





Area Northeast of Tokyo on the Japanese Coast after Earthquake/Tsunami which occurred at 14:46 JST on Friday March 11, 2011

The Pathfinder Task Force (PTF) Advanced “A” Team was requested by Humanitarian Alliance partner AERObridge to pre-stage in Seattle, Washington for possible deployment to Tokyo, Japan for Rapid Needs Assessment for Alliance’s members following a catastrophic earthquake and tsunami which devastated eastern Japan. Following appropriate notice to state and federal government agencies, including contacts with USAID and the US Embassy in Japan, a Type IV, 8 person, PTF team was tasked to Seattle for standby. One day later in Seattle, the team received multiple requests to deploy and following research on safety issues and mission deployment options, PTF team forward staged to Hawaii, with a “fail safe” decision dependent on establishing more specific safety analysis and mission assignment in Japan.

Arrival in Hawaii met with a defined mission opportunity with major US Private Sector partners developing through Wal Mart, its subsidiary SEIYU, and DHL for air freight shipping. With additional research including direct contact with Yokota USAF personnel and Log Unit at the US Embassy, PTF was tasked to Japan. The major objective for this response focused on establishing a network for distribution into more remote overlooked areas, while using Pathfinders Rapid Assessment System (PRAS) to collect needs assessments and field Sit Reps for all Alliance partners (Note: PRAS units are designed to work in a 100% totally disconnected environment, while storing geotagged photos and custom field form intel through a simple but rugged, flip cell phone.).

PTF developed detailed deployment plans for mass distribution, secured 15 tractor trailer trucks (noting fuel was an issue), along with numerous containers of relief goods, including 300,000 blankets for the snow conditions. A successful system of ordering and providing relief goods was set in motion by Pathfinders, in a method which used Lessons Learned from PTF Haiti, stimulated the local economy, used local resources, and took into account local cultural norms. PTF coordinated with Japan based, senior, SEIYU management, and developed a very

short list of 12, high volume, local, products with pallet sized only ordering agreed upon. With reduced pricing due to less handling costs by the box stores, wiring donated funds directly to SEIYU provided actual receipts of selected goods to out of area donors who could choose from the small list of goods, thus providing 100% accountability to the donors. Using this system, PTF avoided shipping delays, used normal, local, resources already in place, and avoided the pitfall of sending in relief goods which did not meet the local cultural norms. Due to a remote, corporate, political glitch, PTF had to shift to COSTCO as the local supplier, noting its Japanese management team quickly seized on the opportunity as a good relief and business model.

More partnerships and Recon were being developed when the nuclear emergency caused the US State Dept. to issue a strong advisory for a voluntary evacuation of US citizens from 3 prefectures of Japan. Numerous, highly reliable, local intel sources confirmed to PTF personnel the importance of the advisory, including the fact that the State Department advisory was expanding to include 13 prefectures, without any further explanation. The team unanimously decided to return back to Hawaii to pre-stage for safety reasons and pursue remote logistic assistance through Japanese based assets.

PTF set up a temporary base in Hawaii and continued remote operations. Repeated validation of safety issues rising in Japan surfaced from a variety of sources. While in Hawaii, PTF coordinated and facilitated Relationship Org charts for Alliance, while working to define distribution points with matching needs and establishing more firm capabilities for Alliance partners. PTF also developed an in-depth Operational Risk Assessment (see attached) to help determine conditions for the possible return of the team to Japan and to assist similar decisions by a wide variety of NGO's and Private Sector partners, many of whom were requesting an in depth summary for their own safety considerations.

**Pathfinders' missions included:**

- Establish local logistic support in Japan
- Begin rapid needs assessments and determine gap analysis
- Establish a mass distribution for local survivors.
- Establish cooperative operations with Japanese local resources
- Perform an Op Risk Assessment for partners and incoming personnel

**The major strengths identified are as follows:**

1. The Pathfinder Deployment Plan through its Advanced Team was validated. A quick, effective and cooperative relationship was developed with local US and Japanese partners.
2. The reception by local Japanese citizenry was exemplary and securing assistance on locally complex issues due to rationing was effective.
3. The rapid, bulk distribution process set up with Japanese based, box stores presented an exceptional format for future deployments, due to accountability, using logistic systems

already in place, stimulating the local economy, providing palletized products, and matching local, cultural norms. The system was replicable and scalable.

4. The local American Red Cross team at Yokota Air Base was exceptional. The assistance rendered was invaluable and timely.
5. Rapid contacts through PTF partners to high level military and civilian responders, both Japanese and US, proved exceptionally effective in rapidly planning major operations.
6. The Incident Command System was utilized by the Pathfinder Management Team (PMT) to organize, document and manage the response.
7. An Incident Action Plan (IAP), along with a Sit Rep 209 for each operations period, was supplied to all partners, both in and out of country and was received well.
8. The Op Risk Assessment by PTF proved to be an invaluable resource both for PTF and a wide number of partners as it consolidated and simplified the complex and extremely divergent information being disseminated via a host of sources, particularly as to the nuclear emergency situation.
9. The military and civilian qualifications of the PTF team lent strong validation to the Pathfinder deployment and the team's rapid effectiveness in securing local cooperation.

**The primary areas for improvement are as follows:**

- Somehow establish a continuous working relationship with USAID.
- Need to work to improve relationship with top administration of American Red Cross, especially given local effectiveness of its assets in Japan
- Need to develop Private Sector partnerships more prior to deployments.
- Work to pre-establish relationships with limited, senior private sector managers so as to try and avoid remote, corporate political issues in the midst of response operations
- Need to expand on Relationship Org chart along with capability to compartmentalize organizations in such a way to secure adequate privacy protections while ensuring operational awareness
- Relay radiation exposure issues, including psychological and mass care impacts, to PTF partners for any future deployments
- Secure more MOU's with Alliance NGO's for clear understanding of various roles in operational situations
- Lack of available counter-radiation medicine and detectors in country combined with extremely limited access to timely and reliable information on radiation threat
- Confidential information suggesting unreliability of open source information

## PTF Donations Distribution



## Assisting and Cooperating Agencies working with Pathfinders

- Disaster Solutions
- Response Force 1
- Humanitarian Alliance
- AERObridge
- Costco Wholesale
- Airlink
- Airline Ambassadors International
- American Logistics Aid Network
- All Hands
- Aidmatrix
- Hands On Network
- Hands On Tokyo
- Points of Light Institute
- Mission Harvest
- Second Harvest
- Pastor Eiji Mendai
- Pastor Mooi Raymond
- Giving Children Hope
- Hawaiian Air Lines
- United States Forces Japan
- Yokota Air Base Public Affairs
- International Medical Assistance Team (IMAT)
- NEC
- Order of St. John of Jerusalem
- Memorial Presbyterian Church
- Rettig Foundation
- Ambassador Lewis Lucke
- Congressman Ted Deutch
- United States Embassy
- USAID
- Wal Mart
- SEIYU
- DHL
- American Red Cross
- Local Support  
Toshi, Nobu, Kyomi, & Mori



The Humanitarian Alliance



Mission Harvest



SECOND HARVEST  
セカンダリー・フーズ・リレーション

## Operational Risk Assessment 031911

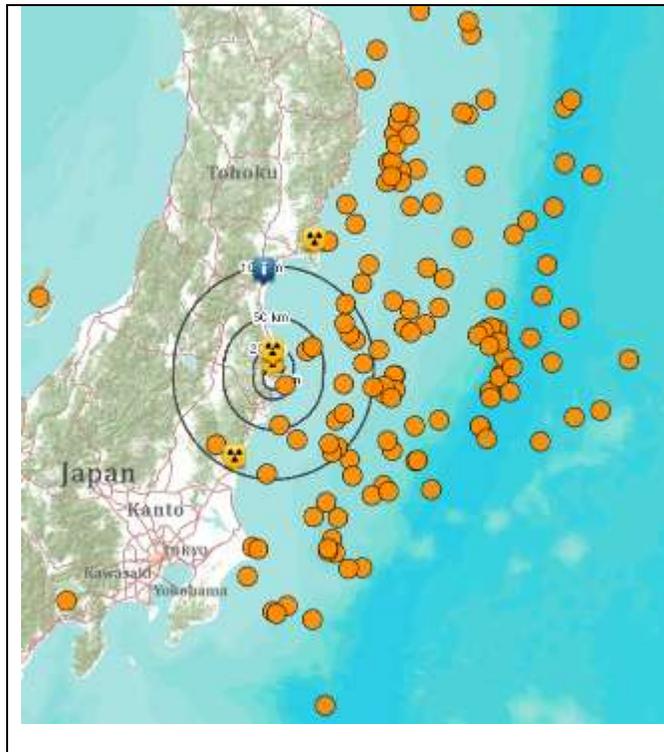
1. While developing this assessment the Pathfinders Task Force uses criteria based on DOD Operational Risk Management Processes.
  - Risk is accepted so long as the benefits outweigh the cost
  - No unnecessary risk will be accepted
  - Anticipate and manage risk through planning
  - Make risk decisions with key personnel involved
  
2. From 15-17 March 2011 actual operational conditions were not considered threatening, allowing three days of in-country advance coordination with Japanese and US counterparts for logistical support of relief effort and additional risk assessment. However, on 17 March the team decided to restage to Hawaii from Japan. This decision was based on a deliberate application of the Risk Management process-in particular, a careful consideration of risks, benefits, and potential costs. Major factors supporting the restaging decision include:
  - Current radiation levels were low, but future levels were dependent upon wind direction and progress controlling active fires and explosions in Fukushima Daiichi
  - Difficulty in securing trucks and fuel to support distribution efforts prevented scheduling of logistical operations for next 4-5 day window
  - Potential danger to personnel well above the benefits of continuing on-site operations
  - **Pathfinders were unable to effectively manage what may have been acceptable risk due to the limited, and delayed flow of reliable information about radiation threats**
  - The team estimated their loss of effectiveness by relocating during this planning stage to be approximately 30%, while restaging completely eliminated the risk to personnel
  - 50K-plus Japanese Self Defense Force and 2M Japanese Red Cross volunteers already responding or activated to relief efforts. US military response numbers in the 1000s and has 450 emergency management personnel on standby if needed. Additional foreign staffing is not a critical need and could become a liability if conditions rapidly deteriorate.
  - Pathfinders remained poised for redeployment with a one-day response time
  
3. Key indicators of increased risk included:
  - State Department warnings on travel escalated from advisory to recommended departure of all non-essential personnel from Japan
  - Recent (18 March) State Department expansion of voluntary evacuation zones from 3 prefectures to 16 prefectures suggests situation is not improving
  - 262 aftershocks of 5.0 magnitude or greater indicate high threat of future damage to key infrastructure
  - Seismologists report 6.2 earthquake at base of Mt Fujiyama (40 Km from Tokyo) on 15 March
  - 12 aftershocks from 5.7-6.2 since 11 March
  - Seismologists report 6.2 earthquake at base of Mt. Fujiyama (40 Km from Tokyo) on 15 March
  - While radiation levels remain low, radiation plume projections indicated extensive reach of radiation

- Forecasted wind shifts towards large population centers (Tokyo)
- Progress of crews towards containing damage at Fukushima reactor facility was slow, uneven, and irregular
- Confirmation of growing shortages of fuel and trucks
- Ongoing evacuation of foreign nationals of US, UK, France and multiple other countries increasing strain on air assets limiting team's emergency egress options
- Worst-case scenario (second severe quake, additional tsunami, expanded nuclear crisis) could trigger widespread population shifts with ensuing gridlock
- Lack of available counter-radiation medicine and detectors in country
- Extremely limited access to timely and reliable information on radiation threat
- Confidential information highlighting unreliability of open source information
- Conditions have not improved significantly since State Department announced first voluntary evacuation

These are the factors that we viewed when we made our decision. We are continuing to look for improvements in any of these conditions to determine when we feel it is safe to return and offer this information to other deploying teams to help them monitor conditions and make their own deployment decisions.



**SUPPORTING SCREEN SHOTS AND LINKS**



**Legend**

- Earthquakes < 5.0 in Magnitude since March 11, 2011
- ☢ Nuclear Power Plant

Figure 1 - Overlay of Nuclear Power Plant and Earthquakes on Map

<http://tmappsevents.esri.com/EQJapan/>

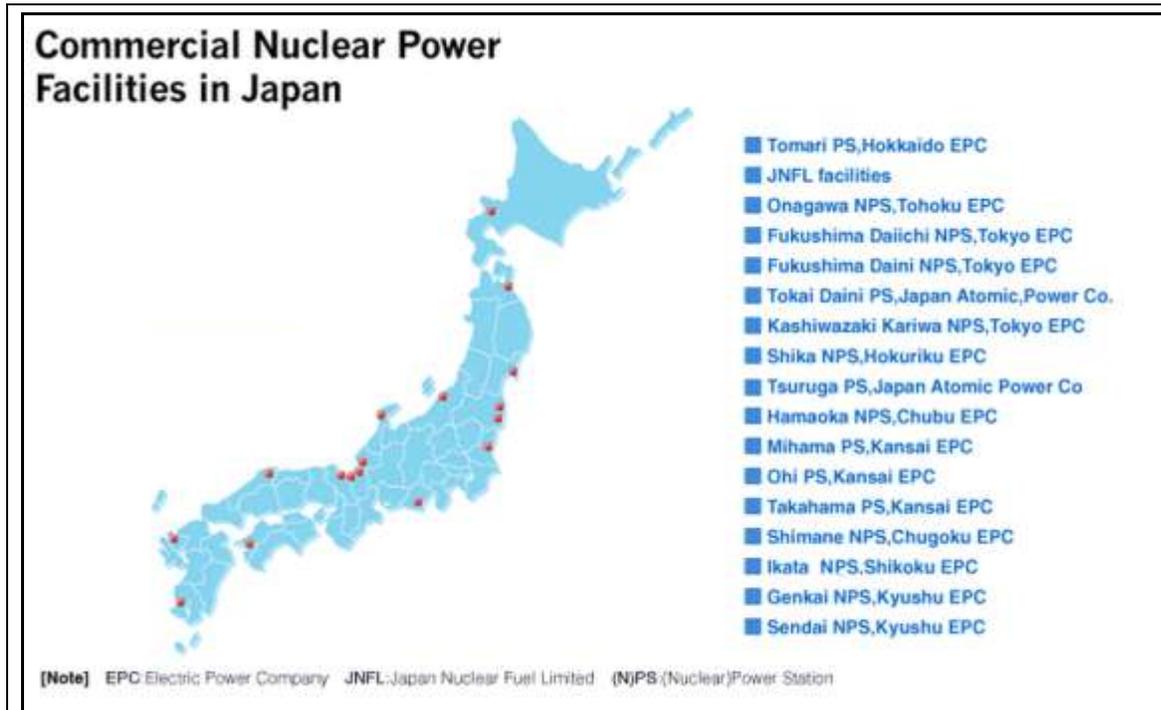
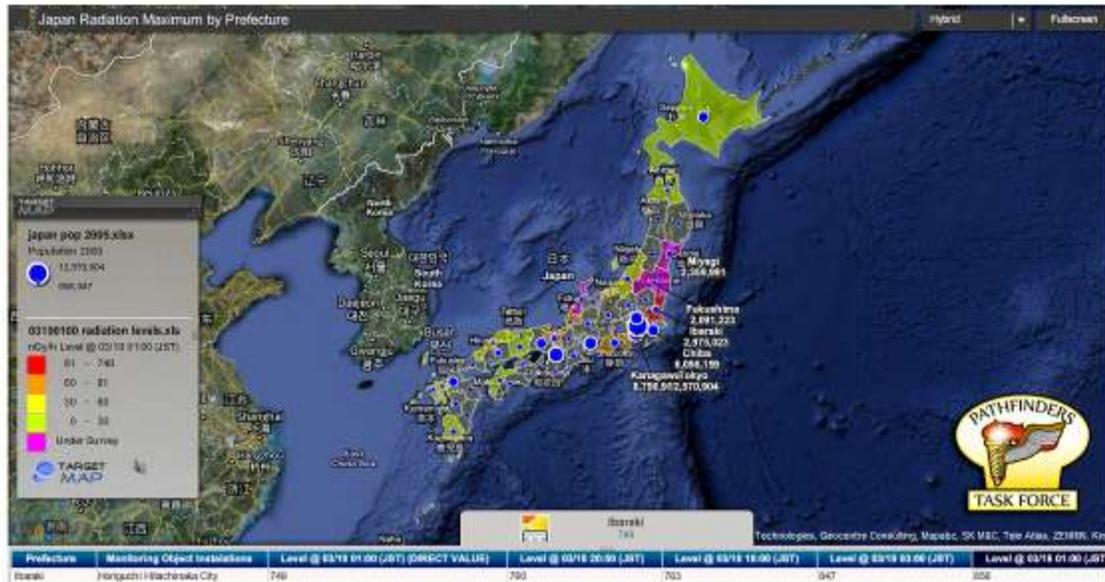


Figure – 2 List of Commercial Nuclear Power Facilities in Japan



Phase	Symptom	Exposure (Sv)				
		1-2Sv	2-5Sv	5-8Sv	8-30Sv	>30Sv
Immediate	Nausea and vomiting	5-50%	50-100%	75-100%	90-100%	100%
	Time of onset	2-6h	1-2h	10-60m	<10m	Immediate
	Duration	>24h	24-68h	<48h	<48h	48h-death
	Diarrhea	None	Slight (10%)	Heavy (10%)	Heavy (90%)	Heavy (100%)
	Time of onset	—	3-8h	1-2h	>1h	<30m
	Headache	Slight	Mid (90%)	Moderate (90%)	Severe (80-90%)	Severe (100%)
	Time of onset	—	4-24h	3-4h	1-2h	<1h
	Fever	Slight-None	Moderate (50%)	High (100%)	Severe (100%)	Severe (100%)
	Time of onset	—	1-2h	>1h	>1h	>30m
CNS function	No impairment	Cognitive impairment 5-20 h	Cognitive impairment <20 h	Rapid incapacitation	Seizures, Tremor, Ataxia	
Latent Period		28-31 days	7-28 days	>7 days	none	none
Overt illness		Mild Leukopenia, Fatigue, Weakness	Leukopenia, Purpura, Hemorrhage, Infections, Epilation	Severe leukopenia, High fever, Diarrhea, Vomiting, Dizziness and disorientation, Hypotension, Electrolyte disturbance	Nausea, Vomiting; Severe diarrhea, High fever, Electrolyte disturbance, Shock	Death
Mortality without medical care		0-5%	5-100%	95-100%	100%	100%
Mortality with medical care		0-5%	5-50%	50-100%	100%	100%

## .0069 Grays = ~1 CT scan

Loss of appetite, apathy, lethargy, nausea and vomiting that usually begin 2-12 hours after exposure to 2 Gy (200,000,000 nG) or more of radiation. The symptoms typically subside completely within 24-36 hours after the exposure, and the person typically feels well for a week or more. Anything you can do nutritionally during this time to build blood cells and increase immunity would help the individual, **otherwise many hematopoietic patients die within 30-60 days after exposure.**

## **Related links for additional research on this subject matter**

<http://bravenewclimate.com/2011/03/13/fukushima-simple-explanation/>

Google Response: <http://www.google.com/crisisresponse/japanquake2011.html>

Earthquake (main page) <http://earthquake.usgs.gov/>

Earthquakes (Learn): <http://earthquake.usgs.gov/learn/topics/all.php>

Tsunamis (Learn): <http://earthquake.usgs.gov/learn/topics/?topicID=34>

Earthquakes for Kids: <http://earthquake.usgs.gov/learn/kids/>

Earthquakes for Older Students & Teachers:

<http://earthquake.usgs.gov/learn/classroom.php>

Japan Earthquake, etc. – How to Donate:

[http://news.yahoo.com/s/yblog\\_newsroom/20110311/wl\\_yblog\\_newsroom/japan-earthquake-and-tsunami-how-to-help](http://news.yahoo.com/s/yblog_newsroom/20110311/wl_yblog_newsroom/japan-earthquake-and-tsunami-how-to-help)

Resources for finding victims, etc.: <http://www.digitaljournal.com/article/304627>

ESRI Resources: <http://www.esri.com/services/disaster-response/japan-earthquake-tsunami-2011-map/resources.html>

Washington Post Resources: <http://www.washingtonpost.com/wp-srv/nation/japan-earthquake-resources.html>

Wiki Resources: [http://en.wikipedia.org/wiki/2011\\_Sendai\\_earthquake\\_and\\_tsunami](http://en.wikipedia.org/wiki/2011_Sendai_earthquake_and_tsunami)

About.com Resources: <http://websearch.about.com/b/2011/03/14/helpful-websites-for-japan-earthquake-information.htm>

Nuclear Reactor Info: <http://www.nirs.org/>

IAEA Updates: <http://www.iaea.org/newscenter/news/tsunamiupdate01.html>

IAEA Incidents and Emergencies: <http://www-ns.iaea.org/tech-areas/emergency/default.asp?s=1&l=5>

Nuclear and Industrial Safety (Japan): <http://www.nisa.meti.go.jp/english/index.html>

WisdomCard™ on Japan Earthquake & Tsunami -

<http://organizedwisdom.com/japan-earthquake-amp-tsunami-online-resources-social-media-4-emergency-management/4152281/nxi/med>

FEMA Blog: <http://blog.fema.gov/search/label/Earthquakes>

Eric Holderman's 3/12 article: <http://www.emergencymgmt.com/emergency-blogs/disaster-zone/Japan-earthquake-and-tsunami-information-031211.html>

Army Public Health Command – Public Health:

<http://phc.amedd.army.mil/topics/emergencyresponse/nd/Pages/EarthquakeResponseResources-Japan.aspx>

Radiation Exposure - 5 Things You Need to Know:

<http://abcnews.go.com/Health/Wellness/radiation-exposure-things/story?id=13131122>

Nuclear Energy Institute Information:

<http://www.nei.org/newsandevents/information-on-the-japanese-earthquake-and-reactors-in-that-region/>

## **News Links:**

Japan Quake Map: <http://www.japanquakemap.com/>

Detwiler – Special Report: <http://bigmedicine.ca/wordpress/2011/03/steve-detwiler-japanese-eq-and-tsunami-special-report/>

FAQs on Nuclear Concerns: <http://bigmedicine.ca/wordpress/2011/03/japan-faqs-on-nuclear-concerns/>

Worldwide Map of Nuclear Power and Earthquake Zones:

<http://maptd.com/worldwide-map-of-nuclear-power-stations-and-earthquake-zones/>

Radiation Plume Map:

<http://www.weatheronline.co.uk/weather/news/fukushima?LANG=en&VAR=zamg>

NIH Japan Earthquake, Tsunami, and Radiation Event - March 2011:

<http://disasterinfo.nlm.nih.gov/dimrc/japan2011.html>

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NIH MEDLINE (Tsunamis): <http://www.nlm.nih.gov/medlineplus/tsunamis.html>

NIH MEDLINE (Tsunamis – Spanish):

<http://www.nlm.nih.gov/medlineplus/spanish/tsunamis.html>

NIH MEDLINE (Earthquakes):

<http://www.nlm.nih.gov/medlineplus/earthquakes.html>

NIH MEDLINE (Earthquakes – Spanish):

<http://www.nlm.nih.gov/medlineplus/spanish/earthquakes.html>

Radiation Emergency Medical Management: <http://remm.nlm.gov>

Radiation Emergency Medical Management (Mobile Vers.):

<http://www.remm.nlm.gov/downloadmremm.htm>

NIH MEDLINE – Radiation Emergencies:

<http://www.nlm.nih.gov/medlineplus/radiationemergencies.html>

NIH MEDLINE – Radiation Emergencies (Spanish):

<http://www.nlm.nih.gov/medlineplus/spanish/radiationemergencies.html>

NIH MEDLINE – Radiation Exposure Info:

<http://www.nlm.nih.gov/medlineplus/radiationexposure.html>

NIH MEDLINE – Radiation Exposure Info (Spanish):

<http://www.nlm.nih.gov/medlineplus/spanish/radiationexposure.html>

Claire Rubin’s Recovery Diva Blog: <http://recoverydiva.com>

Japan Times – Earthquake News: <http://www.japantimes.co.jp/news/tohoku-kanto-earthquake-news.html>

Japan Times – Earthquake Resources:

<http://www.japantimes.co.jp/news/emergency-assistance.html>

Countermeasures for Tohoku – Pacific Ocean Earthquake:

<http://www.kantei.go.jp/foreign/incident/index.html>

Important Information from Japanese Government:

[http://eq.wide.ad.jp/index\\_en.html](http://eq.wide.ad.jp/index_en.html)