

# The Great Eastern Japan Earthquake

(GLIDE: EQ-2011-000028-JPN)

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## In depth damage report by affected cities

SEEDS Asia



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## I. Overview

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With the massive earthquake and the following tsunamis happened on 11 March 2011 (14:46 JST), northern part of Japan was severely damaged. Complete picture of total loss is still not seen as the number of death is increasing and investigation on various damages is still under way. After one month from the disaster, the picture is gradually unveiling as the search operation continues. The casualties and missing exceed 28,000 and many facilities were destroyed. There still are 162,000 evacuees in 2,300 shelters.

There are some agencies updating figures daily but some information is available only in Japanese. This report lists consolidated in-depth figures on damage on human, housing and building, fire cases, situation of evacuation shelters based on the information available at the time of reporting. It will also list detailed damage situation by cities in major affected Prefectures.

As part of our response to the Great Eastern Japan Earthquake, SEEDS Asia supports the affected communities by compiling humanitarian information on the ground in the affected area to be disseminated to the greater humanitarian community.

## II. The Earthquake and Tsunami: Their Impact

### Situation of Human Damage

The National Police Agency (NPA) issues the situation of human damages caused by the Great East Japan Earthquake of 11 March 2011 and its related aftershocks. The table was compiled based on the data available at NPA website and show number of people killed and those who are missing and injured.

<Table 1<sup>1</sup>: Human Damage by Prefectures>

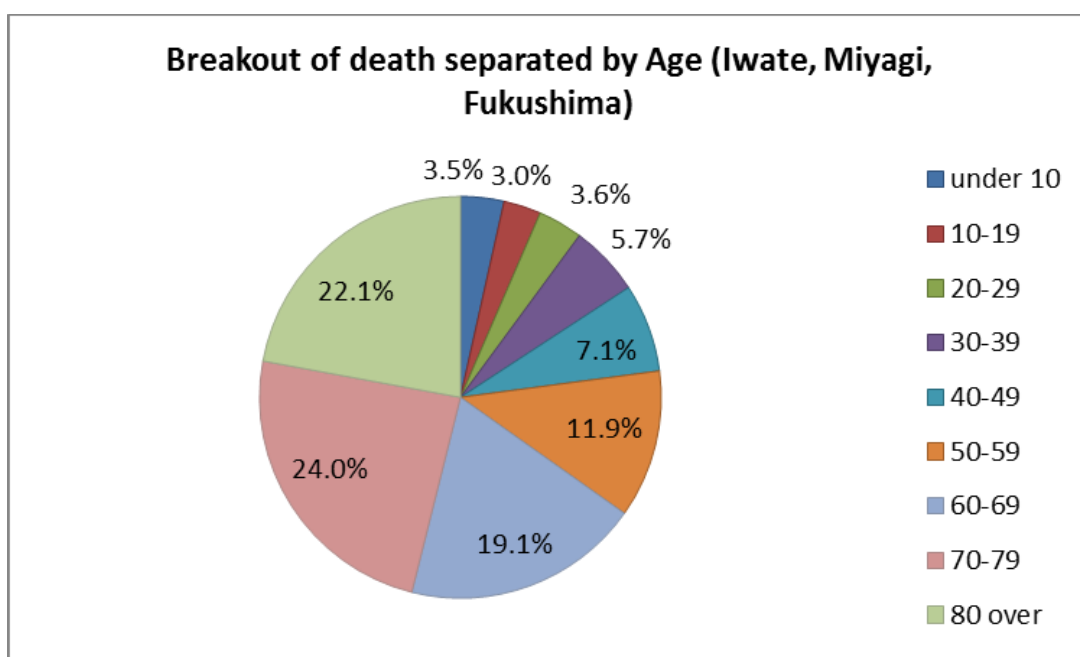
Prefectures	death	missing	injured
Hokkaido	1		3
Aomori	3	1	61
Iwate	4,068	3,759	165
Miyagi	8,541	7,785	3,437
Akita			12
Yamagata	2		29
Fukushima	1,422	1,959	227
Tokyo	7		90
Ibaraki	23	1	693
Tochigi	4		135
Gunma	1		35
Saitama			42
Chiba	18	2	224
Kanagawa	4		139
Niigata			3
Yamanashi			2
Shizuoka			4
Mie			1
Kochi			1
<b>Amount</b>	<b>14,094</b>	<b>13,507</b>	<b>5,303</b>

*\*Major news paper recently quoted the Ministry of Health, Labor and Wealth that 82 children became orphaned in major affected Prefectures: Iwate - 44, Miyagi - 30 and Fukushima - 8.*

<sup>1</sup> Damage Situation and Police Countermeasures, <http://www.npa.go.jp/archive/keibi/biki/index.htm>, 21 April 2011

According to the Jiji Press’s report as of April 19<sup>th</sup>, the National Policy Agency issued the breakout of the death (13,135 confirmed by autopsy) separated by age, in Iwate, Miyagi and Fukushima Prefectures, the most affected areas by the Great East Japan Earthquake. The report shows that death of the aged 60 or elder consists of more than 65.2 percent of total death toll, while number of children and youth under 19 consist 6.5 percent. It also reported 5,971 are male, and 7,036 are female.

2,143 (92.4 percent) were drowned to death, and, 578 were crushed to death, 148 were burnt to death. 83.2 percent of the bodies were identified until now



The table created based on the article by Jiji Press : [http://www.jiji.com/jc/v?p=ve\\_soc\\_jishin-higashinihon20110419j-02-w380](http://www.jiji.com/jc/v?p=ve_soc_jishin-higashinihon20110419j-02-w380) (Japanese)

## Situation of Damage on Housings and Buildings

There are great number of housings and building affected by the disaster. The tsunami occurred after the earthquake is considered the main cause of the damage. Residential buildings are usually lower and many videos of the tsunami destructing the down were repeatedly broadcasted. Below table<sup>2</sup> shows number of buildings damaged by affected Prefectures.

<sup>2</sup> The table was compiled based on the available information from Damage Situation and Police Countermeasures, <http://www.npa.go.jp/archive/keibi/biki/index.htm>, 21 April 2011

&lt;Table 2: Damage on Housings and Building by Prefectures&gt;

	Destruction		Washed Away	Burnt		Inundation		Damaged	Damages In non residential
	Completely	Partially		Completely	Partially	Above floor	other		
Hokkaido						294	433	5	473
Aomori	272	970	6			14	12	54	1,225
Iwate	17,746	1,041		14 (both)		3	9	728	1,226
Miyagi	46,315	9,344		119 (both)		36	2,261	10,322	5,684
Akita								3	3
Yamagata	37	80							
Fukushima	1,961	3,921		77	3	57	25	31,732	864
Tokyo		11		3				257	20
Ibaraki	892	4,737		37 (both)		1,055	718	89,196	4,150
Tochigi	155	1,193						38,643	295
Gunma		1						14,366	195
Saitama		5		1	1		1	1,800	33
Chiba	664	2,136		5		961	682	16,721	369

## Situation of Lifeline

- Electricity (Tohoku Electric Power Corporation (Tohoku Denryoku), April 18<sup>th</sup>, 16:00 JST)
  - 147,152 households out of electricity in Tohoku area (Tohoku Denryoku coverage area)
  - About 4,050 thousand households in Kanto area, about 3,000 households in Hokkaido area, about 4,000 thousand households in Chubu area have already recovered from the blackout.
- Gas (METI, April 15<sup>th</sup>, 22:30 JST)
  - Following households are out of gas (urban gas) in Tohoku area
    - 14,001 households in Sendai (Miyagi Pref)
    - 729 households in Iwaki (Fukushima Pref)
    - 5,209 households in Ishimaki (Miyagi Pref)
  - Following households are out of gas (community gas) in Tohoku area
    - 390 households in Kamaishi and Ohtuchi (Iwate Pref)
    - 12 households in Ofunato (Iwate Pref)
    - 165 households in Higashi-Matsuhima (Miyagi Pref)

- 68 households in Ohtsuchi (Iwate Pref)
  
- Water (MHLW, April 19<sup>th</sup>, 11:00 JST)
  - 25,000 households in Iwate  
(Ohfunato, Rikuzen-Takata, Kamaishi, Ohtsuchi, Miyako, Yamada, Iwaizumi, Tanohata, Noda)
  - 55,000 households in Miyagi  
(Shiogama, Sendai, Kesen'numa, Tagajo, Onagawa, Iwanuma, Natori, Watari, Shichigahama, Yamamoto, Ishinomaki, Higashi-Matsushima, Minami-Sanriku)
  - 12,000 households in Fukushima  
(Fukushima, Yabuki, Minami-Soma, Iwaki, Katsurao, Soma, Shinchi, and Entry-restricted area under radioactive leaking warnings.)
  - 8,300 households in Ibaraki  
(Itako, Kamisu)
  - 430 households in Tochigi  
(Yaita, Sakura)
  - 20 households in Chiba  
(Asahi)
  
- Communication (MIC, April 19<sup>th</sup>, 18:00 JST)
  - Many telephone line (32,200 for land line phone) still out of connection
  - Many households (5,300 for ISDN and 12,8000 for DSL) out of internet connection
  - In blackout area, TV cannot be used, but digital broadcasting satellite stations have been already restored, except for 1 station in Miyagi. As to analog (non-digital) TV satellite stations, 2 stations in Iwate and 3 stations in Miyagi are not able to disseminate TV broadcasting.

## Number of Fire Cases

Oil and fuel spill due to the earthquake and tsunami resulted in number of cases of fire. Limited access to the sites by the fire engines delay the fire fighting efforts. Table 3<sup>3</sup> shows the number of fire cases reported and those that were controlled.

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<sup>3</sup> The table was compiled based on the available information from Damage Situation and Police Countermeasures, <http://www.npa.go.jp/archive/keibi/biki/index.htm>, 19 April 2011

<Table 3: Cases of Fire by Prefectures>

Prefectures	Case Number	Controlled
Aomori	5	5
Iwate	26	26
Miyagi	194	194
Akita	1	1
Fukushima	11	11
Tokyo	35	35
Ibaraki	37	37
Gunma	2	2
Saitama	13	13
Chiba	14	14
Kanagawa	6	6
Shizuoka	1	1

### III. Situation of Evacuation Centers

After one month from the disaster, there are great number of people staying in evacuation shelters. Some people returned to their homes and some stays back. For those whose houses were collapsed or damaged, they will need to wait untill their temporary houses will be completed. In some area, life lines are still not recovered and people choose to stay at the shelters as they do not have access to daily meals or heater. Frequent aftershocks are aslo keeping the evacueess staying at the shelters. In Fukushima Prefecture, people staying in within 30 kim periphery of the nulear plants are taking refuge at the evacuation centers. The number is growing in both those who stays within Fukushima and leave to nearby Prefectures. Table 4<sup>4</sup> shows the number of evacuees and the evacuation shelters. Schools are often used as evacuation shelters and the numbers are also indicated. There are people who cross the Prefecture borders and the origin of the evacuees are described.

<sup>4</sup> The table was compiled based on the available information from Damage Situation and Police Countermeasures, <http://www.npa.go.jp/archive/keibi/biki/index.htm>, 21 April 2011. We have refered to the information by the Ministry of Education, Culture, Sports, Science and Technology for numbers of Schools that are used for evacuation shelters.

**<Table 4: Number of evacuees and shelters by Prefecture>**

Prefectures	Evacuees	Number of Shelters	Shelters in Schools	
Hokkaido	1,034	359		people from Iwate, Miyagi, Fukushima and etc
Aomori	885	313		including people from Iwate, Miyagi and Fukushima
Iwate	43,295	373	52	
Miyagi	41,871	408	94	including people from Fukushima
Akita	518	100		people from Iwate, Miyagi and Fukushima
Yamagata	1,452	43		people from Miyagi and Fukushima
Fukushima	25,936	193	37	
Tokyo	941	26		people from Iwate, Miyagi, Fukushima and etc
Ibaraki	614	44		including people from Miyagi and Fukushima
Tochigi	882	25		including people from Miyagi and Fukushima
Gunma	2,929	59		people from Iwate, Miyagi, Fukushima and etc
Saitama	3,625	48		people from Iwate, Miyagi, Fukushima and etc
Chiba	1,257	64	1	including people from Fukushima
Kanagawa	697	72		people from Miyagi, Fukushima and etc
Niigata	4,210	49		people from Iwate, Miyagi, Fukushima and etc
Yamanashi	840	135		people from Miyagi, Fukushima and etc
Nagano	957	130		people from Iwate, Miyagi, Fukushima and etc
Shizuoka	755	43		people from Miyagi, Fukushima and etc

Below are summary of facts reported by major newspapers related to the evacuation shelters.

- 162,000 evacuees are still in 2,325 shelter
- Shelters have been over all well managed
- Serious problems are lack of privacy, including
  - difficulty in breast-feeding
  - difficulty in medical activities
- Lack of sanitary and health facilities
  - lack of medicine
  - lack of bath, lavatories (SDF and NGOs helping evacuees to take a bath )
  - difficulty in ensuring the mental and physical health
- Provision of temporary houses is the top-priority issue.
- Many municipalities facing difficulties in finding lands for temporary houses as well as construction materials.
- Many evacuees tend to wish to move with their neighbors to another area, in order to prevent



any stress and frustration when they get to new places.

- Many evacuees feel concerned whether they can still stay at their shelters in schools, since many schools will start new semester. Communication between shelter managers and school teachers/education officials are needed for smooth transition.
- According to the Headquarters for Emergency Disaster Control, 11,564 temporary houses are under construction, and 4,679 houses will be constructed in the near future.
  - 6,404 households moved to government-official's residential quarters, and the quarter has the capacity for 51,000 more households.

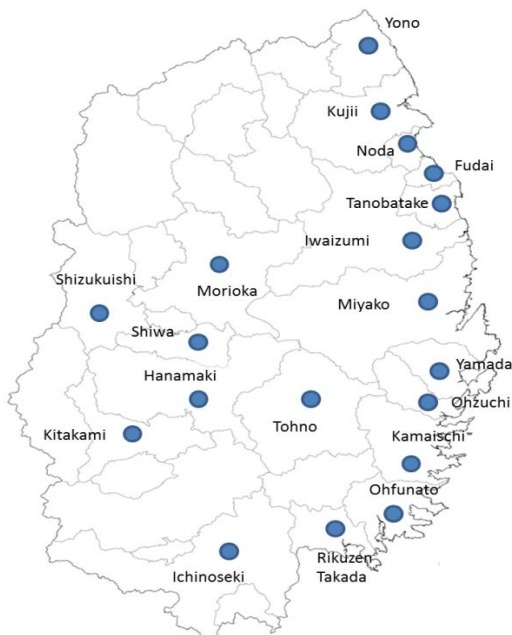
Below are summary of facts reported by major newspapers related to the evacuees.

- Lack of Foods and daily commodities
  - The situation changes daily and by the demography of the evacuees at each shelter
    - Clothes, underwear, socks, work gloves, paper diapers (for children and the elderly), sanitary products, tissue, pocket warmer, hand creams,
    - Drinking, instant foods, packed foods,
    - Stationeries, loud speakers, cars, buses, etc
  - While situation improves, there are still some evacuation shelters facing difficulty in getting the necessary items
  - Volunteering groups are trying to coordinate dissemination of foods, daily commodities, educational materials
- Lack of work
  - Due to loss of livelihood and destruction of materials and tools for their work and living, the affected people are seriously concerned about their future work and life.
  - The government is trying to create new jobs in the reconstruction work,
- Lack of communication
  - Dissemination of information between governments and local residents needs to be improved
    - TV and radio: disconnected (even emergency radio system was disconnected)
    - Internet disconnection
    - Mobile phone disconnection
  - With recovery of electricity and phone line, general communication system will be resumed within April, but it will be delayed in the severely affected area
- Decision on school opening
  - In the affected area, the school opening will be realized around the mid to end of April. In Minami Sanriku and some cities, some schools will open in early May

- Difficulty in relief money distribution
  - Relief money which has been collected to Japan Red Cross will be distributed to the affected residents through the municipal governments in accordance with rules and criteria decided by the Government, aiming to assist the affected people financially to meet basic needs.
  - Due to difficulty in managing such evacuation situation as who evacuate to which shelters, and also due to difficulty in identification, municipal governments are still coordinating how to distribute, which results in the affected population not received the fund after 1 month from the disaster

## VI. Situation by Prefectures

### Situation of Affected Area in Iwate Prefecture<sup>5</sup>



<Table 5: Situation by cities, Iwate Prefecture>

	Death	Missing	Evacuees	Shelters	Electricity	Gas	Water
Rikuzen Takata	1340	830	15,460	88	Partial		Partial
Ohfunato	296	196	6,642	57	Partial		Partial
Kamaishi	748	583	5,038	59	Partial		Partial
Ohtsuchi	673	1,044	5,756	35	Partial		Partial
Yamada	546	378	3,362	33	Partial		Partial
Miyako	404	534	3,939	34	Partial		Almost
Iwaizumi	7	0	225	4	*	Recovered	*
Tanobatake	14	24	430	4	Partial		*
Fudai	0	1	1	1	Recovered	available	Recovered
Noda	38	0	313	8	*		*
Kuji	2	2	62	1	Partial		Recovered
Morioka	0	0	341	5	available		available
Hachimandaira	0	0	128	2	available		available
Shizukuishi	0	0	365	5	available		available
Shiwa	0	0	65	1	available		available
Hanamaki	0	0	573	8	available		available
Tohno	0	4	81	2	Recovered		Recovered
Kitakami	0	0	154	11	Recovered		Recovered
Ohshu	0	0	144	5	Recovered		Recovered
Ichinoseki	0	0	83	3	Recovered		Recovered

\*recovered except for tsunami affected areas

<sup>5</sup> Source: Iwate Prefectural government, Death and Missing, as of 12 April 2011, other information as of 19 April 2011

## Situation of Affected Area in Miyagi Prefecture<sup>6</sup>

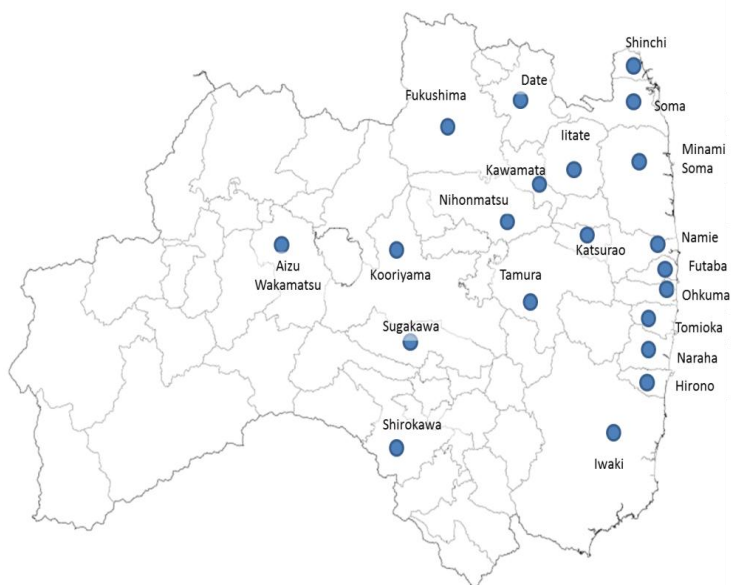


<Table 6: Situation by cities, Iwate Prefecture>

	Death	Missing	Evacuees	Shelters	Recovery status		
					Electricity	Gas	Water
Sendai	531	2400	2829	31	Almost	Partial	Recovered
Ishinomaki	2698	2,770	14776	125	Almost	Totally damaged	Partial
Shiogama	18	2	611	6	Almost	Almost	Almost
Kesen'numa	722	1,408	6907	76	Almost	Partial	Almost
Shiroishi	1	0	64	2	Recovered	No damage	Recovered
Natori	866	1,000	1388	12	Almost	Almost	Almost
Tsunoda	0	0	80	2	Recovered	No damage	Partial
Tagajo	180	12	1206	3	Almost	Almost	Almost
Iwanuma	168	15	545	3	Recovered	Recovered	Recovered
Tome	0	8	799	7	Recovered	No damage	Partial
Kurihara	0	0	224	4	Recovered	No damage	Partial
Higashi Matsushima	920	176	3792	59	Partial	No damage	Partial
Ohsaki	4	0	620	14	Recovered	No damage	Almost
Shibata	2	0	68	1	Recovered	Recovered	Totally damaged
Watari	247	41	1483	5	Almost	No damage	Partial
Yamamoto	613	184	1990	7	Partial	No damage	Partial
Matsushima	2	7	270	3	Recovered	No damage	Almost
Shichigahama	60	13	815	5	Recovered	Recovered	Totally damaged
Onagawa	408	1139	2078	16	Partial	No damage	Partial
Minami Sanriku	441	632	7279	45	Partial	No damage	Totally damaged

<sup>6</sup> Source: Miyagi Prefectural government as of April 13<sup>th</sup>

## Situation of Affected Area in Fukushima Prefecture<sup>7</sup>



<Table 7: Situation by cities, Fukushima Prefecture>

	Death	Missing	evacuees	shelters	Recovery status
					Electricity
Fukushima	2	0	1,152	15	
Nihonmatsu	0	0	356	5	
Date	0	0	379	4	
Motomiya	0	0	0	0	
Kawamata	0	0	79	1	
Ohtama	0	0	389	8	
Kooriyama	1	0	2,485	23	
Sugakawa	9	2	243	5	
Tamura			336	2	
Shirakawa	12	0	68	1	
Saigo	3	0	352	3	
Aizu Wakamatsu	1	0	201	3	
Aizu Misato	0	0	210	6	
Soma	395	86	1,160	8	Not recovered
Minami Soma	490	984	421	5	Not recovered
Hirono	2	1	(5,000)		Not recovered
Taruha	4	10	(7,800)		Not recovered
Tomioka	3	8	(15,480)		Not recovered
Ohkuma	16	8	(11,363)		Not recovered
Futaba	21	13	(6,884)		Not recovered
Namie	13	172	(17,793)		Not recovered
Katsurao	4	1	(1,497)		Not recovered
Shinchi	91	25	543	5	Not recovered
Iitate	1	0	(2,438)		Not recovered
Iwaki	296	82	2,670	45	Not recovered

<sup>7</sup> Source: Fukushima Prefectural government; Death & Missing: As of 21 April , Evacuees & Shelters: 21 April

*Gas provision is recovered*

*Water provision is also restricted in Iwaki City and others (5,475 households)*

*Evacuees in red are stayed outside of the town, due to the radioactive leaking warnings.*

## V. Contact Information

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For questions and inquiries, please contact:

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*A registered non-profit organization located in Kobe, Japan, members of SEEDS Asia come from a broad range of backgrounds that are collectively pooled to promote community-based disaster management.*

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