



## Lessons from the 2011 Japanese Earthquake and Tsunami for Canada's Humanitarian Sector



**Submitted by Francois Audet & Francis Paquette  
From Canadian Research Institute  
on Humanitarian Crisis and Aid – OCCAH**

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# 1. Introduction

## 1.1 Research background

The research mandated by the Humanitarian Coalition (HC) comes at a crucial point. Scholars, governments, members of the humanitarian community and the private sector are highly concerned with the growing risks of natural disasters. Several major disasters hit both southern and northern countries in recent years, a sign that every country is vulnerable.

One example of this vulnerability is Japan. In fact, the disaster that hit the country on March 11, 2011 was certainly expected. What was not expected was the level of damage it caused. What started with an earthquake with a magnitude of nine a few kilometres offshore from Tokyo triggered a massive tsunami that reached up to 40 metres in height, hitting shores at a height of 10 metres and nearly 300 kilometres across (Watanabe, 2011). The disaster resulted in a death toll of 20 000 as well as 460 000 displaced individuals. By some estimates, the costs exceeded 400 billion dollars (US). When the wave crashed on the shore of East Tohoku, it caused damage to the Fukushima nuclear power plant and the situation quickly deteriorated.

Following the disaster, the international humanitarian system initiated its established operational process. While the disaster happened in a developed country, the newly labeled “mega-disaster” was too significant to stay off the humanitarian radar. It was partly due to media pressure that the Canadian humanitarian response took form. In addition to the funding of the response, some Canadian organizations provided specialized professionals to help speed up the drafting of emergency plans, add specific expertise or to carry out additional fundraising.

Now more than a year after the disaster, the Japanese humanitarian sector is in a position to reflect upon what it means for humanitarian organizations to intervene in rich and developed countries such as Japan. The experience offers valuable lessons that may help humanitarian organizations working in developed countries to improve their response in the future.

## 1.2 Research objectives

As stated in the Terms of Reference for this research, the objective of this review was “to document key lessons from the experience of the Japanese Earthquake and Tsunami of 2011 for the Humanitarian Coalition and its member agencies.”

The research presented here goes beyond this primary objective as it aims to make specific normative recommendations for the Humanitarian Coalition in the context of developed countries preparing to respond to a potential disaster. Hence, this research aims to highlight the lessons learned from the mega-disaster in Japan and to provide key recommendations for HC members on responding to disasters in developed countries. The methodology applied here involves three components: review of academic and institutional documents; interviews with HC members in Canada; and interviews with HC and non-HC members in Japan.

## 1.3 Research limits

Some difficulties were encountered during this research. The first was the variety of expectations raised during the interviews by the members of the HC in Canada<sup>1</sup>. These expectations show the importance of such assessments but all of them could not be attended to in this specific study. Furthermore, none of the interviewees in Japan were aware of the existence of the HC in Canada and therefore could not relate to it.

Additionally, the Japan Platform (JPF), which was perceived to be comparable to the Humanitarian Coalition, can hardly be compared as the JPF is a private-public-government institution set in a political context that differs significantly from the HC in Canada.

It is important to mention that several Japanese NGOs and national institutions are still actively working in the Tohoku region affected by the 2011 disasters, and summer 2012 has provided no rest to the relief teams in the Kyushu region<sup>2</sup>. For these reasons, very little time has been made available yet for some NGOs to adequately document their lessons learned<sup>3</sup>.

Despite these challenges, this report offers a starting point for innovative thinking within the Canadian humanitarian system on how to be better prepared for potential mega-disasters in developed countries in general and in Canada in particular.

# 2. The Japanese context and response

Before demonstrating findings and recommendations, this section aims to contextualize the overall organizational and political environment in Japan following the disaster.

## 2.1 Background

The overall impact of the Japanese earthquake and tsunami was substantial. The roads and rail lines leading to the tsunami-devastated zone were either destroyed by the tsunami or blocked by the radiation zones from Fukushima. In the 2011 disasters, a distinction must be made between the tsunami-affected region and the Fukushima nuclear incident. During the latter, the government's failure to adequately control the sharing of information has led some to conclude the nuclear crisis was a man-made disaster<sup>4</sup>. Furthermore, the tight security control over the radiated area made it

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- 1 For instance, some were expecting a field assessment of the projects implemented by the HC in Japan. This was not possible within the actual TOR.
  - 2 Excessive rainfalls have created floods, landslides in the region of Kyushu in late June and July 2012. [http://www.straitstimes.com/BreakingNews/Asia/Story/STIStory\\_823189.html](http://www.straitstimes.com/BreakingNews/Asia/Story/STIStory_823189.html) (consulted on July 16th 2012).
  - 3 However, it is important to note that the Japanese government collaborated with the World Bank to launch a project called "Learning from Mega-disasters". The purpose of this project was to allow Japan to share its experience and knowledge with the rest of the world.
  - 4 The conclusion that the Fukushima nuclear crisis was a man-made disaster is the result of a Japanese investigation made public July 5th 2012. The news went viral on many online newspapers such as the Bangkok Post: <http://www.bangkokpost.com/breakingnews/301092/fukushima-was-man-made-disaster-japanese-probe> or on the Guardian UK : <http://www.guardian.co.uk/environment/2012/jul/05/fukushima-meltdown-manmade-disaster> (consulted on July 18, 2012).

extremely complicated for Japanese NGOs and members of the Civil Society sector to access other devastated zones.

## 2.2 Japanese response to the crisis

In Japan, the crisis is often referred to as a multiple disaster due to the fact that there was both a tsunami-related crisis and a nuclear crisis. Japanese society, as well as the humanitarian community, seemed to see a distinction between the Fukushima nuclear incident and the resulting governmental management – an effort deemed a failure by Japanese media – from the humanitarian response to the tsunami-affected areas. The first one was a man-made disaster that sparked public outrage at the government for its poor choices regarding nuclear energy (Aldrich, 2012). Consequently, regarding the humanitarian response in the tsunami-affected areas, the attitude within the humanitarian community was that the response went as well as possible considering the unprecedented circumstances.

# 3 Key findings and lessons from Japan

This section presents key elements and findings that were gathered through interviews and research of documents. This section is followed by recommendations developed using the lessons learned.

### 1. **The Japan counterparts (CARE Japan, Oxfam Japan, Save the Children Japan and Plan Japan) of the Humanitarian Coalition members were not ready**

All Japan counterparts of the Humanitarian Coalition members participated in the humanitarian response in various regions of the affected areas<sup>5</sup>.

The first finding of this research is that the Japan counterparts of the HC member agencies were not ready to deal with a disaster of this magnitude in their own country. Before the Tohoku crisis, many Japanese organizations operated mainly as support for their international federation members. Their main functions were fundraising and management. As a result, there was very limited expertise of direct field operations in Japanese headquarters.

During the first phase of the intervention, Japanese humanitarian organizations had two options open to them. The first was to quickly become operational. This was challenging for many reasons, including the need to rapidly hire new staff. The second option was to collaborate with local organizations already based in Tohoku.

### 2. **The pressure to intervene was high**

Because of the magnitude of the disaster, HC members and their counterparts in Japan received significant pressure to respond from donors (private and institutional) as well as from the media. This pressure impacted the decision-making process related to the response.

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5 The name of the region is Tohoku and it is composed of six prefectures: Fukushima, Sendai, Iwate (affected by the tsunami) and Aomori, Akita and Yamagata (not affected by the 2011 disaster).



### **3. Financial resources created new opportunities**

The media's heightened interest in the Japan disaster produced an environment in which external, private partners were willing to contribute to the relief effort. This created an opportunity for some organizations to invest in their respective response capacity. An additional benefit of this private funding was independence from government funding. But the increase of new funding proved to be as much of an opportunity for growth as a challenge to assure long-term stability for recipient organizations who will now need to retain additional resources.

For the Japan counterparts of the Humanitarian Coalition members, the increased revenue was not always easy to absorb. As new funding presented management challenges for growth in personnel, logistics, emergency materials, etc., this eventually meant that some NGO's were required to review their overall size and mission.

### **4. The external support proved difficult to absorb for Humanitarian Coalition counterparts in Japan**

The research revealed that the international expertise – specifically that of the Humanitarian Coalition members in Canada – was considered essential by Japanese organizations. One Japan counterpart said that the international expertise made humanitarian interventions possible because Japanese NGOs had neither the internal capacity nor the expertise to plan and execute an intervention in Tohoku.

Despite the added value of the international expertise, the relationships with foreign entities were often complex for Japanese NGOs, most notably because of language and culture barriers. Constant translation and explanation of Japanese culture reduced the effectiveness of the international expertise.

In addition, relationships with international partners were also occasionally perceived as asymmetrical. The expected equal-to-equal cooperative partnership seemed in some cases to vanish in the first few weeks of the response. This asymmetry appears to have been caused by the added pressure from international workers on Japanese NGOs to perform in accordance with their international peers' priorities and standards (from a funding and management point of view).

### **5. The go/no-go decisional processes for responding to disasters in developed countries were not defined**

An important finding of this evaluation is that the term 'mega-disaster' was not clearly defined within the decision-making bodies of Japanese NGOs. Along with this gap, there was no clear decisional procedure as to whether or not to respond. The decision-making process also varied greatly from one agency to the next. This led to some confusion in the first days and weeks of the crisis. The decision-making process for this kind of disaster was not widely understood inside and outside Japan, as well as within organizations.

### **6. Local Japanese organizations were effective**

For some Humanitarian Coalition members in Japan, collaboration with local organizations provided a crucial advantage for effective assessment and quick response in the affected

zones. As is usually the case in disasters, local groups were first on the scene to respond to the needs of the survivors. For some Japan counterparts, collaboration with local organizations provided a crucial advantage for effective assessment and quick response in the affected zones.

For instance, prior to the tsunami, Oxfam Japan had a partnership with the Tohoku-based NGO *Single Mother*. This partnership was essential in accurately evaluating the area's need and subsequent implementation of a rapid intervention. As a result of this successful cooperation, Oxfam Japan sought out other local NGOs with whom to collaborate.

Among these local organizations, it appears the Japanese response benefited from the role of local organization such as Soka Gakkai International (SGI). Deeply rooted in Japanese communities, these organizations were able to rapidly organize and launch their responses. For example SGI was capable to distribute over 100 000 rice balls (homemade by their members in the Miyagi and Chiba prefecture) to victims of the tsunami before Japan counterparts of the HC members were able to mobilize<sup>6</sup>.

## 7. Private-public cooperation increased operational efficiency

With regards to the humanitarian response in Japan, some achievements can be partly attributed to the strength of ties between the public and private sectors. As one interviewee put it: “the State always believes it is almighty, but its limits are obvious and this is where the civil society and private sector can fill the gaps (...). Without the corporations' action, I think the response would have been much more difficult<sup>7</sup>”.

Public-private ties are common in Japanese society, and played a key role in the rapid response to the emergency in March of 2011. For instance, many NGOs have close connections with local government and with private corporations (logistic and material companies, for instance). This ‘triangle’ relationship sped up the delivery of items such as non-food and emergency stock in the first phase of the emergency response<sup>8</sup>.

## 8. The humanitarian charters and Minimum Standards in Disaster Response (MSDR) differed in poor and rich countries

The experience in Japan demonstrates that needs differ between the countries of the global North and global South. The usual MSDR, such as the Sphere Project, appeared to be of little to no use in Japan as the expectations of the affected population in Tohoku varied from those in poorer countries. For instance, household items such as refrigerators were considered essential in Japan and were delivered to some beneficiaries, where this likely would not have been the case in poorer countries. Many humanitarian organizations had to improvise criteria and standards, which created problems with coordination and harmonization between agencies during the intervention.

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- 6 For instance, Soka Gakkai International (SGI), which has 42 centres spread in Sendai, Miyagi and Iwate prefectures, was able to provide relief items within 12 hours after the tsunami hit the coast of East Japan. Source: <http://www.2.sokanet.jp/html/others/saigaitaisaku.html> (consulted on February 11th 2012)
  - 7 In the Japanese language, the word ‘impossible’ is often considered too rude to be used. Instead, softer words such as ‘difficult’ or ‘complicated’ are often used.
  - 8 See Soka Gakkai International website for example for their collaboration with corporations in time of emergency response. [www.2.sokanet.jp](http://www.2.sokanet.jp)

## 9. **Japan Platform (JPF) was slow to coordinate the emergency response**

The JPF was specifically mandated to coordinate the humanitarian assistance after the disaster. However, it took a month for the Japanese Government and the Japanese International Cooperation Agency (JICA) to be operational. At this point, and with the help of the United Nations Disaster Assessment and Coordination (UNDAC), the Japanese government and JICA were able to set up in the Miyagi prefecture field office a team of Tokyo-based coordination experts; among which were partners such as JPF and the Japan NGO Center for International Cooperation (JANIC). Until mid-April, local communities and NGOs were on their own to coordinate their emergency responses outside the Miyagi prefecture.

A particular feature of mega-disasters is the wide range of people they affect. Indeed, humanitarian workers themselves and decision-makers from local and central governments can become the very ones in need of emergency assistance, making the coordination of operations very difficult.

The local government, or the UN in some cases, should assume this coordinating role. However, the experience by some Japanese NGOs indicates otherwise. For instance, CARE Japan, Soka Gakkai, Oxfam Japan and Save the Children Japan were coordinated by neither the UN nor the Japanese Government until mid-April 2011, and in some areas, never received any coordination assistance.

# 4 Recommendations

The interviews and the literature consulted for the purposes of this research led to a significant number of conclusions. A primary concern was to develop specific recommendations for the HC as an organization.

## 1. **Define go/no-go appeal launch process for disasters in developed countries**

Pressure from media, international partners, and federations is a central theme revealed in this assessment. The pressure the media exerts on humanitarian operations must be considered when developing an emergency plan.

With this in mind, HC should develop a modus operandi and communication guidelines for disasters in developed countries that includes go/no-go criteria. These may include fund management systems, pre-agreement within respective federations, as well as other points. This go/no-go decisional process will help managers with procedural protocol when a disaster hits a developed country and could factor in extreme cases of mega-disasters, as happened in Japan.

### 1.1 **Establish guidelines for humanitarian responses in developed countries**

Following the clarification of the go/no-go process for humanitarian responses in developed countries, the Humanitarian Coalition should establish program implementation



guidelines such as MSDRs for various needs and disaster responses such as MSDRs in developed countries.

## **2. Define mega-disaster**

Following the first finding, it became apparent that there is currently no clear definition or criteria for what would constitute a mega-disaster. It is also not clear how these specific situations differ from others in terms of decisional and go/no-go processes. Given this gap in the existing body of research, it appears the HC should emphasize documenting and debating mega-disaster emergency responses in developed countries. This process should include the development of a common logistical framework and plan of action. It should therefore contextually clarify the differences between a 'disaster' and a 'mega-disaster', their impact, and how the respective decisional processes differ.

## **3. Coordination must be adaptable**

Different operational cultures between international experts brought in to support the response and their respective counterparts in Japan may have affected the efficiency of the overall response. Our research indicates that, from the Japanese perspective, in some cases, the international support provided would have been more effective if restricted to specific sectors (areas of expertise) and managed through coordination by the counterparts in Japan.

Given these findings, we recommend that the HC and its members should strive to be better prepared for future disasters in developed countries. The international emergency teams of the HC member agencies should be prepared to work under different operational frameworks and follow modified minimum standards. They should be ready to adapt operational approaches to existing communication and hierarchical structures.

## **4. Prepare a coordination and preparation plan for Canada**

One main finding of this research is that Humanitarian Coalition members, Japan counterparts were not ready to handle a situation such as the 2011 disaster. As a result, we recommend HC develop a disaster plan for Canada. The HC should lead a dialogue in Canada about the need for coordination as the central issue in preparing for mega-disasters.

Future discussions should focus on the development of a disaster preparedness plan and a pre-agreement with other humanitarian actors in Canada (i.e., who does what?). Talks should also cover the following coordination elements: Emergency plans; Business Continuation Plans; Media and international pressure management systems; and the role of the HC and its members in an eventual mega-disaster in Canada. This list is by no means exhaustive, but is intended to provide a starting point for future HC-led discussions.

### **4.1 Create Business Continuation Plan (BCP)**

One of the shared key recommendations made by several HC members in Canada and their counterparts in Japan is the importance of developing an emergency plan for Canada.

As far as the HC is concerned, this emergency plan should include specific components — crucial among these would be the Business Continuation Plan (BCP)<sup>9</sup>.

The BCP would be a predetermined method for maintaining ongoing operations of the agencies in order to ensure the functioning of other global programs while also responding to natural disasters or man-made hazards in Canada.

In the case of the HC and its members, the threat could be that all their resources are dedicated to a domestic response; this might then compromise their operations in other countries. Based on recommendations found in an abundant body of literature on the subject (Tsujiimoto, Atsushi, Akira Ishikawa 2009; Morris 2009; Hiles 2007; Bell 1991), some Japanese organizations have already implemented similar plans.

The emergency plan should consist of a detailed disaster management manual. As the experience in Japan has taught, in extreme circumstances, policy makers (heads of NGOs, donors, government officials) will often prioritize immediate needs over long-term planning. Extensive media coverage can also influence decision-making, as images of a mega-disaster tend to circulate more abundantly in developed countries than in developing countries.

Additionally, the emergency plan should include a timeline to determine the limits of the NGOs' work.

In any case, a dialogue on disaster preparedness – which would include a humanitarian response to disasters in Canada – should take place in a near future. This dialogue should emphasize private-public relationships, as shown in this research<sup>10</sup>.

Furthermore, the dialogue should address the necessity to prepare a cooperation agreement within the domestic security systems in Canada (public security, Canadian Red Cross, municipalities, and Canadian military) as well as within international humanitarian networks (respective federations)<sup>11</sup>.

#### **4.2 Contact potential partners in the private sector**

A significant amount of the success of the humanitarian response to the crisis in Japan can be attributed to the collaborations between the private and the public sectors. With the price of transportation and the higher cost of items in Canada than in developing countries, it should be anticipated that the cost of emergency humanitarian interventions in this country would be significantly higher than elsewhere.

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- 9 The Sun Life Financial provides a good example of such planning. However, it remains limited to the financial sphere. <http://www.sunlife.ca/files/plan/english/pdf/810-2882.pdf>
- 10 Kunreuther (2001) also arrives at the conclusion of the importance of such collaboration. The Japanese collaboration between corporations and NGOs during the response illustrates parts of Kunreuther theoretical framework of a public-private partnership in disaster management (or response).
- 11 The Canadian dialogue should also place emphasis on the regional perspective. During the last century, British Columbia has experienced 58% of all geophysical disasters during the last century, while Ontario and Quebec have collectively experienced 30% (Dore 2003, p.263). Additional to the regional perspective, the “ (...) disaster preparedness policy should concentrate efforts on droughts, heat waves, floods and ice storms, in that order” as recommended by Dore in his forecast of natural disaster in Canada (2009, p.269).

As such, HC should target potential private partners in Canada with a focus on transportation and non-food items (NFIs). Ties with the private sector become crucial to an effective response. This would not only be limited to financial aspects. For instance, truck companies not able to work due to a given crisis may be able to contribute vehicles to the intervention effort at no cost. This type of contribution could be framed as being beneficial for a company in the form of positive advertising.

### **4.3 Establish partnership with local NGOs in Canada**

In case of emergency in Canada, a list of potential local partner organizations must exist. Contact with these local organizations should be made prior to a crisis. Pre-established indexing and contact with these organizations would speed up the response in case of emergency.

## **5 Conclusion**

Our research findings indicate that, as far as HC is concerned, there are key lessons from the experience in Japan that should be applied to any potential disaster in developed countries in general, and in Canada in particular. Despite the fact that Japanese humanitarian organizations were aware of the risks of a mega-disaster, they were not prepared to operate efficiently or to adequately manage pressure from international partners, from donors, and the media. As well, there was the lack of operational mechanisms and of emergency staff in Japan. While important funding was well received by Japanese organizations, the coordination within the international federations and the support received by the HC appears to have been complex and asymmetrical.

Therefore, it is logical to assume that similar scenarios could very well occur in other developed countries, Canada included. In anticipation of these challenges, HC and the humanitarian system in Canada should initiate a methodical working plan to respond to those particular risks and act as a humanitarian leader within the country.

This assessment presents a clear case for future research, best practices, and initiatives on disasters in developed countries. From a normative humanitarian perspective, it is essential that a dialogue on disaster preparedness, which would include a humanitarian response to disasters in Canada, should take place in a near future.

# 6 Appendix

## 6.1 Organizations interviewed between June 15<sup>th</sup> and July 18<sup>th</sup> 2012

- Care Canada
- Care International Japan
- Humanitarian Coalition
- Japan International Cooperation Agency
- Oxfam Canada
- Oxfam Japan
- Oxfam Québec
- Plan Japan
- Save the Children Canada
- Save the Children Japan
- Single Mother's Forum Fukushima
- Soka Gakkai International

## 6.2 References

### A) Periodic article and monograph

- Aldrich, Daniel P. (2012). Post-Crisis Japanese Nuclear Policy: From Top-Down Directives to Bottom-Up Activisms. *Asia Pacific*. East-West Center No.103 January 2012.
- Bell, Judy Kay (1991). *Disaster Survival Planning: A Practical Guide for Business*. Port Hueneme, California.
- Dauvin, Pascal et Johanna Siméant. (2001). Travailler sur l'humanitaire par entretiens. Retour sur une méthode. *Mots*, 65, 117.133.
- Dore, Mohammed H.I. (2003) Forecasting the Conditional Probabilities of Natural Disasters in Canada as a Guide for Disaster Preparedness. *Natural Hazards* Volume 28: 249-269, 2003.
- Fink, Günther. (2011). Determinants of International Emergency: Aid-Humanitarian Need Only? *World Development*. Volume 39, Issue 5, page 741-757.
- Hiles, Andrew (2007). *The Definitive Handbook of Business Continuity Management*. Chichester, England; Hoboken, NJ: John Wiley & Sons.
- King, G., Keohane, R. O., & Verba, S. (1994). "Designing Social Inquiry: Scientific Inference in Qualitative Research". Princeton: Princeton University Press.
- Kovacs, Paul, Howard Kunreuther (2001) *Managing Catastrophic Risk: Lessons from Canada*. Paper presented at the ICLR/IBC Earthquake Conference, March 23, 2001. Simon Fraser University, Vancouver

- Kunreuther, Howard (2001) *Mitigation and Financial Risk Management for Natural Hazards*. Paper presented at Wharton-World Bank Conference on Innovations in Managing Catastrophic Risks: How Can They Help the Poor? January 8-10, 2001. Washington, DC.
- Morris, Janel (2009). *Disaster Planning*. Detroit, Greenhaven Press.
- Nishikawa, Yukiko. (2005) "Japan's Changing Role in Humanitarian Crises". New York: Routledge.
- Strauss, Anselm et Juliet Corbin. (1990). *Basics of Qualitative Research. Grounded Theory Procedures and Techniques*. Newbury Park Sage, 269p.
- Strauss, Anselm et Juliet Corbin. (1994). *Grounded Theory methodology: An overview*. In *Handbook of Qualitative Research*, Norman K. Denzin, Yvonna S. Lincoln (Eds), p. 273-285. Thousand Oaks, California, Sage publication
- Tsujimoto, Atsushi, Akira Ishikawa (2009). *Risk and Crisis Management: 101 Cases*. Singapore, Hackensack, NJ: World Scientific.
- Watanabe (2011). *Comprehensive List of Tsunamis to Hit the Japanese Islands (Second Edition) and preliminary report by "The 2011 Tohoku Tsunami Joint Survey Group" JSCE*. Shimzu Corporation. On line: <http://www.shimz.co.jp/english/theme/earthquake/tsunami.html>

## B) Institutional documentation

- ALNAP. "*Responding to urban disasters: learning from previous relief and recovery operations*". [www.alnap.org](http://www.alnap.org)
- CARE International Japan. "*Tohoku Earthquake Tsunami Response*". 2011
- CARE International Japan. "*Tohoku Earthquake & Tsunami Response-Recovery Phase 1 (June-December 2011)*". 2011
- CARE International Japan. "*2011 Tohoku Earthquake and Tsunami Emergency Response*". 2011
- CARE International Japan. "*After Action Review*". 2012
- Congressional Research Service. "*Japan 2011 Earthquake: U.S. Department of Defense (DOD) Response*". March 22, 2011.
- Gurstein's Community Informatics. "*Responding to a Castastrophic Emergency in a Developed Country Context: Some community informatics reflections on the earthquake and tsunami in Japan as applied to say a similar event in Canada*". [gurstein.wordpress.com](http://gurstein.wordpress.com)
- Heritage Foundation. "*The Great Eastern Japan Earthquake: assessing disaster response and lessons for the United States*". May 25, 2011.
- Japan Platform. "*North East Pacific Japan Earthquake and Tsunami: Current status of JPF's Relief Efforts*". January 2012.
- Japan International Cooperation Agency. "*The Great Japan Earthquake and Tsunami: Response and Lessons Learned*". 2011.
- Japan Platform & Janic. "*Recommendations to the International NGOs for Disasters Response in East Japan*". 1 April 2011. [www.janic.org](http://www.janic.org)
- Oxfam. "*Humanitarian Coalition: Initial Response Report*". 2011.
- PLAN. "*Report Japan Six Months after Tsunami*". 2012.
- PLAN. "*Emergency Response Situation Report*". 2011.

- Save the Children. “Great East Japan earthquake and tsunami Emergency response and recovery program: six-month report”. September 11, 2011.
- Save the Children. “Japan, One Year on: Save the Children’s response & recovery program”. 2012.
- Save the Children. “Initial Response Report”. 2012.
- World Report. “Japan: the aftermath”. Volume 377, March 26, 2011. [www.thelancet.com](http://www.thelancet.com).
- World Vision Japan. “One Year Report”. 2012.

### **C) Relevant Websites visited**

Reconstruction Headquarters Response to the Great East Japan Earthquake  
<http://www.reconstruction.go.jp/english/>

Cabinet Office  
<http://www.cao.go.jp/index-e.html>

Ministry of Foreign Affairs of Japan  
[http://www.mofa.go.jp/j\\_info/visit/incidents/index.html](http://www.mofa.go.jp/j_info/visit/incidents/index.html)

Ministry of Land, Infrastructure, Transport and Tourism  
[http://www.mlit.go.jp/page/kanbo01\\_hy\\_001411.html](http://www.mlit.go.jp/page/kanbo01_hy_001411.html)

World Bank  
<http://wbi.worldbank.org/wbi/stories/learning-mega-disasters>

Tokyo Metropolitan Governmental Disaster Prevention Information  
<http://www.bousai.metro.tokyo.jp/english/index.html>

United Nations Office for the Coordination of Humanitarian Affairs. Japan  
<http://ochaonline2.un.org/Default.aspx?tabid=10449>

Japanese Red Cross Society  
<http://www.jrc.or.jp/eq-japan2011/index.html>

Woman’s Network for East Japan Disaster (Rise Together)  
<http://risetogetherjp.org/?cat=46>

Japan Civil Network; for disaster relief in East Japan  
<http://www.jpn-civil.net/english/>

Japan Platform  
<http://www.japanplatform.org/E/index.html>

The Japan Times, Thursday, May 31, 2012  
<http://www.japantimes.co.jp/ads/pdf/0531p10-11.pdf>

The Mainichi, March 03, 2012  
<http://mainichi.jp/english/english/perspectives/news/20120303p2a00m0na005000chtml>