the Dewa Sanzan, and across the Harai River, where, in the past, worshippers would purify themselves. The pagoda is about 29 meters tall, and is very distinctive with its simple wooden construction that lacks colors or decorations.

Watanabe Sachi, curator of the Dewa Sanzan Museum of History, says, “The pagoda, sur-



rounded by cedar trees, is truly in harmony with nature. Its white bark, exposed to wind and snow over many years, exudes a simple beauty.”

The pagoda is constructed from cedar and Japanese elm, and the wooden joints are stabilized with wisteria vine, which tightens over time as it dries. No metal nails are used. The five-layered roof is covered with many overlapping layers of thin cedar planks in a technique known as *kokerabuki* (shingling). The four corners of the roof slope

gently upwards, and the eaves are deep. Another feature of the pagoda is the *kumimono* (“bracket complex”) that supports the deep eaves and protects the columns and walls from snow and wind. *Kumimono*, made by intricately combining multiple pieces of wood, not only strengthens the pagoda, but also lends it a decorative beauty.

More than one meter of snow accumulates in winter around Mount Haguro. Repairs have been repeatedly carried out on the five-storied pagoda, which has continued to stand even in such a harsh natural environment, and they continue to this day.

“I think that the pagoda has been preserved over many years precisely because of the deep faith held by the *yamabushi* and other visitors,” says Watanabe. “Some visitors spend a long time in front of the pagoda. Many say that they feel calm seeing the pagoda standing there surrounded by nature.”

The five-storied pagoda, standing among the mountains where gods dwell, quietly symbolizes the beliefs associated with the Dewa Sanzan and their deep historical connection with nature.



The path to the summit of Mount Haguro

Courtesy of Yamagata Prefecture

JAPAN  
HERITAGE

Courtesy of Yamagata Prefecture

Dewa  
Sanzan



JAPAN HERITAGE

## Climbing Through the Cycle of Life

**D**ewa Sanzan, “the Three Mountains of Dewa,” is the collective name for Mt. Haguro (414 m), Mt. Gassan (1,984 m) and Mt. Yudono (1,504 m) in Yamagata Prefecture. Haguro Shugendo, a form of mountain asceticism, was born in these mountains 1,400 years ago. According to this faith, Mt. Haguro represents the present and the fulfillment of worldly desires; spirits come to rest under lofty and graceful Mt. Gassan, which represents the past; and Mt. Yudono represents the future, the hot water gushing from its sacred red boulder symbolizing the birth of new life. In the Edo period (1603–1867), climbing the three mountains became popular as a way to reclaim youthful vitality. The pilgrimage remains popular to this day as a “journey of rebirth.”

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