Miyagi Prefecture’s Restoration and Reconstruction Efforts

Miyagi Prefecture
June 2018
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2 State of Damage in Miyagi Prefecture
3 Overview of Miyagi Prefecture Earthquake Disaster Recovery Plan
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1 Overview of 2011 Great East Japan Earthquake Disaster

(1) Overview of the Earthquake Disaster

① Date/Time: March 11, 2011 (Friday), 14:46
② Epicenter: Sanriku Coast (N38.1, E142.5) *130 km east of Oshika Peninsula
③ Depth: Approximately 24 km
④ Size: Magnitude 9.0
   *4th largest earthquake recorded in the world since 1900
   (source: US Geological Survey (UGGS))
   *Largest recorded earthquake in Japanese history
⑤ Largest recorded seismic intensity: Seismic Intensity 7 (Kurihara City)
⑥ Land Subsidence: Total area of land subsided below sea level - 56 km²
   (3.4 times the area of land below sea level prior to the disaster)
   Total area of land that is flooded at high tide – 129 km²
   (1.9 times the area of land flooded at high tide prior to the disaster)
⑦ Tsunami Port of Sendai: 7.2 m (Reported by Japan Meteorological Agency on April 5, 2011)
   Ayukawa, Ishinomaki City: 8.6 m (Reported by Japan Meteorological Agency on June 3, 2011)
   *Reference: Highest tsunami recorded by tsunami tracing method conducted by the Public Works Department, Miyagi Prefectural Government
   • Shizugawa, Minamisanriku Town: 20.2 m
   • Onagawa Town: 34.7 m
   • Utatsu, Minamisanriku Town: 26.1 m

(2) State of Damage (as of May 31, 2018; damage costs are as of February 28, 2018)

① Human Casualties: Deaths: 10,566 Missing: 1,224 (Approx. 50% of human casualties nationwide)
② Damage to Residences: Destroyed: 83,004 Heavily Damaged: 155,130 (Approx. 60% of damage to residences nationwide)
③ Damage Costs (as of February 28, 2018): 9.984 trillion JPY
④ Evacuation (at peak: March 14, 2011): No. of Shelters: 1,183 No. of Evacuees: 320,885 (Approx. 15% of residents in Miyagi)
2 Overview of the Great East Japan Earthquake

(1) Kesennuma/Ishinomaki

- Asahimachi, Kesennuma City
- Kadonowaki, Ishinomaki City
- Chuo, Ishinomaki City
- Asahimachi, Kesennuma City
- Nobiru, Higashi-Matsushima City
- Regional Medical Center, Onagawa Town
- Shizugawa, Minamisanriku Town
- Disaster Prevention Office, Minamisanriku Town
- Route 398, Onagawa Town
(2) Sendai Area

Miyagino Ward, Sendai City

Wakabayashi Ward, Sendai City

Taihaku Ward, Sendai City

Shinhamacho, Shiogama City

Katsurashima, Shiogama City

Machimae, Tagajo City

Yoshida Hanabuchi Port, Shichigahama Town

Shiomidai-minami, Shichigahama Town

Niragamori Bridge, Shichigahama Town
(3) Sennan (Southern Miyagi)/Inland Areas

Yuriage, Natori City

Sendai Airport Access Line Track, Natori City

Wakabayashi Obayashi, Kurihara City

Shimonogo, Iwanuma City

Iwanuma City

Hasama-cho, Tome City

Funairigawa River, Watari Town

Yamamoto Town

Shimo-oinozuka, Kami Town
3 Development of Earthquake Disaster Recovery Plan

Full recovery is expected to take approximately 10 years with the goal for completion set in Fiscal Year 2020. The 10-year recovery plan is broken down into three stages – “Restoration,” “Reconstruction” and “Development.” Projects carried out in the Restoration Stage will include the restoration of the livelihood of the disaster victims and public facilities. The Reconstruction Stage will focus on fulfilling the construction of infrastructure, and the Development Stage will promote strategic projects created for the future prosperity of this region.

Basic Principles of Recovery

1) Developing a disaster-resistant and secure community
2) Each citizen is a key player in recovery efforts; utilizing all available resources
3) Drastic “restructuring” that does not simply stop at “restoration”
4) Progressive community development that will help solve modern-day social issues
5) Constructing a model that outlines the steps from catastrophic damage to full recovery

Recovery Issues

1) Constructing a Miyagi disaster-resistant community development model
2) Rebuilding Miyagi’s fisheries industry
3) Building progressive agricultural and forestry industries
4) Rebuilding the manufacturing industry promptly to achieve a prosperous Miyagi
5) Revitalizing Miyagi’s attractive tourism industry
6) Reconstructing the health, medical and welfare fields comprehensively throughout the region
7) Developing “eco-towns” that utilize renewable energy
8) Promoting a disaster-resistant prefecture and nation
9) Developing human resources for the future
10) Building a framework for financial resources, systems and cooperation that will support recovery efforts
(1) Miyagi’s Future Vision & Earthquake Disaster Recovery Implementation Plan

Purpose of plan development
As the region prepares for the 4-year Reconstruction Stage starting in FY 2014, the “Recovery Implementation Plan (development stage)” was developed as a mid-term implementation plan in order to steadily promote the financial and administrative operations each fiscal year. In accord with the progress of the restoration and reconstruction efforts, and with the movements in the socioeconomic trends, the recovery efforts will continue to move ahead based on the “Miyagi Prefecture Earthquake Disaster Recovery Plan” with the goal to achieve the future appearance of this region outlined in the “Miyagi’s Future Vision” plan.

Basic Philosophy
• Speed up recovery efforts in fields experiencing delays by taking necessary steps, and thoroughly address issues that arise during reconstruction.
• Further deepen ties with affiliated parties for swift community development in order to promptly secure a comfortable living environment for all disaster victims.
• In particular, strongly promote support for rebuilding communities and provide mental healthcare support in new residential areas, and promote the revitalization of industries.
• Achieving “creative reconstruction” through dramatic “restructuring” that is not limited to “restoration”, and achieving the future appearance of this region laid out in the “future vision” plan by vitalizing the regional economy focused on post reconstruction demand and developing labor shortage counter-measures, improving child-rearing support and medical and welfare services, promoting education that assists students to become more self-motivated and goal oriented for future endeavors, etc.

Basic Direction for Policy Promotion and Vision for Policy Development
More appropriate response will be made to resolve necessary and individual issues in order to achieve recovery and recovery efforts will be accelerated by building closer relationships with affiliated parties.
At the same time, the response to the reconstruction of communities and homes, daily life support, industrial revitalization and securement of employment and the Fukushima Daiichi Nuclear Power Plant accident will be carried out vigorously.

- Final stages of recovery
  - Promoting solid and thorough recovery-

- Further growth of regional economies

- Achieve secure and active lifestyles in Miyagi

- Establish attractive and safe communities

- Vision for Policy Development
  1) Manage necessary finances and maintain a flexible system
  2) Secure manpower
  3) Achieve “creative reconstruction” while taking full advantage of the assets of the citizens
  4) Cooperate and combine strengths to promote recovery efforts
  5) Manage prefectural government efficiently and effectively
  6) Promote extensive cooperation and a regional system that will influence the development of the Tohoku Region
(2) Disaster Recovery Plans Developed by Local Municipalities

By December 2011, 21 of Miyagi’s municipalities established their own disaster recovery plans. In coastal towns and cities, the recovery plans include tsunami countermeasures such as relocation of residential areas to higher ground and multi-purpose tsunami defenses, aiming towards the creation of a disaster-resistant community.

“Disaster Minimization” projects developed in 15 coastal municipalities

- Collective relocation
- Multi-purpose tsunami defenses
- Construct and secure evacuation sites and buildings
- Construct and reinforce evacuation routes
- Reinforce seawalls, raise land
- Allocate levee functions to elevated train lines
- Construct high-rise residential buildings that function as evacuation buildings

■ Municipalities with recovery disaster plans
  • 15 Coastal Municipalities (blue)
  • 6 Inland Municipalities (orange)
Image of Municipality Disaster Recovery Plan: Building a Disaster-resistant Community – Creating a Miyagi Model

Relocation to higher ground in the inland areas

Railroads

Restricted Construction Zone

Seaside Disaster Prevention Green Space

Seawall
三陸地域
■高台移転・職住分離
■漁港の集約・再編,水産加工品のブランド化,6次産業化
■三陸の自然を生かした観光振興
■三陸縦貫自動車道の整備促進
釜石・八戸
いわき・水戸
仙台・塩釜港
仙台空港
■高台移転・職住分離
■多重防御
■漁港の集約・統合,産業の集積・高度化
■松島・牡鹿半島を生かした観光振興
■空港・港湾を生かした物流機能,産業立地の推進
■農地集約,6次産業化
■国営公園・防災緑地・防災林の整備
■常磐自動車道の整備促進

Image of Municipality Disaster Recovery Plan:
Relocation to high ground, separation of residential areas and workplaces, and multi-purpose defense system

- Relocation to high ground and separation of residential areas and workplaces
- Multiple-defense system
- Seaside disaster prevention green space and forest
4 Recovery Efforts in Miyagi: Before/After (1)

Sendai Airport

Sendai Station
Before/After (2)

Port of Sendai

Shin Kitakami Ohashi Bridge (Ishinomaki City)
Before/After (3)

Agricultural Industry (Ishinomaki City)

Agricultural Industry (Yamamoto Town)
Before/After (4)

Fishing Industry (Fish market in Kesennuma City)

Fishing Industry (Fish market in Onagawa Town)
Before/After (5)

Shopping area in Minamisanriku Town

Central part of town directly after disaster

Temporary shopping area

New shopping area
Recovery Efforts in Miyagi: Infrastructure

**Ports and Harbors**

Amount of Container FreightHandled
Approx. 119% Restored

Before disaster: 216,142 TEU

State of Operations (as of May 1, 2018)

* Overseas container routes: total 9
  - China/South Korea route (Dalian): 1 per week
  - China/South Korea route (Shanghai): 3 per week
  - South Korea route: 1 per week (Busan Port/Busan New Port)
  - South Korea route: 1 per week
    (direct line to Busan Port/Busan New Port)
  - West Coast North America route (LA/Oakland): 1 per week
  - West Coast North America route: 1 per month
    (Tacoma/Vancouver)
  - Russia Far East route (Vladivostok): 1 every 2 weeks
* Domestic feeder routes
  - Sendai – Keihin: 8 routes, 11 shipments a week

* Loading cargo to container ships (Takasago Container Terminal, Sendai Port)

**Airport**

Sendai Airport Passenger Recovery Rate:
International routes: approx. 99%
Domestic routes: approx. 121%

No. of international passengers:
- Before disaster: 271,932; after disaster: 270,057

No. of domestic passengers:
- Before disaster: 2,554,345; after disaster: 3,100,369


* State of Operations (as of May 1, 2018)

**International Routes (pre-disaster round trip flights per week)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Flights before disaster</th>
<th>Flights after disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seoul</td>
<td>7 (7)</td>
<td>2 (3)</td>
</tr>
<tr>
<td>Shanghai/Beijing</td>
<td>2 (3)</td>
<td></td>
</tr>
<tr>
<td>Guam suspended</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>Dalian/Beijing</td>
<td>suspended (2)</td>
<td></td>
</tr>
<tr>
<td>Taipei</td>
<td>10 (2)</td>
<td></td>
</tr>
<tr>
<td>Changchun suspended</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Honolulu suspended</td>
<td>(0)</td>
<td></td>
</tr>
<tr>
<td>Bangkok season flight service</td>
<td>(0)</td>
<td></td>
</tr>
<tr>
<td>Total: 19 roundtrips a week (20)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Domestic Routes (pre-disaster roundtrip flights a day)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Flights before disaster</th>
<th>Flights after disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapporo</td>
<td>14 (13)</td>
<td></td>
</tr>
<tr>
<td>Narita</td>
<td>2 (2)</td>
<td></td>
</tr>
<tr>
<td>Komatsu</td>
<td>2 (1)</td>
<td></td>
</tr>
<tr>
<td>Chubu</td>
<td>6 (5)</td>
<td></td>
</tr>
<tr>
<td>Itami</td>
<td>14 (13)</td>
<td></td>
</tr>
<tr>
<td>Kansai</td>
<td>4 (0)</td>
<td></td>
</tr>
<tr>
<td>Kobe</td>
<td>2 (0)</td>
<td></td>
</tr>
<tr>
<td>Hiroshima</td>
<td>2 (1)</td>
<td></td>
</tr>
<tr>
<td>Fukuoka</td>
<td>7 (4)</td>
<td></td>
</tr>
<tr>
<td>Izumo</td>
<td>1 (0)</td>
<td></td>
</tr>
<tr>
<td>Okinawa</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>Total: 54 round trips a day (40)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sendai-Seoul daily flight
(May 22, 2017)

Note: apart from completely flooded out areas, main infrastructure (gas, water, electricity etc.) has been restored
Recovery Efforts in Miyagi: Daily Life

Continue rebuilding the lives of disaster victims, creating a favorable living environment where people can live without fear and establish a community that can cope with the many problems faced by contemporary society such as environmental conservation.

<table>
<thead>
<tr>
<th>Disaster Public Housing</th>
<th>Prefabricated Temporary Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. 100% construction started</td>
<td></td>
</tr>
<tr>
<td>Units planned for construction: approx. 16,000 homes</td>
<td>No. of units: 406 sites, 22,095 units (completed by December 26, 2011)</td>
</tr>
<tr>
<td>Construction for 15,823 units has been started in 11 cities and 10 towns (as of May 31, 2018)</td>
<td>Occupied units: 950 units, occupants: 1,918 (as of May 31, 2018)</td>
</tr>
</tbody>
</table>

Disaster Public Housing Construction

- The Miyagi Prefecture Recovery Housing Plan was drafted on December 21, 2011
- Total no. of disaster public housing to be built in Miyagi by 2018 (target): approx. 16,000 units
- Housing will be built in 21 municipalities

No. of Units Completed: 15,415 (as of March 31, 2018)

Prefabricated Temporary Housing

- No. of units: 406 sites, 22,095 units (completed by December 26, 2011)
- Occupied units: 950 units, occupants: 1,918 (as of May 31, 2018)

*Reference*

- Private rental temporary housing: 1,056 units occupied, occupants: 2,344 (as of May 31, 2018)
- Other kinds of temporary housing: 13 units occupied, occupants: 33 (as of May 31, 2018)
- Evacuees outside the prefecture: 278 (as of May 11, 2018)

(Data from the National Evacuee Information System)
Recovery Efforts in Miyagi: Community Development

Construction situation of Recovery Community Development Projects (as of May 31, 2018)

**Disaster Prevention Collective Relocation Promotion Project**
Approximately 99% of prepared land is ready for construction

- No. of areas where construction is planned: 195
- No. of areas where land is ready for construction: 194

**Land Readjustment Project**
Approximately 97% of prepared land is ready for construction

- No. of areas where projects are planned: 35
- No. of areas where land is ready for construction: 34

**Tsunami Recovery Central Construction Project**
Approximately 100% of prepared land is ready for construction

- No. of areas where projects are planned: 12
- No. of areas where construction has commenced: 12
Recovery Efforts in Miyagi: Disaster Debris Disposal

- The local municipalities disposed disaster debris based on the regional disaster prevention plan.
- The prefectural government sought widespread support from other municipalities in Miyagi and affiliated groups when a request was made by the local municipality; the prefectural government also coordinated support efforts.
- When deemed necessary to receive support for such disposal efforts beyond the prefecture, a request was made to the Ministry of the Environment.

- **11.6 million tons of debris was generated as a result of the disaster**
  - The amount of debris generated as a result of the Great East Japan Earthquake accounts for approximately 14 years of general waste generated (820,000 tons).
  - The debris generated in the Ishinomaki Block accounted for approx. 71 years of general waste, while the debris generated in the Watari-Natori Block accounted for approx. 50 years of general waste.

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**100% of debris was treated and disposed**

Disposed amount: Approx. 11.6 million tons
(As of March 31, 2014)

Incineration Facility (Kesennuma City)
**Support Efforts for Child-rearing and Children**

**Children’s Mental Health Care**

“Children’s Mental Health Care Teams” were organized at child guidance centers and children’s centers and consist of staff who travel to offer counseling and medical care. (Medical Team activities: in operation for a total of 942 days in 1,997 locations) (March 2011- March 2017)

**Mental Health Care**

**Establishment of “Miyagi Mental Health Care Center”**

Established as mental health care hub in December 2011. In April 2012, regional centers were set up in Ishinomaki and Kesennuma in order to develop a mental health care consultation system to offer such support as guidance visits for the mentally disabled as well as disaster victims in emergency temporary housing.

- No. of counseling support cases: 30,726
- No. of telephone counseling cases: 10,463 (April 2012- March 2018)

**Support for People with Disabilities**

**Miyagi Support Center for Hearing-Impaired Disaster Victims (Mimi-Sapo Miyagi)**

The center is offering counseling support and information aimed to help deaf and hearing-impaired disaster victims restore order to their lives. (No. of counseling cases: 5,365; January 2012-April 2018)

**Municipality Efforts**

In order to construct a comprehensive regional support system for every region, Ishinomaki City, in cooperation with the Regional Comprehensive Support System Promotion Association, is moving forward various projects.

**Support Efforts for Child-rearing and Children**

**Establishment of Support Center**

47 temporary housing support centers are in place in 11 coastal cities/towns in order to keep watch over the residents in the temporary housing and providing life/health counseling. (As of April 30, 2018)

**Temporary housing visit (Natori City)**

**Health Surveys for People Living in Temporary Accommodation**

Health workers assess the health conditions of those living in temporary housing and provide health guidance when necessary.

**Measures for Diseases Arising from Lack of Activity**

Educational activities and home guidance are provided by rehabilitation specialists in order to prevent Disuse Syndrome and disabilities which may caused by living in temporary housing.

**Town Infirmary**

Health counseling/check-ups are provided by public health nurse.

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Recovery Efforts in Miyagi: Economy, Commerce/Industry, Tourism and Employment (1)

Economic foundations must be rebuilt, with priority placed on prompt restoration of the manufacturing industry, rejuvenation of the commercial and tourism sectors, and creation of employment to support prefectural citizens.

State of Restoration of Affected Businesses
Approx. 95% restarted

No. of chamber of commerce and industry members affected: 9,814
Members undecided about resuming business: 66
No. of members continuing operations: 9,748
(as of the end of March 31, 2017)

Measures regarding the “overlapping debt” problem
Establishment of the Miyagi Prefecture Industry Recovery Support Center (November 2011)
Enquiries with 1,623 companies have been carried out as of Apr. 30, 2018

Establishment of Miyagi Industry Recovery Organization (December 2011)
Factoring transaction cases decided with 142 businesses as of Apr. 30, 2018

Establishment of Great East Japan Earthquake Disaster Business Rejuvenation Support Organization (March 2012)
343 cases of assistance carried out within the prefecture as of Apr. 30, 2018

Support from the SME Group Funds
Approx. 4,000 affected companies are making use of the SME Group Funds and working towards recovery.

SME Foundation Improvement Organization, Temporary Facility Maintenance Project
This project sees companies working together with local governments to build temporary shops and factories in order to help SMEs restart their operations. These facilities are built in 88 locations in 6 cities and 4 towns, including Ishinomaki (as of December 14, 2017; numbers include facilities that are in the process of being built).
Economic foundations must be rebuilt, with priority placed on prompt restoration of the manufacturing industry, rejuvenation of the commercial and tourism sectors, and creation of employment to support prefectural citizens.

Tourists: approx. 99% have returned compared to 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>(preliminary figure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>61,290,000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>60,840,000</td>
<td></td>
</tr>
</tbody>
</table>

**Miyagi “Recovery Tourism” Project**

Bringing a link to the inland and coastal regions, "Recovery Tourism" is being promoted to allow visitors to learn about the current state of recovery efforts through guides who share their experience of the disaster as well as visiting temporary shopping districts in coastal regions. Visitors can also experience what the region has to offer through local foods, natural landscapes, and hot springs.

**Attraction of Foreign Tourists**

The Miyagi Prefectural Government is taking steps to attract more foreign tourists by collaborating with the region’s various tourism organizations and the Tohoku region as a whole. We hope that by doing so we can rid the area of the stigma that resulted from the 2011 Great East Japan Earthquake disaster and the Fukushima nuclear power plant incident.

**Year-round Tourism Campaign**

The popular idol group “Hey! Say! JUMP”, which includes Hikari Yaotome, a member from Miyagi, will be featured in Miyagi’s first year-round tourism campaign, to showcase the four seasons of this region and to promote what the seasons have to offer throughout the year in cooperation with Johnny & Associates who has been contributing to the recovery efforts.

The following will be included in the campaign.

- Guidebooks and posters
- Promotional videos
- Stamp rallies
- Ads on pillars inside Sendai Subway Station
- Promotional advertisement in Tokyo Metro and JR Yamanote trains

**Efforts to Promote Tourism Recovery**

- **Measures to attract tourists**
  - Government and private sectors cooperate to promote public awareness
  - Bring in more tourists from Kansai area through cooperation with airline companies
  - Promote “Recovery Tourism” and educational travel
  - Attract tourists under the theme of Keicho European Envoy Departure 400-Year Anniversary (UNESCO Memory of the World Registered Heritage)

- **Information and Press**
  - Disseminate information to dispel harmful rumors and to keep Miyagi in people’s minds
  - Promote Miyagi together with Musubimaru (Sendai and Miyagi tourism mascot)

- **Inbound**
  - Tourism promotion and attraction in 4 important overseas markets (especially Taiwan)
  - Expand into possible markets (Southeast Asia)
  - Promote educational travel from other countries
  - Reinforce the system for welcoming foreign tourists
Recovery Efforts in Miyagi: Economy, Commerce/Industry, Tourism and Employment (3)

Miyagi Prefecture is working towards economic reconstruction by prioritizing the creation of employment which supports prefectoral residents and aims at swift recovery of the manufacturing industry and revitalization of commerce and tourism.

**Employment Situation (As of Apr. 2018)**

**Source:** Miyagi Labor Department

(1) No. of effective job seekers (*1): approx. 37,000
   Just before the disaster (March 2011): approx. 54,000
   At the peak (June 2011): approx. 77,000
(1*: Unemployed as a result of the disaster, unemployed from before the disaster)

**Ref.: Unemployment Situation Due to the Disaster (As of August 2012):**

(1) No. of unemployed because of the disaster: approx. 47,000 (at peak) → approx. 12,000
   No. of insured (employment insurance): approx. 6,000,
   (including those who are no longer insured)
   No. of self-employed: approx. 6,000
(2) No. of those on employment leave due to the disaster: approx. 65,000 (at peak) → approx. 12,000

**Measures for Employment Creation**

(Aimed at creation of stable employment for 35,000 persons)

In unison with industrial policy, the government is working to create stable employment by supporting private businesses which employ people without term limitations. Currently, 33,778 people have been employed at 10,260 companies. (As of March 31, 2018)

**Job Fairs in Miyagi Prefecture**

Job fairs for those forced into unemployment were held.

**Job Fairs in FY 2018**

Job fair planned

(Past Job Fairs)

• Attendance in FY 2013
  3 locations, 191 Companies, 879 Job Seekers

• Attendance in FY 2014 FY
  4 locations, 93 Companies, 717 Job Seekers

• Attendance in FY 2015
  2 locations, 30 Companies, 281 Job Seekers

• Attendance in FY 2016
  2 locations, 34 Companies, 454 Job Seekers

• Attendance in FY 2017
  1 location, 19 Companies, 293 Job Seekers

### Ratio of job offers to job seekers within each Public Employment Security Office within Miyagi Prefecture *The total figures are seasonally adjusted*

<table>
<thead>
<tr>
<th>Public employment security office</th>
<th>Total*</th>
<th>Sendai</th>
<th>Ishinomaki</th>
<th>Shiogama</th>
<th>Kesenumma</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2011</td>
<td>0.44</td>
<td>0.50</td>
<td>0.28</td>
<td>0.27</td>
<td>0.19</td>
</tr>
<tr>
<td>April 2018</td>
<td>1.73</td>
<td>1.78</td>
<td>1.70</td>
<td>0.94</td>
<td>1.61</td>
</tr>
</tbody>
</table>
Recovery Efforts in Miyagi: Agricultural, forestry and fishing industries (1)

The Great East Japan Earthquake Disaster caused significant damage to the entire coastal region. Miyagi Prefecture will step up its efforts to make the agricultural, forestry and fisheries industry a growing industry that will drive the regional economy through efforts including drastic restructuring of policies. Miyagi Prefecture will be reborn as a food supply base for Japan.

● Agricultural Industry

<table>
<thead>
<tr>
<th>Farmland (including salt removal)</th>
<th>Approx. 98% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected: approx. 13,000 ha</td>
<td>Completed: approx. 12,808 ha</td>
</tr>
</tbody>
</table>

Horticulture (restored greenhouse area)
Approx. 99% Restored

| Affected: approx. 178 ha | Restored: approx. 176.5 ha |

● Forestry

<table>
<thead>
<tr>
<th>Forestry Facilities (mountains &amp; coasts)</th>
<th>Approx. 95% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected: 19 sites</td>
<td>Completed: 18 sites</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Forestry Roads (mountains &amp; coasts)</th>
<th>Approx. 100% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected: 62 sites</td>
<td>Completed: 62 sites</td>
</tr>
</tbody>
</table>

Recovered Farmland and Demonstration Rice Reaping at Test Field (Higashimatsushima City)

Forestry road construction 「Takakura Line」 (Taiwa Town)
Recovery Efforts in Miyagi: Agricultural, forestry and fishing industries (2)

The Great East Japan Earthquake Disaster caused significant damage to the entire coastal region. Miyagi Prefecture will step up its efforts to make the agricultural, forestry and fisheries industry a growing industry that will drive the regional economy through efforts including drastic restructuring of policies. Miyagi Prefecture will be reborn as a food supply base for Japan.

**Fishing Industry** (As of April 30, 2018)

<table>
<thead>
<tr>
<th>Fishing Ports (restoration work)</th>
<th>Approx. 82% work completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected: 1,260 locations</td>
<td>Work completed: 1,032 locations</td>
</tr>
</tbody>
</table>

**Fishing Boats (no. in operation)**

<table>
<thead>
<tr>
<th>Approx. 100% in operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before disaster: approx. 9,000</td>
</tr>
<tr>
<td>*Repair or replacement of all fishing boats requested by owners has been completed.</td>
</tr>
</tbody>
</table>

**Hauls at Main Fishing Markets (value)**

<table>
<thead>
<tr>
<th>Approx. 101% restored</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010: approx. 60.2 billion yen (approx. 320,000 tons)</td>
</tr>
<tr>
<td>2017: approx. 60.7 billion yen (approx. 250,000 tons)</td>
</tr>
</tbody>
</table>

Onagawa Fish Market’s central building was completed on August 31, 2016.

Pacific saury that have unloaded.

---

As of April 30, 2018

Pacific saury that have unloaded.
Miyagi Prefecture is working hard to cultivate Miyagi’s soil in order to develop the prefecture, overcome the effects of the disaster, and nurture the livelihood and lives of our citizens. We do so with the belief that sustainable soil cultivation will pass on the natural bounty of Miyagi to future generations.

**Recovery Efforts in Miyagi: Restoration projects on public facilities**

**Roads and bridges (restoration construction)**
Approx. 97% Completed

- Damaged roads: 1,411 sites
- Damaged bridges: 123
- Restoration construction completed: 1,490 sites

**River facilities (restoration construction)**
Approx. 84% Completed

- Damaged: 273 sites
- Construction completed: 229 sites

**Coastal preservation facilities (restoration construction)**
Approx. 53% Completed

- Damaged: 73 sites
- Completed: 39 sites

**Port facilities (restoration construction)**
Approx. 69% Completed

- Affected: 281 sites
- Completed: 194 sites

As of May 31, 2018

State of reconstruction work on Sunaoshi River (Tagajo City)

State of reconstruction work on Kojirahama Shore (Matsushima Town)
Recovery-Focused Efforts: Education, Disaster Preparedness, and Safety

Response to the TEPCO Fukushima Daiichi Nuclear Power Plant Accident

**Promotion of Comprehensive Accidental Damage Measures**
- Establishment of the Miyagi Citizens’ Committee
- Drafting and execution of accidental damage measures and basic policy

**Monitoring and Measurement of Radioactivity**
- Creation of plan to carry out radiation and radioactivity measurements
- Regular monitoring of air radiation levels in all municipalities by setting up monitoring posts
- Prefecture-wide distribution of devices to measure radiation levels in food products
- Dispatch of decontamination assistance teams to municipalities
- Decontamination of prefectural facilities
- Memorandum exchange regarding TEPCO reports
- Review of requests to prevent leakage of contaminated water into the ocean (Nuclear Regulation Authority, etc.)

**Response to Damage**
- Workshops and consultation regarding compensation for damage to private businesses

**Dissemination of Correct Information, Public Awareness**
- Creation and maintenance of a website to announce results of radiation and radioactivity testing within the prefecture: *Radiation Information Site Miyagi*
- Consultation counter to respond to inquiries and concerns, lecture visits
- Specialist-led seminars

**Addressing Health Concerns**
- First Miyagi Advisory Conference on Health Effects (October 25, 2011)
- Thyroid ultrasound testing (December 4, 2011; January 15, 2012)
- Whole-body counting measurement of radiation exposure (January 14-15, 2012)
- Second Miyagi Advisory Conference on Health Effects (January 24, 2012)
- Public meetings regarding health effects from the Fukushima Daiichi Nuclear Power Plant accident
  - FY 2011: 4 times, with approx. 1000 participants
  - FY 2012: 2 times, with approx. 600 participants

**Measurement of Radioactivity at Schools**
- Measurement of air radiation dose on school grounds and playgrounds with cooperation of local municipalities (FY 2017 results showed no facilities with radiation dose of 0.23μSv/h or higher)
- Measurement of radiation levels in outdoor pools
- Testing of school meals after preparation (monitoring)
- Testing of ingredients to be used for school meals (sample measurement)
- Announcement of measurement results on prefectural websites (*Radiation Information Site Miyagi*, etc.)
**Recovery Efforts in Miyagi: Restoration of Industries**

**Special Zones for Reconstruction System:** Promotes recovery through establishing regions where normal procedures (legal etc.) and taxes are relaxed.

### Special Measures and Arrangements of Special Zones for Reconstruction System

#### Regulations and Procedures
- Housing: Reduced conditions to apply for public housing
- Industry: Special arrangements for development of facilities regarding agriculture, forestry and fishery processing and selling facilities, special arrangements regarding fishery rights concession, etc.

#### Land Use Restructuring
- Special arrangements for land use restructuring beyond existing land use frameworks (urban area, farm area, forests, etc.)
- Relaxed regulation of floor area ratio for building construction for tsunami evacuation purposes

#### Tax Incentive System
- Introduction of tax system to promote investment, employment and research and development aimed at concentrating industry in disaster-affected regions
- Compensation for local governments for loss of revenue caused by reduced local taxes

#### Finance
- Grants for reconstruction to municipalities in affected areas
- Support to supplement interest of various financing in the Special Zones

### Example of reconstruction projects that utilise special measures

- Construction of public housing
- Revitalisation of agricultural, forestry and fishery industries, etc.
- Transfer and maintenance of housing land and agricultural land
- Relocation of residences to higher ground, etc.
- Concentration of industries in affected areas
- Securing employment opportunities in affected areas, etc.
### Plans Related to the Law for Special Zone for Reconstruction

1. **Recovery Promotion Plan Approved:** Total no. of approved plans: 67 plans submitted by prefectural government: 8, plans submitted by the local municipalities: 59 (as of March 11, 2017)

Ex.) Prefectural plans: Private Investment Promotion Zone (manufacturing industry), Miyagi Momonoura Area Fisheries Industry Reconstruction Zone etc.; Municipal plans: Agriculture and Food Frontier Promotion Zone (Sendai), Ishinomaki City Rejuvenation Zone (Ishinomaki) etc.

2. **Recovery Improvement Plans Announced (as of January 31, 2018)**
   - Established Recovery Improvement Councils in 15 coastal municipalities in February 17, 2012.
   - Discussions were carried out regarding recovery land readjustment projects in stricken urban areas and collective relocation promotion projects etc., and recovery improvement plans related to recovery improvement projects were announced in 14 municipalities (see table below)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Collective Relocation Promotion Projects (no. per area)</th>
<th>Land Readjustment Projects (no. per area)</th>
<th>Disaster Public Housing Improvement Projects (no. per area)</th>
<th>Tsunami Recovery Hub Improvement Projects (no. per area)</th>
<th>City Planning Road Projects (no. of roads)</th>
<th>Other (no. of projects)</th>
<th>Recovery Improvement Council (no. of meetings)</th>
<th>Recovery Improvement Plans (no. announced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sendai City</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Ishinomaki City</td>
<td>48</td>
<td>15</td>
<td></td>
<td></td>
<td>22</td>
<td>10</td>
<td>26</td>
<td>48</td>
</tr>
<tr>
<td>Shiogama City</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>Kesennuma City</td>
<td>51</td>
<td>4</td>
<td>21</td>
<td>2</td>
<td>13</td>
<td>8</td>
<td>26</td>
<td>82</td>
</tr>
<tr>
<td>Natori City</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td></td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Tagajo City</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Iwanuma City</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>6</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Higashi-Matsushima City</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td></td>
<td>2</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Watari Town</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Yamamoto Town</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Shichigahama Town</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td></td>
<td>1</td>
<td>4</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Rifu Town</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onagawa Town</td>
<td>21</td>
<td>1</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>Minamisanriku Town</td>
<td>26</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>20</td>
<td>44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>185</strong></td>
<td><strong>29</strong></td>
<td><strong>84</strong></td>
<td><strong>10</strong></td>
<td><strong>49</strong></td>
<td><strong>37</strong></td>
<td><strong>135</strong></td>
<td><strong>339</strong></td>
</tr>
</tbody>
</table>
## 5 Support Received in Miyagi (1)

### (1) Rescue teams from around the world dispatched to Miyagi

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries/Regions</td>
<td>17</td>
</tr>
<tr>
<td>Relief teams</td>
<td>594</td>
</tr>
<tr>
<td>Rescue</td>
<td>134</td>
</tr>
<tr>
<td>Clerical/Medical</td>
<td>4</td>
</tr>
<tr>
<td>Restoration support</td>
<td>15</td>
</tr>
<tr>
<td>Support team</td>
<td>46</td>
</tr>
<tr>
<td>Medical support team</td>
<td>56</td>
</tr>
<tr>
<td>Rescue dogs</td>
<td>22</td>
</tr>
</tbody>
</table>

---

Ref.: Ministry of Foreign Affairs (As of January 30, 2012)
Support Received in Miyagi (2)

1. **Disaster Volunteering Efforts** (as of April 30, 2018)
   - Efforts at municipal disaster volunteer centers
     - Locations: 13 located across 8 cities and 5 towns
     - No. of volunteers: 768,015 people (March 12, 2011 – April 30, 2018)

2. **Donation Money (for Disaster Victims)** (as of April 30, 2018)
   - 27.12 billion JPY (204,074 separate cases)
   
   Breakdown - Domestic: 26.87 billion JPY (203,859 separate cases) Overseas: 260.6 million JPY (215 separate cases)

3. **Donation Money (for Recovery Efforts)** (as of May 31, 2018)
   - 34.54 billion JPY (13,358 separate cases)
   
   Breakdown - Domestic: 18.21 billion JPY (13,292 separate cases) Overseas: 16.32 billion JPY (66 separate cases)

4. **Donations for Children Orphaned by the Great East Japan Earthquake** (as of April 30, 2018)
   - 10.76 billion JPY (16,903 separate cases)
   
   Breakdown - Domestic: 10.74 billion JPY (16,825 separate cases) Overseas: 20.49 million JPY (78 separate cases)

   *Children who lost both parents: 139  Children who lost one parent: 925  (as of January 31, 2016)
Thank you for your support! We have started efforts towards recovery and development, and we are determined to complete our goal.
We appreciate your continued cooperation!