

# 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 7 weeks from the disaster, the picture is gradually unveiling as the search operation continues. The casualties and missing are 25,949 and there still are 130,229 evacuees in 2,559 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>

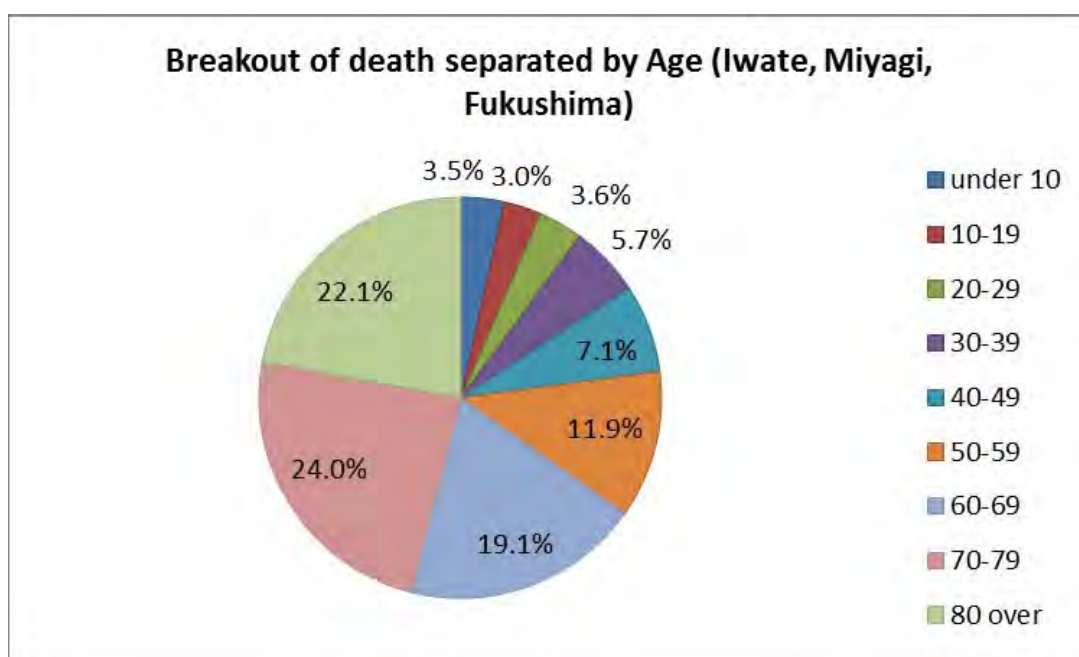
Prefectures	death	missing	injured
Hokkaido	1		3
Aomori	3	1	61
Iwate	4,243	3,479	165
Miyagi	8,745	6,674	3,446
Akita			12
Yamagata	2		29
Fukushima	1,466	1,275	227
Tokyo	7		90
Ibaraki	23	1	693
Tochigi	4		135
Gunma	1		36
Saitama			42
Chiba	18	2	225
Kanagawa	4		139
Niigata			3
Yamanashi			2
Shizuoka			4
Mie			1
Kochi			1
Amount	14,517	11,432	5,314

*\*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>, 27 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-hiqashinohon20110419j-02-w380](http://www.jiji.com/jc/v?p=ve_soc_jishin-hiqashinohon20110419j-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>, 27 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	435	5	473
Aomori	273	987						67	1,225
Iwate	16,962	1,849		14 (both)		1,763	332	1,133	1,226
Miyagi	55,146	11,638		119 (both)		88	2,276	11,571	15,262
Akita								3	3
Yamagata	37	80							
Fukushima	2,250	4,628		77	3	57	25	32,260	918
Tokyo		11		3				257	20
Ibaraki	1,231	5,509		37 (both)		1,022	730	97,605	4,993
Tochigi	222	1,101						41,263	295
Gunma		1						15,410	195
Saitama		5		1	1		1	1,800	33
Chiba	679	2,231		5		961	682	16,832	369

## Situation of Lifeline

Overall, damage situation of lifeline has been dramatically improved while reconstruction activities have been more active in the affected areas , but there are still some blackouts and gas/water shortage in many municipalities.

- Electricity
  - In Tohoku region (Tohoku Electric Power Corporation (*Tohoku Denryoku*), April 25<sup>th</sup>, 16:00 JST)
    - 12,485 households out of electricity in Tohoku area (Tohoku Denryoku coverage area), while there are no expectation for recovery in 81,577 households whose house were washed away.
  - In other regions (METI, April 26<sup>th</sup> 08:00 JST)
    - 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 22<sup>nd</sup>, 17:00 JST)
  - Following households are out of gas (urban gas) in Tohoku area
    - 2,875 households in Ishimaki (Miyagi Pref)
    - In other areas, cut-in situation is already recovered.

- Cut-in situation of gas (community gas) in Tohoku area is already recovered.
  
- Water (MHLW, April 26<sup>th</sup>, 11:00 JST)
  - 24,000 households in Iwate  
(Ohfunato, Rikuzen-Takata, Kamaishi, Ohtsuchi, Miyako, Yamada, Iwaizumi, Tanohata, Noda)
  - 47,000 households in Miyagi  
(Shiogama, Sendai, Kesen'numa, Tagajo, Onagawa, Iwanuma, Natori, Watari, Shichigahama, Yamamoto, Ishinomaki, Higashi-Matsushima, Minami-Sanriku)
  - 5,400 households in Fukushima  
(Fukushima, Minami-Soma, Iwaki, Soma, Shinchi, and Entry-restricted area under radioactive leaking warnings.
  - 2,200 households in Ibaraki (Kamisu)
  - 23 households in Tochigi (Yaita)
  
- Communication (MIC, April 26<sup>th</sup>, 18:00 JST)
  - Many telephone line (30,200 for land line phone) still out of connection
  - Mobile phone: 1,167 stations are still damaged and cannot be used. Mobile phone carriers rented satellite based mobile phones for free of charge.
  - Many households (5,200 for ISDN and 12,6000 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.

### III. Situation of Evacuation Centers

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After one and a half 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 until 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 also keeping the evacuees staying at the shelters. Those who have their houses or places to stay, they come to collect meals and relief items at the evacuation centers.

In Fukushima Prefecture, people staying in within 30 km periphery of the nuclear 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>3</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.

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

Prefectures	Evacuees	Number of Shelters	Shelters in Schools	
Hokkaido	1,048	371		people from Iwate, Miyagi, Fukushima and etc
Aomori	1,003	377		including people from Iwate, Miyagi, Fukushima, and etc
Iwate	41,521	363	47	
Miyagi	40,788	433	93	including people from Fukushima
Akita	518	100		people from Iwate, Miyagi and Fukushima
Yamagata	715	30		people from Miyagi and Fukushima
Fukushima	26,416	179	36	
Tokyo	749	24		people from Iwate, Miyagi, Fukushima and etc
Ibaraki	529	41		including people from Fukushima
Tochigi	673	23		including people from Iwate and Fukushima
Gunma	2,669	59		people from Iwate, Miyagi, Fukushima and etc
Saitama	4,544	49		people from Iwate, Miyagi, Fukushima and etc
Chiba	1,229	62	1	including people from Fukushima
Kanagawa	659	69		people from Iwate, Fukushima and etc
Niigata	4,535	80		people from Miyagi, Fukushima and etc
Yamanashi	787	133		people from Miyagi, Fukushima and etc
Nagano	974	131		people from Iwate, Miyagi, Fukushima and etc
Shizuoka	872	35		people from Iwate, Miyagi, Fukushima and etc

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

- 130,229 evacuees are still in 2,559 shelter
- Shelters have been over all well managed
- Some evacuees are now moving to other municipalities' shelters due to shelter consolidation process, and some evacuees are moving to the secondary evacuation places like hotel or

<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>, 27 April 2011. We have referred to the information by the Ministry of Education, Culture, Sports, Science and Technology for numbers of Schools that are used for evacuation shelters.

public dormitories. This is due to reopen of schools that were used as shelters and improved access to private/public accommodations.

- Serious problems are lack of privacy, including
  - difficulty in breast-feeding
  - difficulty in medical activities
- Lack of sanitary and health facilities
  - 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, 72,290 temporary houses are needed in the affected areas in total, and now 17,692 temporary houses are under construction, and 5,807 houses will be constructed in the near future.
  - 7,805 households moved to government-official's residential quarters, while the quarters have the capacity for 52,973 households in total.

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

- Unbalanced distribution of Foods and daily commodities by shelters
  - 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
- 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>4</sup>



<Table 5: Situation by cities, Iwate Prefecture>

	Death	Missing	Evacuees	Shelters	Electricity	Gas	Water
<b>Rikuzen Takata</b>	<b>1,417</b>	<b>795</b>	<b>15,299</b>	<b>87</b>	<b>Partial</b>		<b>Partial</b>
<b>Ohfunato</b>	<b>300</b>	<b>186</b>	<b>6,287</b>	<b>58</b>	<b>Partial</b>		<b>Partial</b>
<b>Kamaishi</b>	<b>780</b>	<b>566</b>	<b>4,433</b>	<b>55</b>	<b>Partial</b>		<b>Partial</b>
<b>Ohtsuchi</b>	<b>723</b>	<b>978</b>	<b>5,950</b>	<b>34</b>	<b>Partial</b>		<b>Partial</b>
<b>Yamada</b>	<b>554</b>	<b>378</b>	<b>3,204</b>	<b>33</b>	<b>*</b>		<b>Partial</b>
<b>Miyako</b>	<b>408</b>	<b>534</b>	<b>3,270</b>	<b>30</b>	<b>*</b>		<b>Almost</b>
<b>Iwaizumi</b>	<b>7</b>	<b>0</b>	<b>217</b>	<b>4</b>	<b>*</b>	<b>Recovered</b>	<b>*</b>
<b>Tanohata</b>	<b>14</b>	<b>23</b>	<b>466</b>	<b>4</b>	<b>*</b>		<b>*</b>
<b>Fudai</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>Recovered</b>	<b>available</b>	<b>Recovered</b>
<b>Noda</b>	<b>38</b>	<b>0</b>	<b>298</b>	<b>8</b>	<b>*</b>		<b>*</b>
<b>Kuji</b>	<b>2</b>	<b>2</b>	<b>62</b>	<b>1</b>	<b>*</b>		<b>*</b>
<b>Morioka</b>	<b>0</b>	<b>0</b>	<b>339</b>	<b>5</b>	<b>available</b>		<b>available</b>
<b>Hachimandaira</b>	<b>0</b>	<b>0</b>	<b>128</b>	<b>2</b>	<b>available</b>		<b>available</b>
<b>Shizukuishi</b>	<b>0</b>	<b>0</b>	<b>355</b>	<b>5</b>	<b>available</b>		<b>available</b>
<b>Shiwa</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>1</b>	<b>available</b>		<b>available</b>
<b>Hanamaki</b>	<b>0</b>	<b>0</b>	<b>573</b>	<b>8</b>	<b>available</b>		<b>available</b>
<b>Tohno</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>Recovered</b>		<b>Recovered</b>
<b>Kitakami</b>	<b>0</b>	<b>0</b>	<b>154</b>	<b>11</b>	<b>Recovered</b>		<b>Recovered</b>
<b>Ohshu</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>5</b>	<b>Recovered</b>		<b>Recovered</b>
<b>Ichinoseki</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>4</b>	<b>Recovered</b>		<b>Recovered</b>

*\*recovered except for tsunami affected areas*

<sup>4</sup> Source: Iwate Prefectural government, Death and Missing, as of 27 April 2011, other information as of 24 April 2011

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

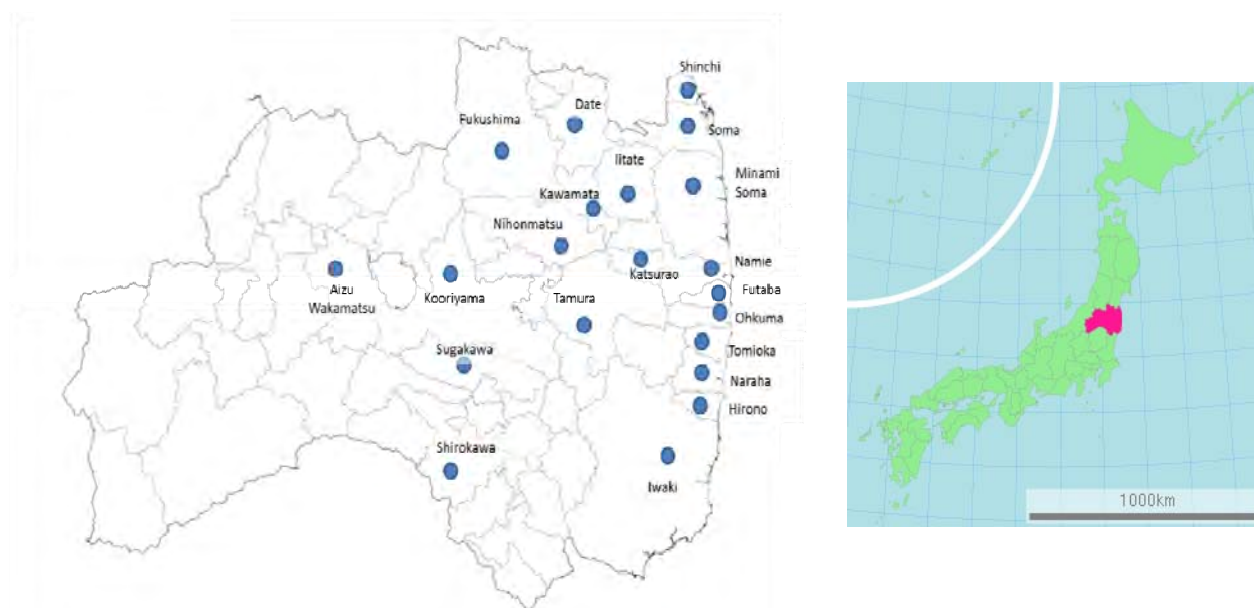


<Table 6: Situation by cities, Iwate Prefecture>

	Death	Missing	Evacuees	Shelters	Recovery status		
					Electricity	Gas	Water
Sendai	649	210	2,120	23	Recovered	Recovered	Recovered
Ishinomaki	2,879	2,770	10,711	113	Almost	Partial	Partial
Shiogama	21	1	525	6	Almost	Almost	Almost
Kesen'numa	815	1,216	5,986	71	Almost	Partial	Almost
Shiroishi	1	0	39	1	Recovered	No damage	Recovered
Natori	892	231	1,148	10	Recovered	Almost	Recovered
Tsunoda	0	0	93	2	Recovered	No damage	Recovered
Tagajo	184	4	966	3	Almost	Almost	Almost
Iwanuma	173	12	467	3	Recovered	Recovered	Recovered
Tome	0	7	832	11	Recovered	No damage	Almost
Kurihara	0	0	217	6	Recovered	No damage	Recovered
Higashi Matsushima	1,020	740	3,363	54	Almost	No damage	Almost
Ohsaki	4	0	929	34	Recovered	No damage	Recovered
Shibata	2	0	71	1	Recovered	Recovered	Recovered
Watari	247	24	1,404	5	Almost	No damage	Almost
Yamamoto	646	117	1,760	6	Almost	No damage	Almost
Matsushima	2	2	266	4	Recovered	No damage	Almost
Shichigahama	64	12	718	3	Recovered	Recovered	Recovered
Onagawa	450	749	1,899	16	Partial	No damage	Partial
Minami Sanriku	498	656	6,202	41	Partial	No damage	Partial

<sup>5</sup> Source: Miyagi Prefectural government as of April 28<sup>th</sup>

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



<Table 7: Situation by cities, Fukushima Prefecture>

	Death	Missing	evacuees	shelters	Recovery status
					Electricity
Fukushima	2	0	1,064	12	
Nihonmatsu	0	0	343	5	
Date	0	0	278	4	
Motomiya	0	0	0	0	
Kawamata	0	0	77	1	
Ohtama	0	0	384	8	
Kooriyama	1	0	2,260	19	
Sugakawa	9	2	242	5	
Tamura			320	2	
Shirakawa	12	0	48	1	
Saigo	3	0	353	3	
Aizu Wakamatsu	1	0	163	3	
Aizu Misato	0	0	168	6	
Soma	395	86	1,125	8	Not recovered
Minami Soma	490	984	436	5	Not recovered
Hirono	2	1	(5,000)		Not recovered
Naraha	4	10	(7,800)		Not recovered
Tomioka	3	8	(15,480)		Not recovered
Kawauchi	0	0	(2,992)		Not recovered
Ohkuma	16	8	(11,496)		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	469	5	Not recovered
Iitate	1	0	(1,117)		Not recovered
Iwaki	296	82	2,462	44	Not recovered

<sup>6</sup> Source: Fukushima Prefectural government; Death & Missing: As of 27 April , Evacuees & Shelters: 27 April

*Gas provision is recovered*

*Water provision is also restricted in Iwaki City and others (5,075 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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*SEEDS Asia takes an integrated and interlinked approach to disaster management and environmental conservation within the overall umbrella of human security, to ensure safer communities in the Asia Pacific region.*

*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.*

*SEEDS Asia worked in Indonesia, Maldives, Myanmar, Pakistan, Vietnam and Japan.*