Higashimatsushima
Community Development for Recovery after the Great East Japan Earthquake

Never Forgetting, Striding Together into the Future City, JAPAN

Higashimatsushima City is located in the northeast of Japan, bordering the Pacific Ocean. It is a scenic city that includes Matsushima, one of Japan’s three great views. The JR Senseki Line and Sanriku Expressway run through the center of the city, and it is only around 20 hours from Sendai City. Higashimatsushima features convenient public transportation as a regional city.

Experiences and Exchange
Higashimatsushima City is blessed with nature, with spectacular views of the sea, mountains, and rivers. It is particularly rich in marine leisure opportunities, such as outdoor swimming, clam digging, and fishing. Prior to the earthquake disaster, it was visited by roughly 1.1 million people each year.

The Japan Air Self-Defense Force Matsushima Base holds an air show every summer, and airplane fans gather from around the country to see Blue Impulse fly.

Overview of Higashimatsushima

Population: 40,183 (as of December 1, 2015)
(Population before earthquake: 43,142)

City flower: Cherry blossom
City tree: Pine

Higashimatsushima damage conditions (as of end of August 2015)

- Human damages (city residents)
  Deaths: 1,110
  Missing persons: 24
  Total: 1,134 (approx. 3% of the city’s residents)
- Home damage
  Completely destroyed: 5,513 homes
  Partially destroyed: 2,500 homes
  Total: 8,013 homes
  (Approx. 73% of all households)
- Evacuees (peak): 15,185
- Shelters (peak): 106
- Flooded agricultural area: 1,465 ha
  Total agricultural area: 3,349 ha

65% of the city’s urban area was inundated by the tsunami (more than any other municipality in Japan)

Higashimatsushima’s unique regional autonomy framework
8 autonomous organizations, based on basic autonomous regulations

Promoting regional mutual assistance
Higashimatsushima’s autonomous residents exercise their abilities even during major disasters.

Self-assistance → Mutual assistance → Public assistance
Bonds between people played an important role after Higashimatsushima suffered devastating damage.

Making progress on building homes with residents

1. Establishment of disaster prevention collective relocation sites (planned single-family housing zones)
   - Higashimatsushima City is currently developing a total of 1,010 public housing units.
   - 528 planned single-family housing zones have been completed, for a completion rate of 100%.
   - 831 have been completed, and families have already moved in. Completion rate: 82.3%

2. Establishment of disaster public housing
   - Currently developing a total of 1,010 public housing units.
   - 831 have been completed, and families have already moved in. Completion rate: 82.3%

New plans for recovery

Two plans are being implemented simultaneously: a recovery plan and the FutureCity Initiative.

Simple recovery

- Challenges for the solution to problem
- FutureCity Initiative

A city still facing challenges, such as energy supply and transport network, is trying to prevent disaster recurrence.

Higashimatsushima style recycling of disaster waste

- Disaster rubble volume: 1,098,000 tons
- Approx. 99% of all rubble was recycled.
- 110 times the annual waste production of Higashimatsu

- Total: 1,098,000 tons
- Unburnable mixed garbage: 185,000 tons
- Metal: 25,000 tons
- Asphalt: 34,000 tons
- Concrete: 404,000 tons
- Mixed garbage: 79,000 tons
- Wood/wood scrap: 373,000 tons
- Source: Kahoku Shimpo (July 6, 2014)

This type of school is very rare in Japan.
Future City Initiative Vanguard Project

Clinic

Hospital

Clinic

Ministry of the Environment JAPAN, Global Environment Bureau

"Future City" Initiative Vanguard Project

Low-carbon energy social development promotion operation

This power station was featured in the Financial Times in the article "Providing Power... and Hope." In addition to power generation operators, carport solar power can provide power to residents as a distributed power station during an emergency or disaster. Power is provided along with parking, providing two benefits at the same time.

Electric local production for local consumption

Low-carbon energy social development promotion operation

Ministry of the Environment JAPAN, Global Environment Bureau

Higashimatsushima Organization for Progress and Economy, Education, Energy (HOPE)

A recovery-related intermediary support organization formed by industry, academia, government, and residents

Founding objective

Promoting the implementation of leading projects based on Higashimatsushima recovery community development plans

Have a new power projects this year

Higashimatsushima Organization for Progress and Economy, Education, Energy (HOPE)

Higashimatsushima intelligent disaster prevention eco-town

Disaster public housing

85 units

The Japan’s first protection disasters model by which electricity supply is possible for 1 week when the disasters, reducing CO2 of 266ton a year

2011

2012

2013

2014

2015

Kw

Solar power generation systems.

This is 20 times more than before tsunami disaster

Higashimatsushima intelligence disaster prevention eco-town

Nobiru northern hillside area (model area for town-wide relocation)

Disaster public housing

170 units

Post office/parking/commercial area

June 2015

Ishinomaki

JR Senseki Line

Nobiru Nursery School

Nobiru northern hillside area development [2012-2016]

Type of project: Large reconstruction project

Tate area: 25.5 ha including development area of 24.6 ha

Residential area: 324 dwelling (9.1 ha)

Disaster public housing: 170 units (3.2 ha)

Higashimatsushima "Kizuna" Carport Solar Power

(Operator: Resident fund)

(Linked: approx. 2 megawatts)

(Planned installation area: approx. 155 Kw)

(Community Center parking lot: approx. 10 Kw)

Total: Approx. 268 Kw

Higashimatsushima "Kizuna" Solar Park

(Operator: Resident fund)

(Linked: approx. 1,950 Kw (approx. 2 megawatts)

(Planned installation area: approx. 47,000 m2)

Electric local production for local consumption

Higashimatsushima "Kizuna" Carport Solar Power

"Providing Power... and Hope." Renewable energy equipment deployed to shelters and public facilities.

Oku-Matsushima "Kizuna" Solar Park

(Operator: Resident fund)

(Linked: approx. 1,950 Kw (approx. 2 megawatts)

(Planned installation area: approx. 47,000 m2)

Electric local production for local consumption

Oku-Matsushima "Kizuna" Carport Solar Power

"Providing Power... and Hope." Renewable energy equipment deployed to shelters and public facilities.

Tokyo Electric Power Company

"Providing Power... and Hope." Renewable energy equipment deployed to shelters and public facilities.

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Electric local production for local consumption

Higashimatsushima "Kizuna" Carport Solar Power

"Providing Power... and Hope." Renewable energy equipment deployed to shelters and public facilities.
復興に向けた協力と連携の合意に関わる覚書(事例はインドネシアアチェ市)
両市の間に協力と連携に基づく、良好な関係を築くことを望み、平等と相互利益の原則の重要性を認め、以下のように合意する。

≪主な協働分野≫
①都市計画、防災計画
②教育、健康、文化
③観光、貿易、中小産業
④技術開発、通信システム開発

HigashiMatsushima and JICA agreed on regional revitalization and promotion of reconstruction through international cooperation on 2015.

International exchange after the disaster

Indonesia
Tsunami Affected Area

Philippines
Leyte Typhoon
Afflicted Area

Memorandum on agreement on cooperation for reconstruction (example of Aceh City)

- Disaster-prevention education (Aceh City)
  - Reception of trainees (HigashiMatsushima)
    - 2 trainees x 3 times,
    - 6 trainees in total
  - Training on 10-year reconstruction project as an advanced reconstruction site
- Information sharing (Aceh)

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Higashimatsushima: Toward becoming a FutureCity

Forest school

Miyanomori Elementary School: the forest school

Shin Nobiru Station

Megasolar

Tsunami monitoring cameras

Nobiru northern hillside area
Collective relocation creation area

Medical Institution, etc.