

# Preparedness after Great East Japan Earthquake & Tsunami

Asian Conference on Disaster Reduction  
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# I-a. Great East Japan Earthquake & Tsunami

# Great East Japan Earthquake and Tsunami (March 11, 2011)

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## Tsunami Disaster

Miyako City, Iwate Prefecture  
Courtesy of Tarocho Fisheries  
Cooperative Association



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## Catastrophic Damage

Kesennuma City, Miyagi Prefecture, 14 March 2011  
Courtesy of Tokyo Fire Department



# Damage caused by Great East Japan Earthquake

## Estimated Economic Damage

Item	Damage (approx.)
Buildings	10.4 trillion yen (87 billion dollars)
Lifeline facilities	1.3 trillion yen (11 billion dollars)
Social basic facilities	2.2 trillion yen (18 billion dollars)
Agriculture, forestry, and fisheries	1.9 trillion yen (16 billion dollars)
Others	1.1 trillion yen (9 billion dollars)
Total	<b>16.9 trillion yen</b> <b>(141 billion dollars)</b>

## Human Loss / Damage

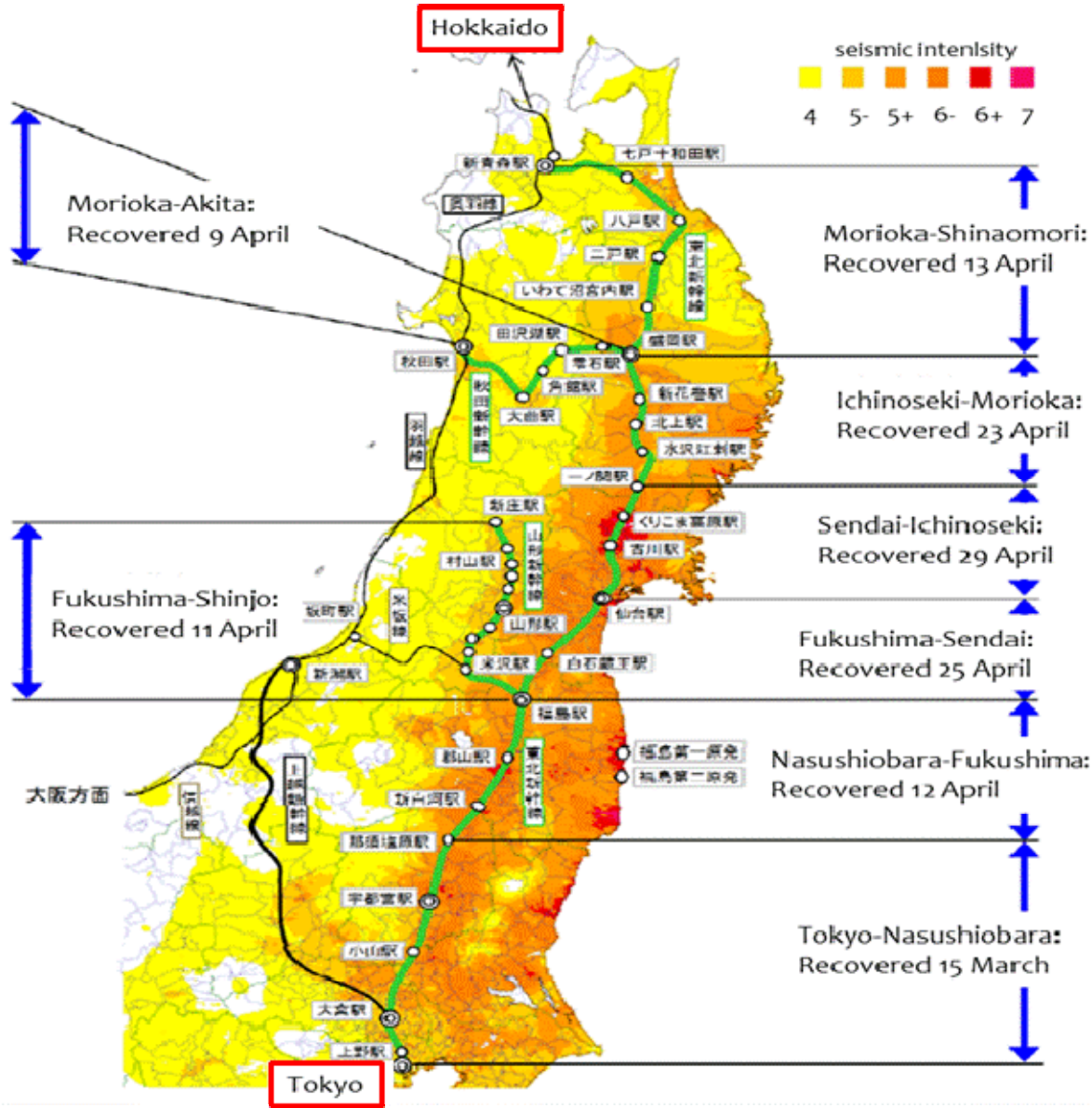
- Casualties: **15,891**  
as of 11 Mar 2015
- Missing: **2,584**  
as of 11 Mar 2015
- Evacuees:  
Max **470,000**

# I-b. Lessons from GEJE & T

# Shinkansen; Investment and Build Back Better



East Japan Earthquake Picture Project Web service by Yahoo! JAPAN





# Recovery of Expressways; Prior Agreement

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- Emergency recovery operation of Tohoku Expressway (the longest expressway in Japan) had done on 22 March, just 11 days later of the occurrence of the disaster.
- The 16 Pre-Disaster Cooperation Agreements between governments and local construction companies enabled the quick recovery of highways and roads including the Toholu Expressway.
- It contributed not only to the transportation of the emergency relief supplies, but also recovery of the economy in Japan.



**Six days later**



Joban  
Expressways



# Lessons We've Leant from GEJE&T

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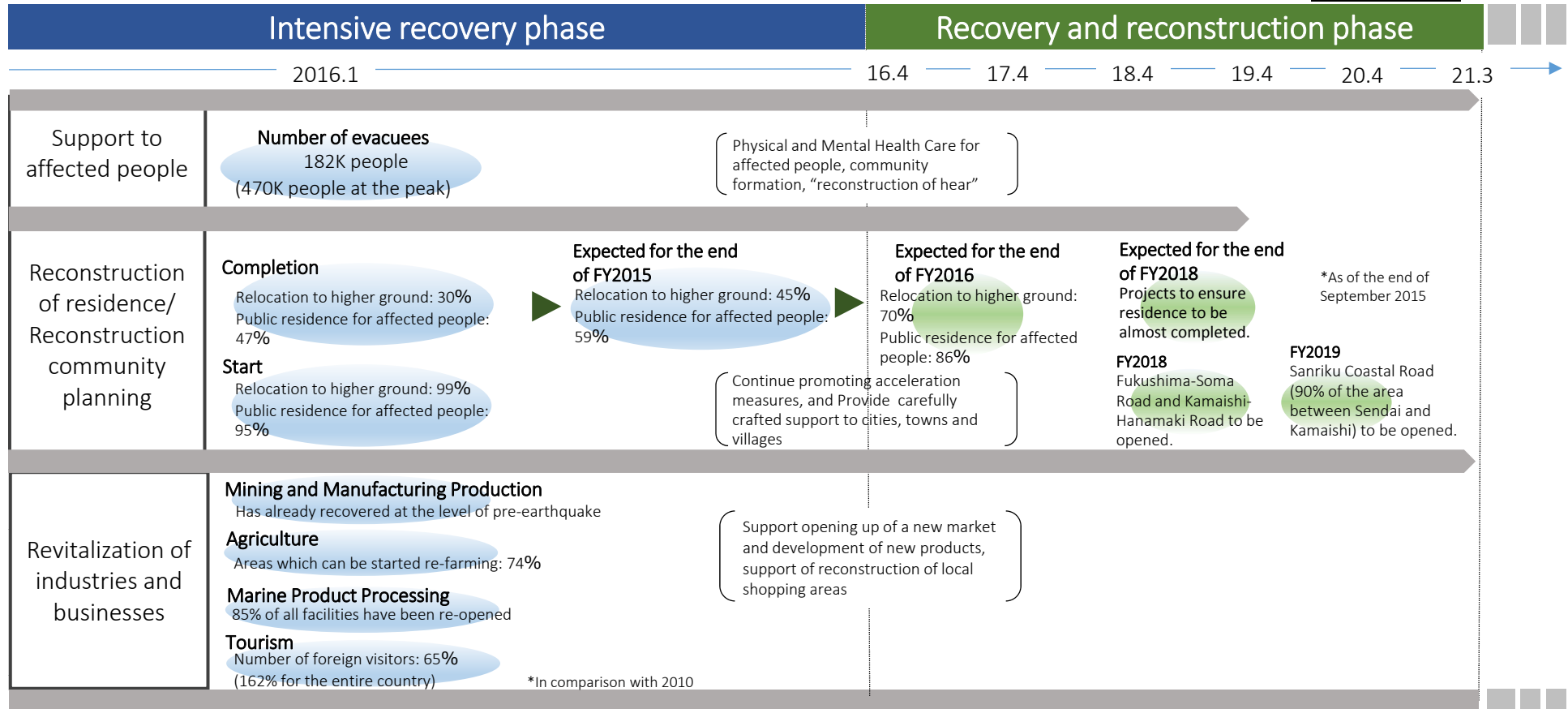
✓ **Prior Investmet**

✓ **Build Back Better**

✓ **Prior Arrangement/Agreement**

# Roadmap for Recovery from a Disaster

January 2016



2020: Tokyo Olympic and Paralympic Games  
 2021 March: Reconstruction and revitalization phase to be ended.  
 (The end of the Reconstruction Agency to be authorized to operate.)

## II. The Third UN World Conference on Disaster Risk Reduction in Sendai, 2015

# The Third UN World Conference on Disaster Risk Reduction



- Date: 14-18 March 2015
- Venue: Sendai City, JAPAN
- Participation:  
More than 100 ministers  
(25 Heads of States and Governments)  
More than 6,500 participants



## «Outcome»

- Adoption of Sendai Framework for DDR 2015-2030
- Adoption of Sendai Declaration
- Sendai DRR Cooperative Initiative (by Prime Minister ABE)



# Training on the Promotion of Women's leadership in Disaster Risk Reduction

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## JICA's Invitation Program

### Invitation Program on Gender and Diversity in Disaster Risk Reduction

Objectives: Learn challenges and good practices on preparedness, emergency response, recovery and reconstruction, in terms of gender and diversity, from the past experiences of disasters in Japan and participant countries, and then discuss the enhancement of disaster responses and gender

Period: 21 February – 6 March 2016

Participant countries: Indonesia, Sri Lanka, Thailand, Nepal, Bangladesh, Philippines, Viet Nam

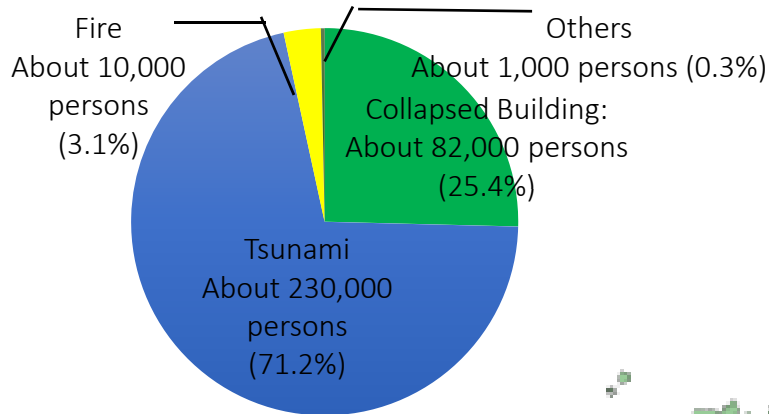
Number of participants: Total 21 participants from 3 countries

# III. Tsunami Preparedness through Awareness

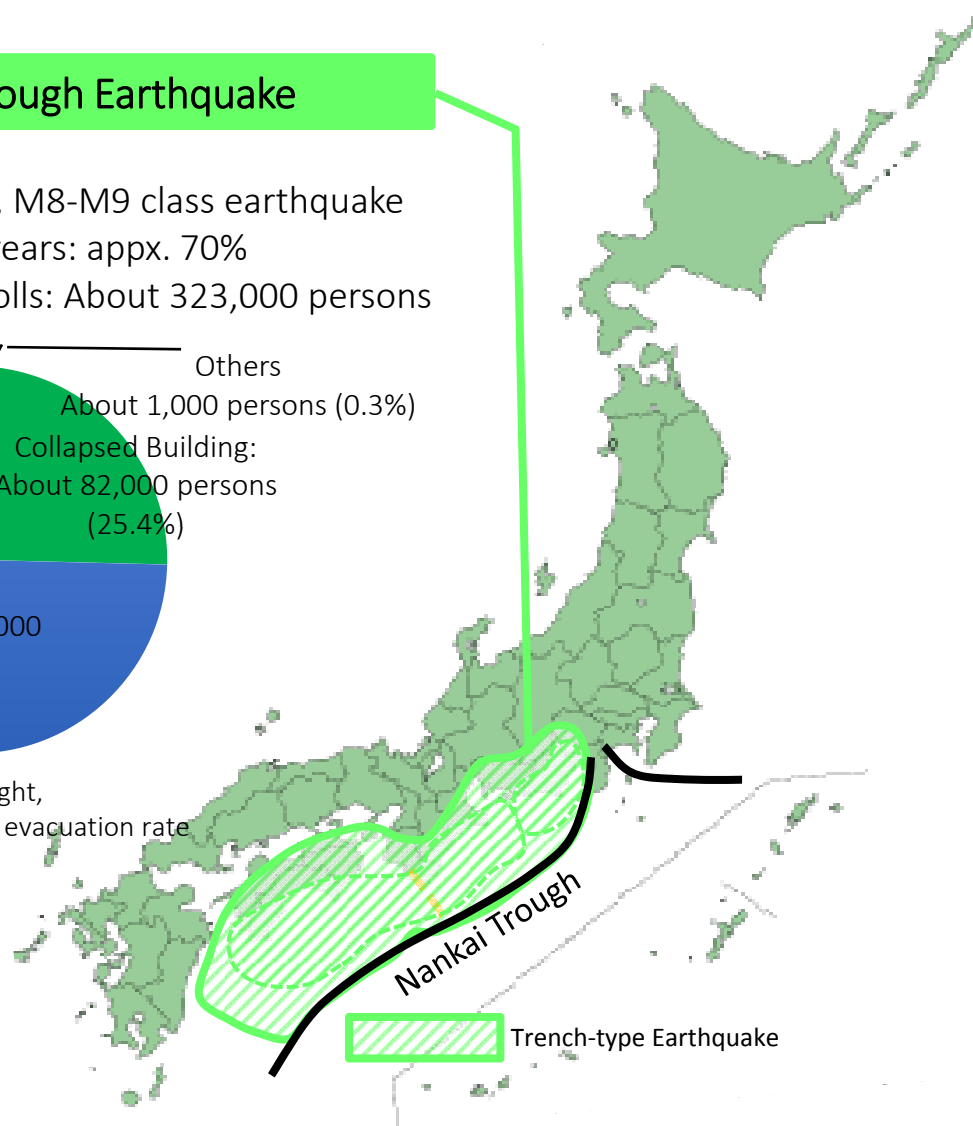
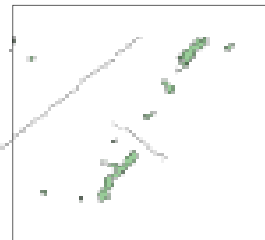
# Possible Nankai Trough Earthquake

## Nankai Trough Earthquake

Probability of a large, M8-M9 class earthquake occurring within 30 years: appx. 70%  
→Estimated Death Tolls: About 323,000 persons



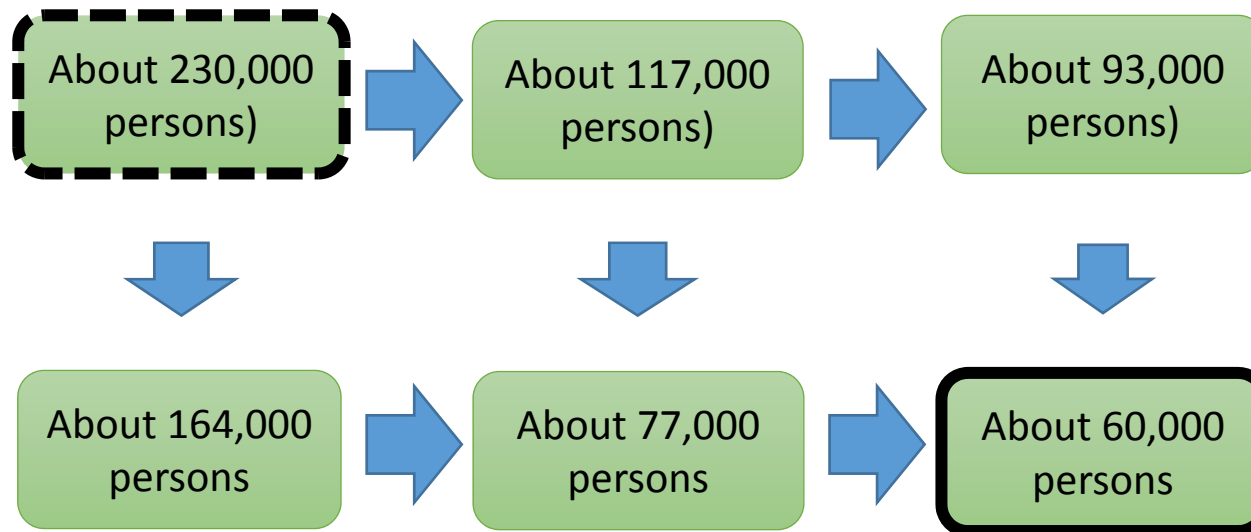
Assumptions: Winter, mid-night, wind speed : 8m/s, low early evacuation rate





# Effects of Anti-tsunami Measures for the Nankai Trough Earthquake

## Fatalities caused by the Tsunami



Excluding effects of evacuation buildings

Effective use of evacuation buildings

Hard measures (Public assistance)

Low Early Evacuation Rate	High Early Evacuation Rate	100% Immediate Evacuation
Speed up of starting evacuation		
Soft measures (Self-help/Communal assistance)		

Assumptions: the Tokai region is severely damaged.

# Tsunami Drills in Japan

In Japan, tsunami drills are executed around November 5, the day of Tsunami Disaster Prevention Day

Number of groups which conducted drills in FY2015: 287 (Oct 31-Nov 8)

## 1. National government level

9 ministries and agencies (7 for the last year): Cabinet Office, National Police Agency, Fire and Disaster Management Agency, Ministry of Justice, MOF, METI, MLIT, JMA, JCG

## 2. Local government level

172 (124 for the last year): 10 prefectures, 162 cities, towns, and villages

## 3. Business and community level

106 businesses and community groups (49 for the last year)



# A Commemorative Event for November 5<sup>th</sup>, “Tsunami Preparedness Day”



Prime Minister Shinzo Abe speaking on Tsunami Preparedness at the event (Cited from the PM's office website)



Prime Minister Shinzo Abe and Minister of State Taro Kono striking “Tsunami Preparedness” pose, together with “Tsunami Bosai Promotion Squad”



Introducing new members of the Tsunami Bosai Promotion Squad, who are presenting each area's initiatives for tsunami preparedness

# The United Nations General Assembly established November 5 as World Tsunami Awareness Day in December 2015.

Let's take steps to prepare for tsunami based on correct understanding.

In order to boost awareness of the risks of tsunami and strengthen tsunami countermeasure throughout the world, the United Nations established November 5 as World Tsunami Awareness Day at its General Assembly in December 2015 following a joint proposal made by 142 countries including Japan.

This heralded the start of new initiatives in the field of tsunami countermeasures.

