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The role of social capital and community leadership in post-disaster recovery practices: an ethnography of Minami-Sanriku after the 2011 Tsunami

By

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Keele University

Abstract

This research explores community post-disaster recovery practices in Minami-Sanriku, Japan after the 2011 tsunami by focusing on how various types of social capital have been developed and deployed in bottom up community-based tourism initiatives. In so doing, the research fills a gap in the existing disaster recovery literature by bringing to the fore the voices and experiences of the tsunami survivors as opposed to outsiders (Government, NGOs etc.) who have already received extensive attention in terms of their roles in the reconstruction efforts. The study adopts a social capital lens which is applied to the context of disaster recovery and illustrated via empirical cases which unpack the processes by which social innovation was facilitated by and in turn facilitated the development of bonding, bridging and linking social forms of capital. The research also demonstrates the dynamics of *Kizuna* as perceived by the local community which challenges the official meaning of *Kizuna* of social solidarity as espoused by the government in its reconstruction rhetoric. Finally, this research contributes new insights to the role of community leadership by highlighting its emergent and collective nature and its roots in a crisis situation. This alerts us to rethink power-sharing in decision-making and coordinating recovery activities at all levels to achieve the goal of "building back better".

The research is ethnographic and the data was collected via a mosaic of complementary methods. Classical American pragmatism was chosen due to its emphasis on problem-driven inquiry and to the view that theory is valid and rigorous only when it has consequences in the real world. The research findings can inform preparing for future disasters, thus being beneficial for other disaster-prone communities. It is hoped that the study will inspire other researchers to put community experiences at the heart of studying disaster recovery practices.

Key words: community-based recovery, social capital, *Kizuna*, community leadership, disaster tourism, disasters resilience, Japan.

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Chapter One: Introduction to Thesis

1.1.Background and rationale for my research

The term, *Kizuna* means bond or connection among people, in Japanese. It was a word widely used in the aftermath of 2011 Great East Japan Earthquake to express the pride found in human connection to enhance disaster recovery. Paradoxically, it was also a term employed to lament the "*dis-kizuna*" following the nuclear meltdown and a longing for *kizuna* to strengthen social solidarity for recovery. This thesis grew out of my interest in *Kizuna* (social connection), in the topic of social capital and its role in enhancing community resilience as well as out of personal lived experience in Japan, a country that is disaster prone. Japan is perceived as a world leader in disaster preparedness and risk mitigation (The World Bank, 2017). Given the frequent occurrence of natural disasters in Japan, it struck me that Japan might provide an ideal case for learning how communities deal with crises- in terms of their first-hand experience of preparing for emergencies and of implementing post-disaster reconstruction strategies on the ground.

A further motivation for focusing my study on community-based disaster recovery stems from my encounter with classical American pragmatism, a philosophy that emphasises the interconnectedness of theory and practice and the centrality of knowledge inquiry to problem solving. Many scholars (Kelemen 2012, 2013; Rumens and Kelemen, 2010; Brownlie et al, 2008) strongly recommend that the gap between theory and practice should be bridged and that theoretical insights must come from the community and be for the community. The research outcomes should not just fulfil the expectations of academic rigour; they should also be useful to the practice of communities affected by similar natural disasters.

The lion's share of attention had been paid to how government, business leaders and NGOs outside the disaster-stricken areas had responded to the crisis. However, little research had been done to capture the voices, coping strategies and aspirations of the individuals and communities affected by the disaster. I visited Minami-Sanriku, an area affected by the 2011 disasters and spoken to many residents prior to starting my PhD. There was a desire and an active effort to rebuild from within, by drawing on tangible and intangible community assets such as social and cultural capital. Therefore my research aims to make such grassroots stories and survival strategies heard and shared more widely.

The thesis, therefore, provides an in-depth ethnographic study on community-based bottom-up strategies for recovery. In so doing it unpacks how the Japanese government promoted the *Kizuna* ideal (bond and connection) in its reconstruction rhetoric, and how *Kizuna* was perceived differently (e.g. *Kizuna* among people, *Kizuna* between humans and nature; *Kizuna* between generations; *Kizuna* between the living and the dead) by local communities and put to work in a myriad of ways for disaster recovery. In addition, the role of community leadership became apparent in the crisis situation and played a critical role in the creation and redeployment of social capital. One crucial aspect for rebuilding the community was being able to retain the community connections (*Kizuna* among people) built immediately after the disaster, by engaging the community to work to bring back the vitality of the place. My research suggests that the main coping strategies used by the community was to enhance "bridging" social capital for disaster recovery through community-led tourism and other bottom-up approaches. Though tourism was used as the main strategy for enhancing bridging social capital, each initiative discussed in the research had its own tactics of implementation dependant on its unique circumstances. This provides useful insights into the social and cultural dynamics of disaster resilience and sheds new light on how traditional place-based practices and community knowledge influence recovery initiatives in post-disaster areas.

My research makes three contributions. First, it fills a theoretical gap in the existing literature on disaster recovery given its specific focus on the voices and experiences of the affected community members, as opposed to the supporters from the outside (government, NGOs etc.) who have already received extensive attention in terms of their roles in the reconstruction efforts. In addition, my research adds new insights to the role of social capital in disaster recovery in the Japanese context by bringing into focus community's different understandings of *kizuna* in contrast to the government' promotion of *kizuna* as a form of solidarity central to the reconstruction rhetoric. My research contributes to the understanding of community leadership in disaster recovery by highlighting the emergent and collective character of community leadership rooted in the disaster context as opposed to a competency approach to leadership. It also challenges the pre-conceived image of women' role by making women community leadership visible in the disaster research, which contributes to a more inclusive approach to disaster risk reduction that leads to increased effectiveness of disaster management.

Second, my research makes a methodological contribution to the field of disaster recovery studies. By employing a mosaic of complementary methods of data collection, my research captures in a powerful way the needs and aspirations of the local communities, the ways in which these needs are accounted for in the reconstruction process and the processes by which community leaders emerge to enable the process of rebuilding from within rather than with outside help. In addition, the core ideas of pragmatism philosophy (e.g. notion of the continued inquiry, reciprocity between theory and practice; participatory democracy) could inform an approach toward understanding the disasters, formulating collective coping strategies, decision-making and action-taking in the context of uncertainty.

Third, this research is also significant in terms of practical implications. As Japan is a disaster-prone country and has a rich experience in dealing with disaster recovery, the study will highlight best practices rooted in community efforts. Community's first-hand experience of disaster preparedness and associated ground-level reconstruction strategies could be shared with other disaster-prone countries with the view to reduce community vulnerability and enhance disaster resilience globally.

In addition, in the Japanese context, the influence from the government is a critical part of disaster recovery in a top-down manner. My research will contribute to the understanding of the role of community in disaster situations and provide an alternative (bottom-up) way of re-thinking and addressing the issue of power-sharing for decision-making and for establishing collaborative relationships between government and local communities. Community leaders are important links to bridge the shift from traditional recovery practices conducted in top-down fashion to bottom-up disaster recovery practices. Identifying, developing and valuing such individuals will be a great asset for local communities and government authorities alike. My study will therefore improve preparedness for future similar disasters, which unfortunately are likely to occur given Japan's level of risk to earthquakes.

1.2.Research objectives

Research objective 1: Critically evaluate how the Minami-Sanriku communities was impacted by the 2011 Great East Japan Earthquake and tsunami and their strategies to rebuild from within.

Research objective2: Examine existing discrepancy between disaster theories and local practices, and the influence of my methodological choices on the research findings.

Research objective 3: Investigate the widely accepted concept of *Kizuna* (bond and connection) as a metaphor of social solidarity in the context of 2011 disaster and illustrate empirically how the *Kizuna* has been perceived and applied in community recovery practice.

Research objective 4: Identify key recovery lessons, learnt from the 2011 disasters, challenges, and gaps in "building back better" and disaster resilience theory, in order for the local community's experience to be shared with other disaster prone areas for future disaster risk reduction.

1.3.Purpose of study

The project will address three research questions that allowed objectives to be achieved.

Question 1. How do Tsunami survivors from Minami-Sanriku make sense of their losses?

Question 2. What is their approach/strategy to rebuild their lives and communities in the aftermath of the Tsunami? How social capital has been utilized and deployed in disaster recovery?

Question 3. To what extent the process of community based recovery facilitates and is facilitated by emerging practices of community leadership?

1.4.Thesis structure

The dissertation is divided into ten chapters. Chapter one introduces the background and rationale for this research, followed by research objectives, thesis structure and conceptual framework.

Chapter two provides the research context to my ethnographic study. The overview of the 2011 Great East Japan Earthquake and Tsunami and reconstruction process are presented before introducing the research site of Minami-Sanriku including the town characteristics, disaster history and damage situation, reconstruction plan, current progress and challenges.

Chapter three and chapter four focus on the literature review. The literature review starts with reviewing disaster impacts and the traditional intervention in disaster recovery, followed by another stream of literature on social aspects of recovery which places emphasis on building resilience through social capital, social innovation, post-disaster tourism, and the role of community leadership in disaster recovery. The existing literature helps justify the need for my ethnographic study on community-based bottom-up strategy for disaster recovery in Minami-Sanriku.

Chapter five presents an overview of the philosophical paradigm and a detailed justification for the methodological decisions taken for conducting this research. In this chapter, I also explain the specific research methods employed - such as the interview, participant observation, documentation, media reports, visual methods etc and the process of data analysis. The chapter concludes with a discussion of importance of reflexivity, research ethics and fieldwork challenges.

Chapter six, chapter seven and chapter eight present the findings of the research. These three chapters draw on evidence from interviews, disaster archives, participant observation, documentation, evidence from various news media, together with my close engagement with the community to present the findings of how social capital has been applied to enhance disaster recovery in Minami-Sanriku and shed light on the community's bottom-up strategies and tactics employed to enhance social capital for recovery. The role of community leadership in creating and applying social capital through community-based disaster recovery practices is also highlighted.

Chapter nine synthesizes and distils the findings of this thesis, linking back to the issues discussed in the literature review section to further refine knowledge about post-disaster recovery practices by bringing to the fore the community's bottom-up recovery strategies. This chapter ends with a reflection of the areas where my thesis makes a contribution.

Chapter ten concludes the key findings and discussions of this thesis against the research objectives, highlighting the contributions of this research from theoretical, practical and methodological aspects. The latter half of the chapter discusses the limitation of this research and closes with proposed areas for future research and a closing statement.

1.5.Conceptual framework

A conceptual framework is provided below (Figure 1) to give a sense of the research undertaken, the key concepts used and its theoretical focus. It aims to help illustrate the key ideas underpinning and resulting from the research. The framework also aims to demonstrate the interconnectedness and development of different concepts within the context of post-disaster recovery and community responses.

The bottom blue bar shows the disaster management cycle: disaster response, recovery, disaster mitigation. The phases of this cycle are not clear-cut and at times overlap: the length of each phase varies depending on many factors such as the severity of the disaster and the approach to dealing with disaster. In the disaster response phase, community members played a critical role in saving lives as the government was unable to respond immediately. In the recovery phase, efforts were made to return the community to normal by rebuilding physical infrastructures such as temporary housing, public services and other lifeline facilities. Some of the social aspects and long-term strategy for recovery were also emphasized. The phase of disaster mitigation or resilience should be viewed as the ability to bounce forward to a new improved state rather than bounce back or recover to the original state within.

The framework (from left to right) attempts to bring to the fore the voices and experiences of the tsunami survivors as opposed to outsiders (Government, NGOs etc.) who have already received extensive attention in terms of their roles in the reconstruction efforts. The study adopts the theoretical lens of social capital which is applied to the context of disaster recovery and illustrated via empirical cases which unpack the processes by which social innovation was facilitated by and in turn facilitated the development of bonding, bridging and linking social forms of capital (shown in grey). The research also demonstrates the dynamics of Kizuna as perceived by the local community (Kizuna among people, Kizuna between humans and nature, Kizuna between generations, Kizuna between the dead and the living) which challenges the official meaning of Kizuna as social solidarity as espoused by the government in its reconstruction rhetoric.

The bar (in light green) highlights the role of community leadership and social innovation throughout all the phases of the disaster cycle. The research contributes new insights to the understanding of community leadership by indicating its emergent and collective nature, its roots in a crisis situation and its role in creating space for social innovation and the potential for linking social capital. This alerts us to rethink power-sharing in decision-making and coordinating recovery activities at all levels to achieve the goal of "building back better" and enhance disaster resilience.

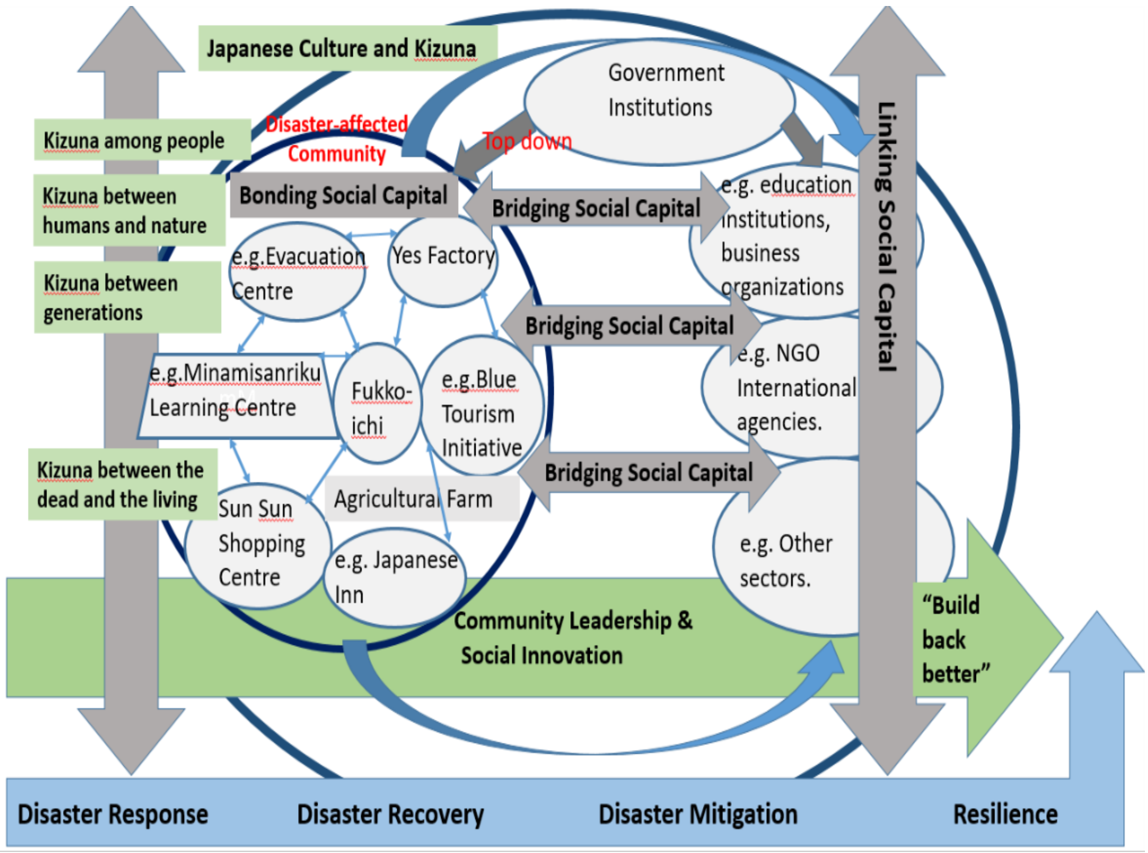

Japanese Culture and Kizuna
Government Institutions
Kizuna among people
Disaster-affected Community
Top down
Kizuna between humans and nature
Bonding Social Capital
Bridging Social Capital
e.g. education institutions, business organizations
Linking Social Capital
e.g.Evacuation Centre
Yes Factory
Kizuna between generations
Bridging Social Capital
e.g. NGO International agencies.
e.g.Minamisanriku Learning Centre
Fukko-ichi
e.g.Blue Tourism Initiative
Kizuna between the dead and the living
Bridging Social Capital
Sun Sun Shopping Centre
Agricultural Farm
e.g. Japanese Inn
e.g. Other sectors.
Community Leadership & Social Innovation
"Build back better"
Disaster Response
Disaster Recovery
Disaster Mitigation
Resilience

Figure 1: Conceptual framework

Chapter Two: Context to the research

2.1. Introduction

This chapter provides the disaster context by which the community under the study were affected and rebuilt. It starts with an overview of the research in Japanese cultural context, the general situation of the 2011 Great East Japan Earthquake and Tsunami, and the reconstruction process, followed by a more detailed context of the research site, which includes the characteristics of the Minami-Sanriku town, the damage situation, historical occurrences of earthquakes and tsunamis, the reconstruction plan, challenges and current progress of reconstruction.

2.2. Overview of Japanese culture context

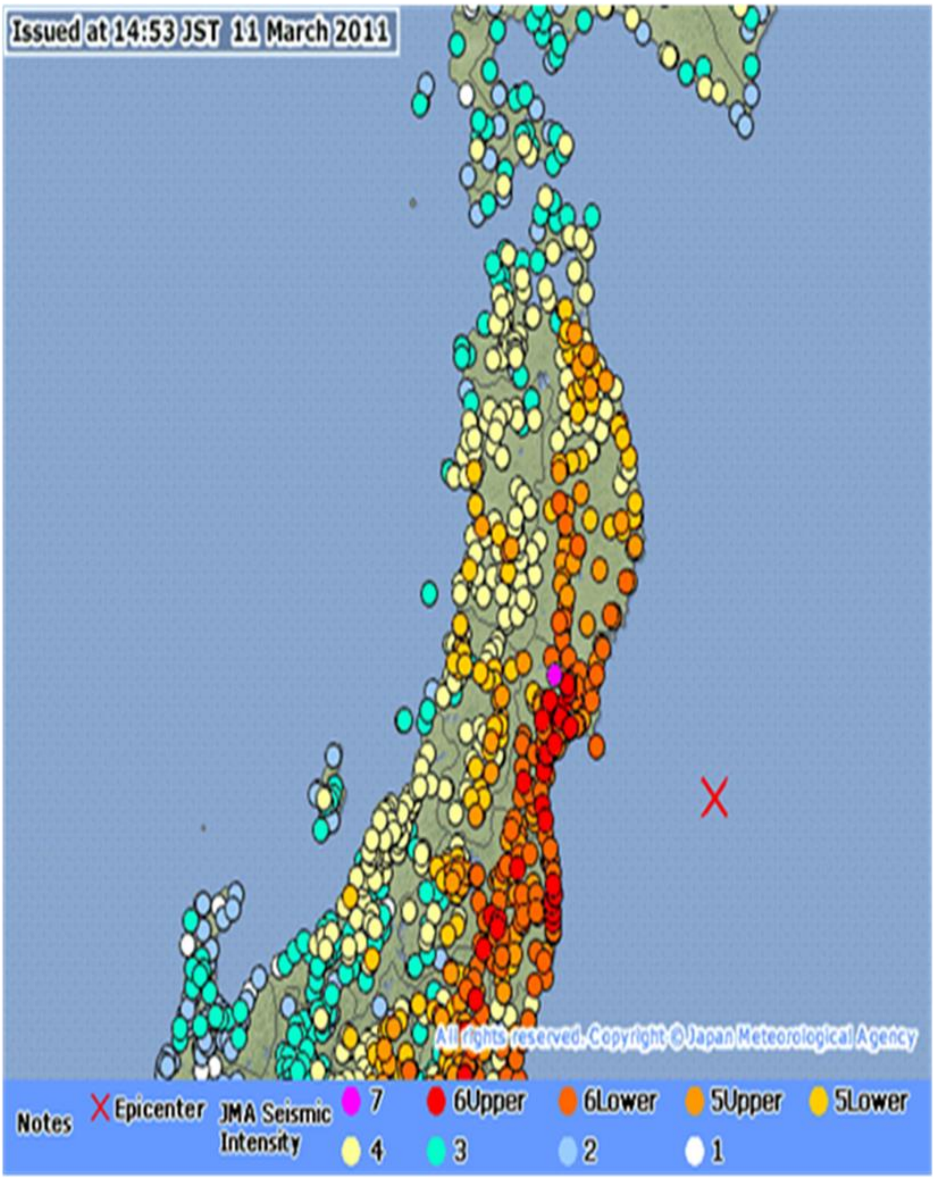
Japan is a disaster prone country with a record of a devastating disaster history such as the 2011 earthquake and tsunami, the Great Hanshin earthquake of 1995 in Kobe, the Great Kantō earthquake of 1923, and many other earthquakes recorded from pre-modern history. Some commentators suggest that while the cultural evolution of a society may be directly influenced by the catastrophic natural disasters it experiences (Sheets and Grayson, 2013), inherent cultural traits themselves impact a country's approach to dealing with disaster.

Japan's approach to dealing with disaster is affected by a variety of factors such as culture, political issues, and the severity of the disaster, certain social conventions pertinent to Japanese culture such as obedience, hierarchy, reluctance to question authority, collectivism, have been identified as the key contributors to responding to disaster (Parry, 2017). For example, Japanese culture is often perceived as having a high social hierarchy which reflects on every aspect of social relationships. Even the Japanese language system itself reflects hierarchy where people with higher status use casual speech while people with lower status use more formal and respectful speech, which can create a barrier for communication. Similarly, as Hall (1959) points out, Japan is a country seen as “high context culture” (Hall, 1959), in which the culture is homogeneous, and there is no need to verbalize everything explicitly because of a shared social cultural background. Communication is often indirect and subtle with a lot of unwritten rules. The social etiquette of being able to use Honne (true/real feeling) and Tatemae (shown behaviour in public) and the unwillingness to question authority help maintain social harmony while at the same time it can cause ambiguity. Hofsted (2005) claims that Japanese culture has a high ‘index of power distance’ and a high index for collectivism. Hofstede’s model of national cultural differences has value in understanding people’s behaviour in certain ways, but critics argue that there are differences in the characteristics of individuals and communities which need to be considered outside the national stereotype. Japanese people may still differ in many respects, although Hofstede’s framework posits that every nation has a shared unique culture overriding individual differences (McSweeney, 2002).

Power and political issues also affect the disaster recovery. For example, the influence from the government remains central to disaster recovery in Japan and its top down approach taken is met with relatively weak resistance. Therefore it is important to employ an emic research approach to explore the subtleties of the disaster situation in Minami-Sanriku.

2.3. Overview of the 2011 Great East Japan Earthquake and Tsunami and reconstruction process

An unprecedented earthquake of magnitude 9.0 (the largest earthquake recorded in Japan, see table 1) hit Japan at 14:46 JST (05:46 UTC) on March 11, 2011 with the epicentre off the coast of Sanriku, 130km east-southeast off Oshika Peninsula. Seismic intensity was measured as 7 maximum (Japan Meteorological Agency, 2011). Thirty minutes later, a massive tsunami triggered by the earthquake followed, causing tremendous damage along the Sanriku coastline (See Figure 2). The tsunami tidal wave, reached a recorded height of 9.3m in Soma city, Fukushima prefecture. The run-up height of the tsunami wave was up to 40.5m (Cabinet Office Japan, white paper on disaster management 2011). The subsequent nuclear accident at the Fukushima Daiichi Nuclear Plant triggered by the massive tsunami worsened the situation.


Issued at 14:53 JST 11 March 2011
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Notes
Epicenter
JMA Seismic Intensity
7
6Upper
6Lower
5Upper
5Lower
4
3
2
1

Figure 2: The 2011 Great East Japan Earthquake

Source: Japan Meteorological Agency, the 2011 Great East Japan Earthquake http://www.jma.go.jp/jma/en/2011_Earthquake/Information_on_2011_Earthquake.html

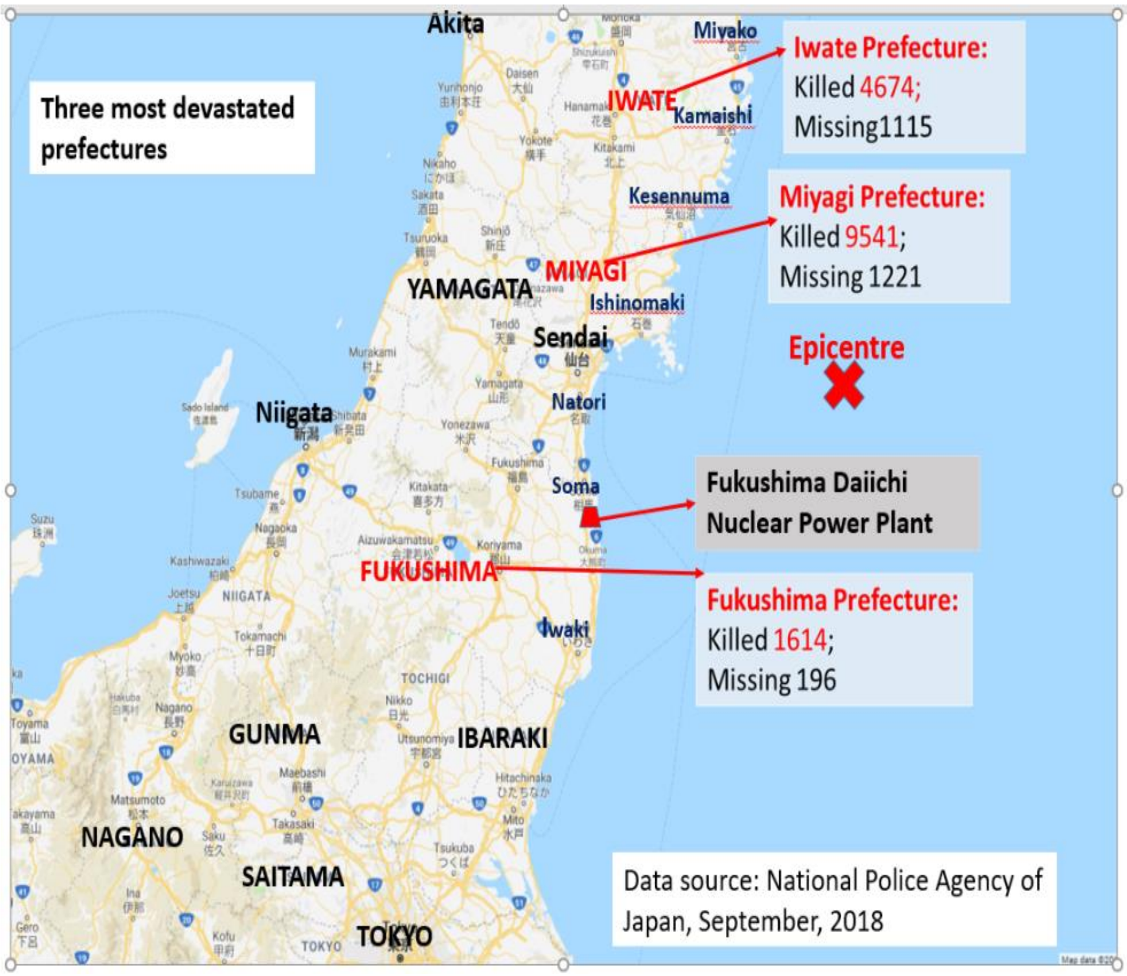
Historically there have been large earthquake occurrences in this area including the 869 Jomon Era Tsunami, the 1896 Meiji Tsunami, the 1960 Chili Tsunami, and the 1993 Miyagi off-shore earthquake tsunami (see the detailed damage situation in section 2.3). A number of disaster prevention infrastructures such as the seawall and evacuation towers have been set up along the coastline. However, the scale of the 2011 earthquake (see the table 1) far exceeded the Japan Meteorological Agency, prediction of severity.

Table 1: Summary of the 2011 Great East Japan Earthquake from Japan Meteorological Agency.

Name:	The 2011 Great East Japan Earthquake (The 2011 off the Pacific coast of Tohoku Earthquake)
Date and Time:	11 March 2011 14:46 JST (05:46 UTC)
Hypocentre:	38° 6.2′ N, 142° 51.6′ E (130km ESE off Oshika Peninsula) Depth 24km
Magnitude:	9.0 (the largest earthquake recorded in Japan)
JMA Seismic Intensity:	7 (Max) (Kurihara City of Miyagi Prefecture)

Source from: Japan Meteorological Agency, the 2011 Great East Japan Earthquake Summary. http://www.jma.go.jp/jma/en/2011_Earthquake/2011_Earthquake.html

The disaster caused huge damage and the evacuation was delayed due to the unexpected scale. More than 20 prefectures were affected by the disasters, among which three prefectures along the Sanriku coastline, Miyagi, Fukushima and Iwata, were the most devastated (see figure 3 and table 2 for details of the damage).


Akita
Miyako
IWATE
Kamaishi
Kesennuma
MIYAGI
YAMAGATA
Ishinomaki
Sendai
Natori
Niigata
Soma
FUKUSHIMA
Iwaki
NIIGATA
TOCHIGI
GUNMA
IBARAKI
NAGANO
SAITAMA
TOKYO
Epicentre

Three most devastated prefectures

Iwate Prefecture:
Killed 4674;
Missing1115

Miyagi Prefecture:
Killed 9541;
Missing 1221

Fukushima Daiichi Nuclear Power Plant

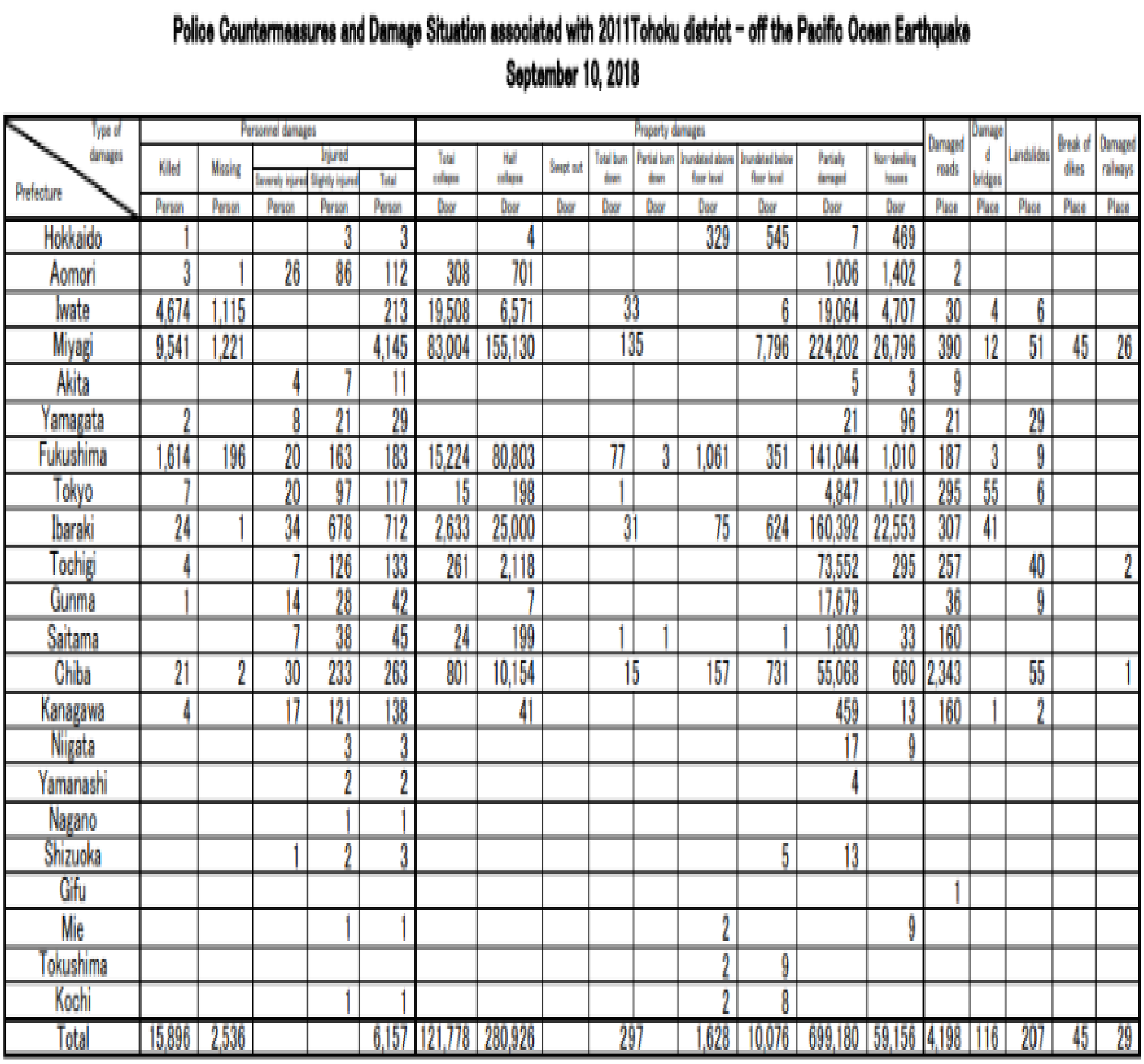
Fukushima Prefecture:
Killed 1614;
Missing 196

Data source: National Police Agency of Japan, September, 2018

Figure 3: The three most devastated prefectures.

According to the Japan National Police Agency (as of September, 2018), the number of deaths reached 15,896, with 2,536 still missing. More than 470,000 people were evacuated from the area. Around 1,111,030 houses were damaged of which 130,435 were totally destroyed, 262,917 were half destroyed, and 717, 678 had less severe damage. The area of land affected was 562 square kilometres. The economic loss was estimated to approximately 16.9 trillion yen (US $199 trillion) including damage to buildings (10.4 trillion), lifeline facilities (1.3 trillion),social infrastructure facilities (2.2 trillion), agriculture, forestry and fisheries (1.9 trillion) and other damage (1.1 trillion) (Cabinet Office, 2011).

Table 2 : Reported damage in Tohoku district



Police Countermeasures and Damage Situation associated with 2011Tohoku district - off the Pacific Ocean Earthquake
September 10, 2018

Type of damages / Prefecture	Personnel damages					Property damages									Damaged roads	Damaged bridges	Landslides	Break of dikes	Damaged railways
	Killed	Missing	Injured			Total collapse	Half collapse	Swept out	Total burn down	Partial burn down	Inundated above floor level	Inundated below floor level	Partially damaged	Non-dwelling houses					
			Severely injured	Slightly injured	Total														
	Person	Person	Person	Person	Person	Door	Door	Door	Door	Door	Door	Door	Door	Door	Place	Place	Place	Place	Place
Hokkaido	1			3	3		4				329	545	7	469					
Aomori	3	1	26	86	112	308	701						1,006	1,402	2				
Iwate	4,674	1,115			213	19,508	6,571		33			6	19,064	4,707	30	4	6		
Miyagi	9,541	1,221			4,145	83,004	155,130		135			7,796	224,202	26,796	390	12	51	45	26
Akita			4	7	11								5	3	9				
Yamagata	2		8	21	29								21	96	21		29		
Fukushima	1,614	196	20	163	183	15,224	80,803		77	3	1,061	351	141,044	1,010	187	3	9		
Tokyo	7		20	97	117	15	198		1				4,847	1,101	295	55	6		
Ibaraki	24	1	34	678	712	2,633	25,000		31		75	624	160,392	22,553	307	41			
Tochigi	4		7	126	133	261	2,118						73,552	295	257		40		2
Gunma	1		14	28	42		7						17,679		36		9		
Saitama			7	38	45	24	199		1	1		1	1,800	33	160				
Chiba	21	2	30	233	263	801	10,154		15		157	731	55,068	660	2,343		55		1
Kanagawa	4		17	121	138		41						459	13	160	1	2		
Niigata				3	3								17	9					
Yamanashi				2	2								4						
Nagano				1	1														
Shizuoka			1	2	3							5	13						
Gifu															1				
Mie				1	1						2			9					
Tokushima											2	9							
Kochi				1	1						2	8							
Total	15,896	2,536			6,157	121,778	280,926		297		1,628	10,076	699,180	59,156	4,198	116	207	45	29

Table source: Emergency Disaster Countermeasures Headquarters. (National Police Agency of Japan, 2018.) On-line available at: https://www.npa.go.jp/news/other/earthquake2011/pdf/higaijokyo_e.pdf

Immediately after the disaster, the Extreme Disaster Management Headquarters were asked to co-ordinate the response to the disasters. Government teams were sent to Miyagi prefecture to inspect the situation and relief measures were taken. The priority was to save lives so a large number of rescue teams were dispatched to the disaster affected areas. According to the white paper on disaster management (Cabinet office, 2011), the National Policy Office dispatched 307,500 staff (as of May, 2011), the Fire and Disaster Management Agency sent 1,558 emergency Fire Response Teams of around 103,600 fire fighters. The Japan Coast Guard dispatched 4,413 boats and 1,564 airplanes and 1,510 staff to aid the rescue efforts. The Ministry of Defence dispatched up to 107,000 corps of the Japan Self-Defence Force. In addition to this, international rescue teams from 28 countries also joined the rescue operations. Government provided large amounts of support such as disaster relief and personnel as an initial response to the disaster and also made efforts to re-establish the infrastructure (e.g. transportation facilities) and lifelines (water, electricity, gas, sewages, and telecommunication), public buildings (e.g. schools, hospitals, and community facilities), livelihood (e.g. agricultural, fishery facilities, marine products processing facilities) which had all been severely damaged in the disaster.

Despite the government supports, the severity of the damages involving multi-locations across many prefectures and the complexity of a triple disaster earthquake, tsunami and nuclear crisis rendered the reconstruction harder. There were still many other challenges to face including the issues of relocation of housing, resources to rebuild the infrastructures, livelihood and food safety concern due to nuclear impact. To facilitate the reconstruction, *Basic Guidelines for Reconstruction* were issued in July 2011 by the Reconstruction Headquarters which outlined the basic concepts for reconstruction, a ten-year timeframe for reconstruction, and response actions to be implemented, and policies and measures needed for reconstruction. “The Guidelines clarify an overall picture of the actions of the Government for the reconstruction….but main administrative actors accountable for the reconstruction shall be municipalities, for the municipalities are closest to local residents and best understand characteristics of the regions” (Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake, 2011, p1). In other words, municipalities were required to take leading roles in implementing the disaster reconstruction operations while prefectures would play a coordination role between municipalities based on the guidelines provided by central government. The figure 4 outlines the reconstruction process and government’s responsibility at different levels.

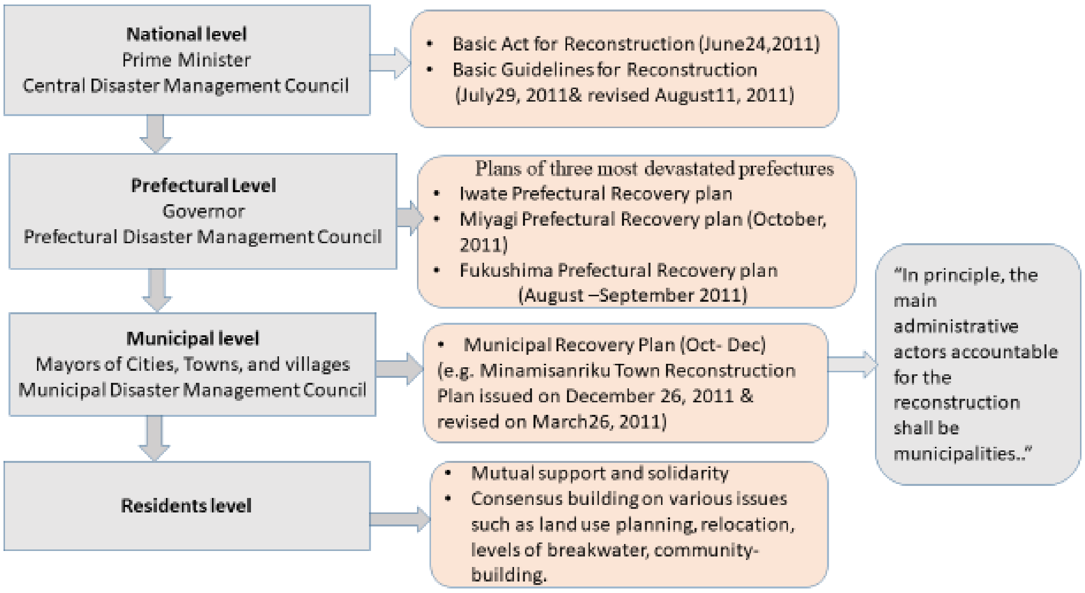

National level
Prime Minister
Central Disaster Management Council
Basic Act for Reconstruction (June24,2011)
Basic Guidelines for Reconstruction (July29, 2011& revised August11, 2011)
Prefectural Level
Governor
Prefectural Disaster Management Council
Plans of three most devastated prefectures
Iwate Prefectural Recovery plan
Miyagi Prefectural Recovery plan (October, 2011)
Fukushima Prefectural Recovery plan (August –September 2011)
Municipal level
Mayors of Cities, Towns, and villages
Municipal Disaster Management Council
Municipal Recovery Plan (Oct- Dec) (e.g. Minamisanriku Town Reconstruction Plan issued on December 26, 2011 & revised on March26, 2011)
Residents level
Mutual support and solidarity
Consensus building on various issues such as land use planning, relocation, levels of breakwater, community-building.
“In principle, the main administrative actors accountable for the reconstruction shall be municipalities..”

Figure 4: The reconstruction process and government’s responsibility at different levels.

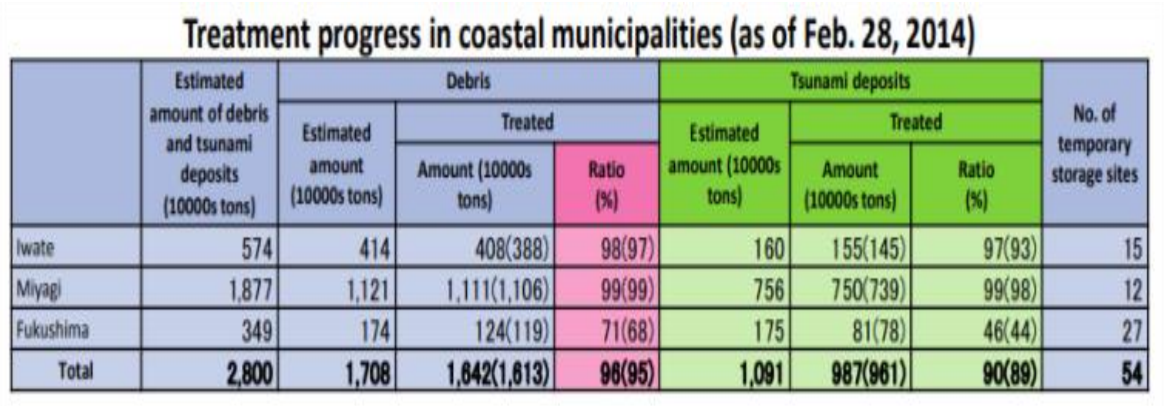
(Source: based on the information from Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake, 2011.)

To coordinate the reconstruction activities, the Reconstruction Agency was established in February 2012. With a ten year timeframe for reconstruction, the first five years

(2011-2015) were set as an intensive reconstruction period while the second five years (2016-2020) were positioned as the reconstruction and revitalization period.

Many people were evacuated to temporary shelters at public buildings such as schools, community centres and gymnasiums (470,000 people at its peak) after the disaster. The essential materials for the evacuation shelters were provided from all parts of Japan and abroad, but due to damage of the road system and poor information sharing, the distribution of disaster relief was hampered. One of the priorities therefore was to provide support and relocation for those who were residing in temporary shelters. To support this, Government provided funding to build temporary houses to accommodate those who were in evacuation shelters and provided subsidiaries for house rentals. The lifelines such as electricity and water supply were restored within 1- 3 months. According to the Ministry of Environment (2014), huge amount of debris had been removed by 2014 except for the area around Fukushima where the nuclear accident meant debris removal had to be delayed (see table 3)

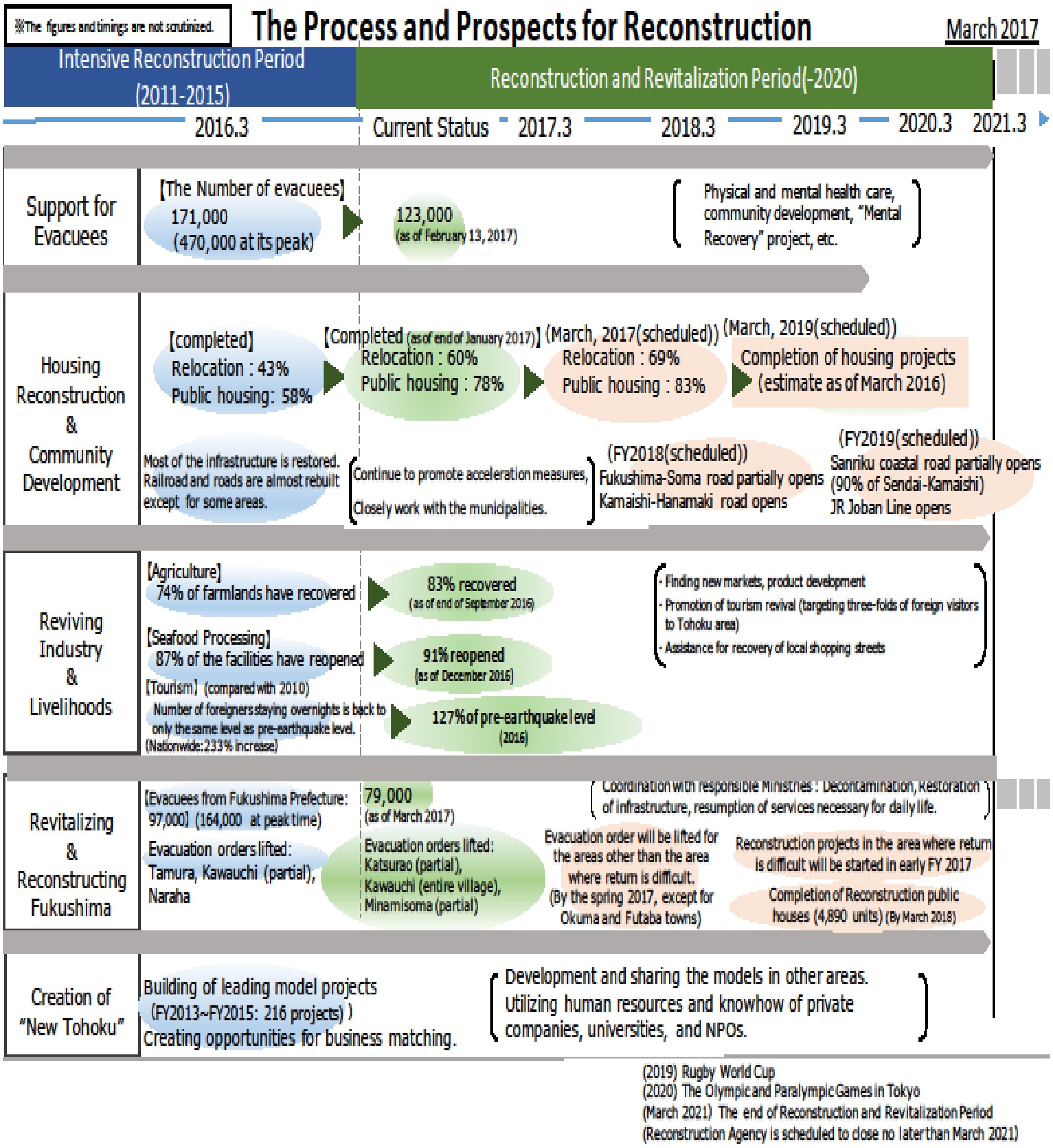
Table 3: Progress on treatment of debris from the Great East Japan Earthquake (Ministry of Environment, 2014)



Treatment progress in coastal municipalities (as of Feb. 28, 2014)

	Estimated amount of debris and tsunami deposits (10000s tons)	Debris			Tsunami deposits			No. of temporary storage sites
		Estimated amount (10000s tons)	Treated		Estimated amount (10000s tons)	Treated		
			Amount (10000s tons)	Ratio (%)		Amount (10000s tons)	Ratio (%)	
Iwate	574	414	408(388)	98(97)	160	155(145)	97(93)	15
Miyagi	1,877	1,121	1,111(1,106)	99(99)	756	750(739)	99(98)	12
Fukushima	349	174	124(119)	71(68)	175	81(78)	46(44)	27
Total	**2,800**	**1,708**	**1,642(1,613)**	**96(95)**	**1,091**	**987(961)**	**90(89)**	**54**

Other priorities were given to infrastructure rebuilding such as road, transportation system, disaster prevention facilities, industry and livelihood recovery, such as farmland recovery, fishing facilities, seafood processing, tourism recovery and Fukushima decontamination and reconstruction etc., with the aim of creating a new “Tohoku” (Reconstruction Agency, 2012). To date, the reconstruction is progressing but has been slow due to factors such as a shortage of human resource and insufficient experience of local authorities which has impeded the progress of reconstruction work (Japan International Cooperation Agency, 2013) and the unexpected scale of disasters across multi-locations makes the process of reconstruction more challenging. Figure 5 shows the progress to date (as of March 2017).



※The figures and timings are not scrutinized.

The Process and Prospects for Reconstruction

March 2017

Intensive Reconstruction Period (2011-2015)

Reconstruction and Revitalization Period(-2020)

2016.3 | Current Status | 2017.3 | 2018.3 | 2019.3 | 2020.3 | 2021.3

Support for Evacuees

[The Number of evacuees] 171,000 (470,000 at its peak)

123,000 (as of February 13, 2017)

Physical and mental health care, community development, "Mental Recovery" project, etc.

Housing Reconstruction & Community Development

[completed] Relocation : 43% Public housing: 58%

[Completed (as of end of January 2017)] Relocation : 60% Public housing : 78%

(March, 2017(scheduled)) Relocation : 69% Public housing : 83%

(March, 2019(scheduled)) Completion of housing projects (estimate as of March 2016)

Most of the infrastructure is restored. Railroad and roads are almost rebuilt except for some areas.

Continue to promote acceleration measures, Closely work with the municipalities.

(FY2018(scheduled)) Fukushima-Soma road partially opens Kamaishi-Hanamaki road opens

(FY2019(scheduled)) Sanriku coastal road partially opens (90% of Sendai-Kamaishi) JR Joban Line opens

Reviving Industry & Livelihoods

[Agriculture] 74% of farmlands have recovered

83% recovered (as of end of September 2016)

[Seafood Processing] 87% of the facilities have reopened

91% reopened (as of December 2016)

[Tourism] (compared with 2010) Number of foreigners staying overnights is back to only the same level as pre-earthquake level. (Nationwide: 233% increase)

127% of pre-earthquake level (2016)

- Finding new markets, product development
- Promotion of tourism revival (targeting three-folds of foreign visitors to Tohoku area)
- Assistance for recovery of local shopping streets

Revitalizing & Reconstructing Fukushima

[Evacuees from Fukushima Prefecture: 97,000] (164,000 at peak time)

Evacuation orders lifted: Tamura, Kawauchi (partial), Naraha

79,000 (as of March 2017)

Evacuation orders lifted: Katsurao (partial), Kawauchi (entire village), Minamisoma (partial)

Coordination with responsible Ministries : Decontamination, Restoration of infrastructure, resumption of services necessary for daily life.

Evacuation order will be lifted for the areas other than the area where return is difficult. (By the spring 2017, except for Okuma and Futaba towns)

Reconstruction projects in the area where return is difficult will be started in early FY 2017

Completion of Reconstruction public houses (4,890 units) (By March 2018)

Creation of "New Tohoku"

Building of leading model projects (FY2013~FY2015: 216 projects)) Creating opportunities for business matching.

Development and sharing the models in other areas. Utilizing human resources and knowhow of private companies, universities, and NPOs.

(2019) Rugby World Cup
(2020) The Olympic and Paralympic Games in Tokyo
(March 2021) The end of Reconstruction and Revitalization Period
(Reconstruction Agency is scheduled to close no later than March 2021)

Figure 5: Progress to date, the process and prospects for reconstruction, recovery and reconstruction from the Great East Japan Earthquake, 2017.

(Source: Japan Reconstruction Agency, 2017, On-line available at: http://www.reconstruction.go.jp/english/topics/Progress_to_date/pdf/201703_process_and_prospects.pdf)

2.4. The Research site: the Minami-Sanriku town

2.4.1. Overview of Minami-Sanriku: features of the town, its history of disasters and the damage situation

Minami-Sanriku was one of the hardest-hit towns by the 2011 disasters and is the town on which this thesis focuses. The town is blessed with bountiful and beautiful coastal scenery, fresh seafood and relaxing hot spring (Onsen) but also bears the negative aspects of being a disaster-prone area with a long history of earthquakes and tsunami. The entire town centre of Minami-Sanriku was almost swept away by 2011 tsunami.

2.4.1.1. Features of the town

Minami-Sanriku town is home to one of the Pacific coastal communities located in the Miyagi prefecture in northeast Japan with the Pacific Ocean to the east, Kesennuma city to the north, Ishinomaki to the south and Tome city to the west (See figure 6). The town was formed through the merger of two towns, Shizugawa, and Utatsu in October, 2005 (Minami-Sanriku town website, 2016) with a total area of roughly 163.40 square kilometres, 70% forest coverage rate and a population of 17,429 prior to the 2011 disasters (population census, 2010). Its geographic location on the coast of the Pacific Ocean makes it a great fishing ground for its aquaculture farming such as seaweed, oyster, sea squirrel, scallop farming and is one of Japan's leading aquaculture bases. Large numbers of the town's population still rely on the fishing industry, seafood product processing and tourism services for their livelihoods.

Minami-Sanriku was a popular tourist resort prior to the 2011 tsunami, thanks to its beautiful coastline, dotted with islands and cliffs, with an annual tourist industry of around 1 million people prior to the 2011 disasters. Its coastline is part of the Sanriku Fukkō National Park with a long range of magnificent sea cliffs created by waves, stretching northwards to Aomori Prefecture. The National Park along the Sanriku coastline was formerly known as Rikuchū Kaigan National Park but since 2013 it has been extended to include the parks within the disaster-affected areas and reformed into the New “Sanriku Reconstruction (Fukko) National Park” to provide an economic boost to these devastated areas and to promote eco-friendly tourism and local employment (Ministry of the Environment, 2016).

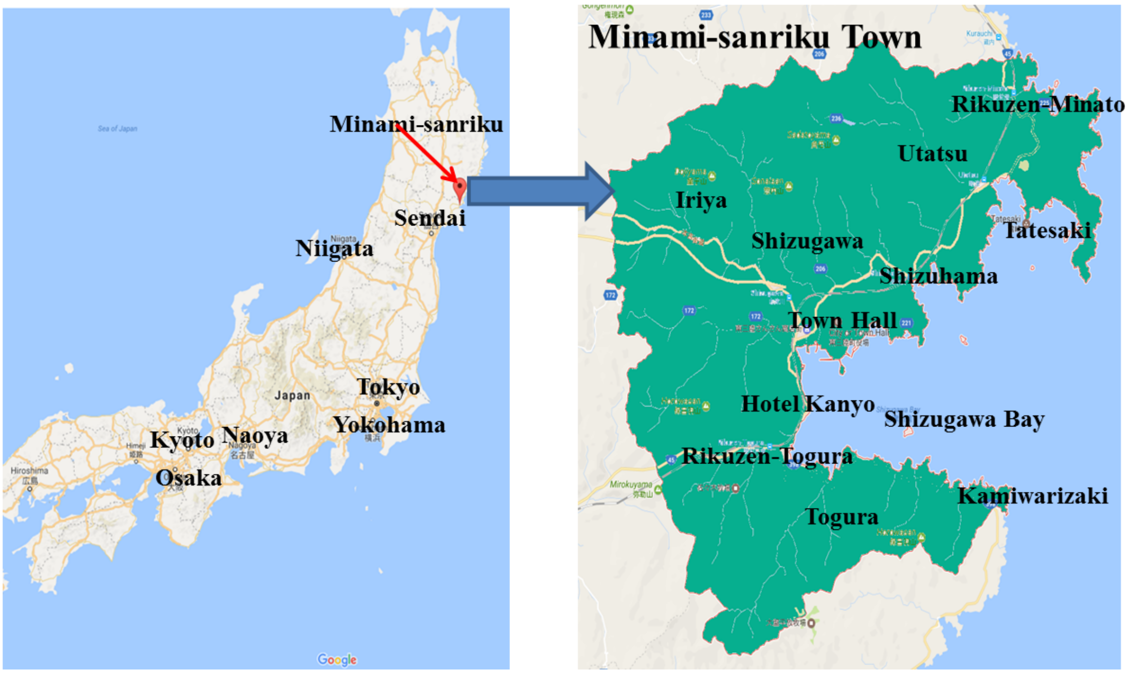

Sea of Japan
Minami-sanriku
Sendai
Niigata
Japan
Tokyo
Yokohama
Kyoto
Naoya
Osaka
Hiroshima
Google
Minami-sanriku Town
Rikuzen-Minato
Utatsu
Iriya
Tatesaki
Shizugawa
Shizuhama
Town Hall
Hotel Kanyo
Shizugawa Bay
Rikuzen-Togura
Kamiwarizaki
Togura

Figure 6: Map of Minami-Sanriku

2.4.1.2. Major earthquake and tsunami in history

While the local community of Minami-Sanriku town are blessed in many respects, living in a coastal area with beautiful natural scenery and rich fishing grounds, they are also threatened by destructive natural forces as this area is also a disaster-prone area, having been hit by at least eight large earthquakes and tsunamis that have caused huge losses and destruction. See Table 4 for more details.

Table 4: Major earthquake and tsunami in Sanriku area in history

Major earthquake and tsunami in Sanriku area in history (there were some lower scale earthquakes in between)				
Date	Name of earthquake	Name in Japanese	Magnitude	Damage situation
July 13, 869	869 Sanriku Jōgan earthquake	三陸貞観地震	M8.9	Number of deaths and missing, Approx. 1000.
December 2, 1611	1611 Keicho Sanriku earthquake tsunami	慶長三陸地震津波	M8.1	Casualties approximate 5,000.
June 15, 1896	Meiji Sanriku Earthquake tsunami	明治三陸地震津波	M 8..5	Death, 21,959; House damages 10000.
March3, 1933	Showa Sanriku Earthquake tsunami	昭和三陸地震津波	M 8.1	Death and missing 3064; housing total collapse 5851, houses flooded 4,018
May 23, 1960	Chile Earthquake tsunami	チリ地震津波	Ms 8.5	Death and missing 142; House damages 3500.
December	the Sanriku-	三陸はるか	M 7.6	Death 3; injury788;

28, 1994	haruka-oki Earthquake.l994	沖地震		House damages 501
May 26, 2003	Miyagi prefecture (Sanriku South Earthquake)	宮城県沖（三陸南）地震	M7.1	Injury 174, House damages 23.
March 11, 2011	The great east Japan earthquake	東日本大震災	M9.0	Death 15895 Missing 2539. House damages: 1111030. (total damaged 130,435; half damaged 262917 and partially damaged 717678)

Source: based on the information from three sources from Ministry of Land, Infrastructure, Transport and Tourism, Tohoku Regional Bureau, Koriyama National Highway Office (2005) & Disaster Information Laboratory (2011) and Japan meteorology agency (2017) http://www.data.jma.go.jp/svd/eqev/data/higai/higai-1995.html

Local community members are very aware of earthquakes and tsunamis due to their frequent occurrence in this area. Their ancestors have passed down their disaster experience through various artefacts such as marked evacuation routes, “tsunami stones” erected beyond the coastal hillside to act as markers to warn later generations not to build houses below these points. In addition, the “tsunami tendenko” cultural practices have been handed down from generation to generation, whereby if a tsunami occurs, people should evacuate without delaying to help others in order to avoid larger causalities. Modern Japan, as a disaster prone country, has built on its ancestors' experiences and expertise to develop more sophisticated disaster measurements and prevention mechanisms such as a high-tech warning system, tsunami barriers, seawalls, evacuation towers and well-marked evacuation routes.

However, natural hazards are not always predictable nor does science or technology always work. For example, the tsunami caused by Chilean earthquake in 1960, occurred early in the morning, at 4AM, and caused large causalities in Shizugawa because there was no sign of an earthquake for the Shizugawa area showing on the detection equipment and therefore people did not evacuate promptly. After the Chilean earthquake and tsunami, seawalls which exceed the height of previous disasters were built with the expectation that this would provide sufficient protection of the area and save lives. Unfortunately, the 3.11 disasters far exceeded all predictions and the tsunami waves breached the seawall defences (the faith on seawall to protect lives will be discussed in chapter 7), swept through the towns and caused huge destruction on the pacific coastal communities. Lessons from historical disasters and disaster preparation were helpful to aid a prompt evacuation following the evacuation routes to designated sites. However, as the scale of earthquake and tsunami were beyond anything experienced previously, even some of the designated evacuation places were no longer safe.

2.3.1.3. The damage situation in Minami-Sanriku

The damage to the town resulted mostly from the Tsunami. The flooded areas reached 1,144.5 hectares. The pre-disaster population of Minami-Sanriku town was 17,666 (as of February, 2011). The number of deaths and missing after the disasters was 831 and more than 60% of households were damaged and most farmland flooded by seawater.

Main roads, railways and bridges were damaged and resulted in the interruption of transportation for some months afterwards (Minami-Sanriku town website, 2017). Government functions were temporarily paralyzed, as the tsunami destroyed both the town hall and the adjacent Minami-Sanriku Disaster Prevention Centre with 43 government employees killed. A three-story skeleton of the building remains on the site as a monument of the 2011 disaster. The future of this skeleton building has been controversial, with debate as to whether to preserve or to demolish it. Some argue that the building should be removed, as it is a heart-breaking reminder, while others suggest that it should remain as the memories of disaster will fade away, and the building can serve as a reminder of the tragedy for future generations. Miyagi prefecture have decided to preserve it for a period of 20 years, and after that the next generation will be able to decide its future. Other living facilities were also severely damaged such as schools, hospitals and markets. The figure 7 shows Minami-Sanriku town before and after the disaster and table 5 provides the details of the damage to the town.

Table 5: Damages situation in Minami-Sanriku

Damages situation in Minami-sanriku	
Human damage	• Death: 620 • Missing: 211
Physical damage	Damaged housing in total: 3321 households (61.94%) • Completely damaged: 3143 households (58.62%) • Half damaged: 178 households (3.32%)
	Damaged farmland: 462 hectare (33%)
	Damaged woodland: 12 hectare
	Damaged fishing ports: 23 ports

	Damaged fishing boats: 2022 (94%)
	Other damaged infrastructures of the town: river, road, harbours, drainage, railroads, school, and hospital, town hall.
	Flooded areas: 1144.5 hectares (MLIT, 2011)
Number of evacuees	First evacuation: the peak number of evacuees in the shelters (scattered in different locations), 9500 people. Second evacuation: 1800 people. In May, 2011, people started to move to temporary housing.

Source: based on the information from Minami-Sanriku town website (in Japanese)

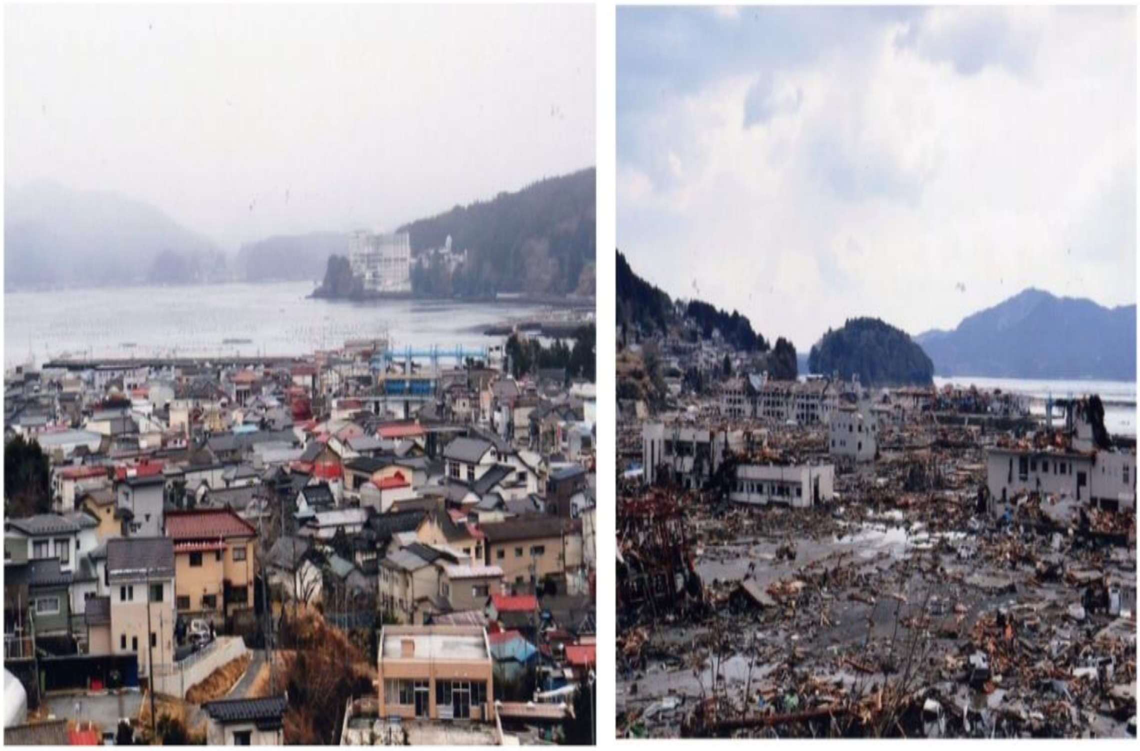


Figure 7: Minami-Sanriku town before and after disaster.

(Figure source: Minami-Sanriku Disaster Reconstruction Plan, 2012.)

2.4.2. The community reconstruction plan, challenges and progress

The term “community” is used widely in many areas of social research and is seen by many as a highly ambiguous concept (Titz, Cannon and Krüger, 2018). In Disaster Risk Reduction (DRR) terminology, the notion of community “typically refers to a sub-system or a segment of society at the local level, both rural villages and sometimes urban neighbourhoods” (Titz, Cannon and Krüger, 2018, p76). Community can be defined by boundaries such as a geographical location but it can be open to different participants despite their location (Onyx and Leonard, 2011).

Despite the ambiguity of the term, it is helpful to use it as a framing concept to give a sense of the scope of the research undertaken. In this research, the term is used to highlight a bottom-up approach to disaster recovery in disaster-affected areas within 2011 disaster context in Japan. It indicates a geographic boundary within the disaster-affected areas, though the mobility and uncertainty features of post-disaster reconstruction make this boundary quite blurred. The term is used to bring to the fore the voices and experience of people living in the town of Minami-Sanriku. This is a coastal community, in the north-east of Japan, which was severely affected by the 2011 disasters. The population of Minami-Sanriku is about 13,571 inhabitants, primarily consisting of elderly population, making it a relatively small town located in the north of the Miyagi prefecture. Its industries include fishing, seafood processing and aquaculture. In 2011, this picturesque town was swept away by the tsunami. Many industry related infrastructures including shipping, fishing harbours, fishery processing factories, aquafarming facilities and equipment were destroyed.

Minami-Sanriku community reconstruction plan was first created in December 2011 and revised in March 2012. The basic principles for recovery were to re-build “a town with vitality where nature, people, and livelihoods are well-integrated and coexist in harmony" (Minami-Sanriku Disaster Reconstruction Plan, 2012, p.26). Three reconstruction goals were established: to build a community in which people could live secure and sustainable lives; a community that coexists with nature; and, a community with sustainable livelihoods and vitality.

While the basic principles and goals for community rebuilding were set in the plan, the reconstruction has been very slow and has faced many challenges. The local government buildings, information systems, transportation system and other public facilities were all interrupted, which affected the speed of the disaster rescue and response. Even confirmation of safety was difficult and the close ties of the community were interrupted as people were scattered in many different locations. More than half of the town's population was evacuated and lived in evacuation shelters such as gymnasiums, schools, community centres and other municipal buildings. At the peak there were around 9,500 town's people living in the evacuation shelters.

Relocation was a huge challenge as although government provided the funding for building temporary housing for relocation, it was the municipalities and towns themselves who were the main actors to implement the reconstruction. The figure below (Figure 8) shows the town's reconstruction plan in which multiple measures have been included in the reconstruction effort to ensure future disaster prevention for both the maximum level of tsunami and frequently occurring tsunamis, but it would need enormous time to implement. Specifically, for a maximum level tsunami (more than 10 metres height), multi-tier of counter measures are taken including seawall, great belt, evacuation facilities to ensure future safety of lives and property but evacuation is key to saving lives during large-scale tsunamis with public facilities and residential needing to relocate to higher ground to reduce the risk of human loss and also addressing the difficulty of night time evacuation and providing supports. Green belt would be built to reduce the impact of the tsunami. In addition, evacuation facilities would be set up to ensure the smoothness of evacuation. For the frequently occurring tsunami, the seawall is being constructed based on the prediction of the heights of the future tsunami.

However, the challenge lies in relocating large number of evacuees very quickly. As Minami-Sanriku is located in a coastal area, it took time to secure land for temporary housing reconstruction due to a lack of available land. In addition, the temporary houses were only used as a transition, but the time needed for building permanent housing was even longer, which means that many people had to live in the temporary housing for years. A questionnaire in 2012 of Minami-Sanriku town residents about land use found that 68% of respondents agreed that residential houses should be located on higher ground, 58.2% wanted schools, hospitals and the town hall locating on higher ground (Minami-Sanriku town website, survey on housing relocation, 2012). To be able to achieve this required land elevation, a massive and a long-term project that is still on going.

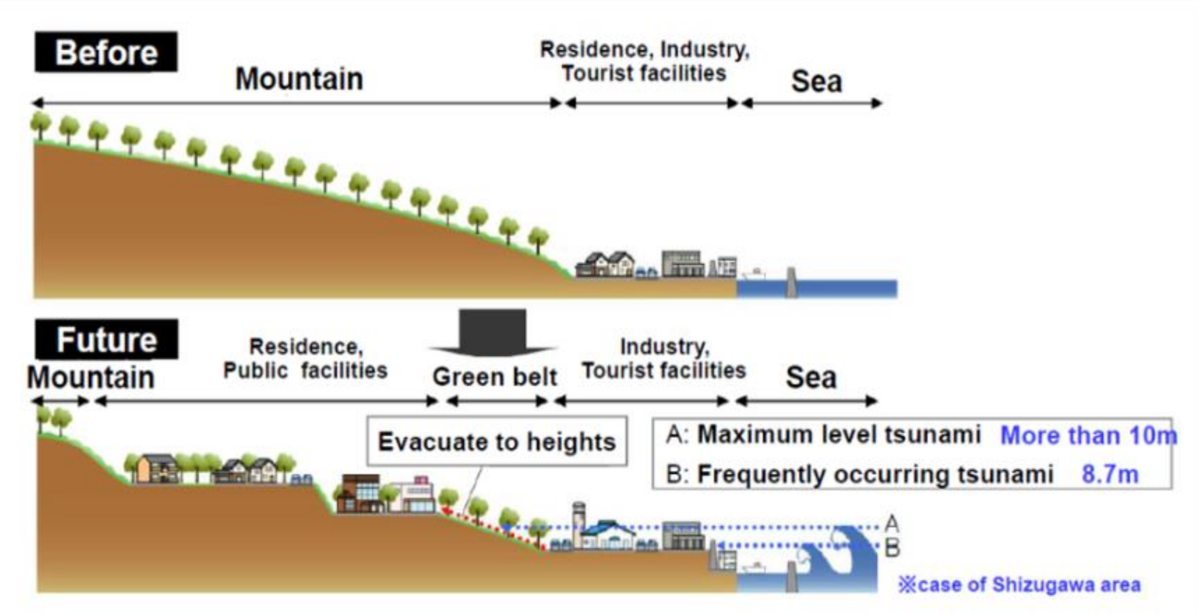

Before
Mountain
Residence, Industry, Tourist facilities
Sea
Future
Mountain
Residence, Public facilities
Green belt
Industry, Tourist facilities
Sea
Evacuate to heights
A: Maximum level tsunami More than 10m
B: Frequently occurring tsunami 8.7m
A
B
※case of Shizugawa area

Figure 8: Recovery g planning process & related case studies of the Great East Japan Earthquake.

Source: http://www.bousai.go.jp/kokusai/kyoryoku/session_/pdf/02.pdf (Kawawaki, 2011).

Livelihood recovery was another challenge given the damage to industries, businesses, fishing ports and other fishery facilities. Most of people lost their means of making a living and became jobless, which made the depressing lives in the evacuation centre even worse. The town was full of tsunami debris and required the disposal of over 540,000 tons of rubble between April 2012 and March 2014 (Ministry of Environment, 2014). The debris removal took a substantial time, which made the recovery of industry and employment more difficult. Some fishermen left the town as they needed to find an alternative way to earn a living, leaving the situation for primary industry in the area even more severe.

In addition, for many years, the rural areas suffered from the challenges of an ageing population along with a depopulation of younger citizens who have increasingly moved away from rural areas to cities and towns. There have been many projects aimed at trying to save these rural communities but most have had very little effect. According to the population census in October 2015, the population of Minami-Sanriku decreased to 12,370 from 17,666 in February 2011. As people were evacuated to many locations after the disaster and some families left the town, this weakened community ties. To bring back the vitality of the town and slow down the speed of depopulation, some additional efforts were needed to attract more people to come and live in the area.

Depopulation is not only an issue for Minami-Sanriku but for the whole nation. Bringing vitality back with a limited population is a great challenge. One of the strategies taken to revitalize the town is to enhance the transient population. Minami-Sanriku used to be a popular summer resort for domestic tourism and there are quite a number of traditional Japanese Inns. People visited here for holidays to enjoy the countryside, rural life and fresh seafood. However, the number of tourists decreased sharply from 1,083,630 in 2010 to 359,027 in 2011 after disaster. Though it has recovered greatly to 806,153 by 2016, it has not yet reached to the level prior to the disaster (Minami-Sanriku town website, 2017). Volunteers have provided large support for the disaster recovery, according to Minami-Sanriku Reconstruction Progress Report (2017), the number of volunteers at its peak (August 2011) reached 8,304 but this decreased to a few hundred per month at the lowest point. The volunteering activities have been shifted from removing debris at the early stage of recovery to agricultural and fishery support such as weed removing, planting, wakame harvesting, and oyster processing. When the piles of disaster rubble and debris were removed, the sign of needing help was less obvious. Once the number of volunteers and visitors began to decrease, it was difficult to know what strategies they could pursue to bring back the vitality of the town. Though some reconstruction progress was been made mostly in terms of infrastructure rebuilding, retaining *Kizuna* (the bond and connection) being built during the reconstruction (among volunteers, community members and other visitors) would be difficult when the reconstruction is completed. The table below shows the major reconstruction progress made from 2011 to 2017.

Table 6: The major reconstruction progress after disaster from 2011 to 2017

11.03.2011	Occurrence of the Great East Japan Earthquake and tsunami	02.02.2015	Moving into disaster public housing (Masuzawa）
27.04.2011	The completion of the first temporary house (Yokoyama-cho Yokoyama Residence)	04.10.2015	The completion of Togura primary school
30.06.2011	Withdrawal of the Japan Self-Defence Forces from Minami-Sanriku	14.12.2015	The opening of Minami-Sanriki Hospital and Integrated Care Centre, Minami-Sanriku.
31.08.2011	Completion of temporary houses reconstruction	15.02.2016	Moving into disaster public housing （Isatomae）
21.10.2011	Closedown of emergency shelters	01.03.2016	Moving into disaster public housing(Tokura)
24.10.2011	Completion of the temporary fish market.	1.04.2016	The opening of Tokura children care centre
07.12.2011	The establishment of	09.05.2016	The opening of Utatsu

	(National) Great East Japan Earthquake Recovery Special Regional Law		children care centre
13.12.2011	The opening ceremony of Utatsu Isatomae shopping street	01.06.2016	The completion ceremony of Minami-Sanriku regional wholesale market.
26.12.2011	Drawing up Minami-Sanriku town disaster reconstruction plan	08.10.2016	The completion of the reconstruction of National Highway No. 398 Togura, Hadenya road
25.02.2012.	The opening of Sizugawa Fukko Street (Minami-Sanriku Sun Sun Shopping village)	01.10.2016	The opening of Togura public hall.
27.03.2012.	The completion ceremony of the temporary town hall and public Minami-Sanriku Clinic	30.10.2016	Sanriku expressway Shizukawa IC system in operation.
01.04.2012	The start of receiving the application moving from the areas that are designated as unsafe residential areas.	19.11.2016	The opening of Sanriku Fukko National Park, Minami-Sanriku Marine Visitor Centre
16.09.2012	The completion of earthquake disaster debris incinerator	31.12.2016	The completion of disaster collective relocation

	facilities (Kesennuma block, Minami Sanriku disaster waste treatment zone)		
12.02.2013	The opening ceremony of disaster public housing reconstruction (Iriya Sakurazawa)	03.03.2017	The opening of Sun Sun Shopping Centre (permanent facility)
26.02.2013	Disaster prevention collective relocation reconstruction opening ceremony（Fujihama Complex）	20.03.2017	Sanriku expressway Minami-Sanriku Coast IC system in operation
25.05.2013 01.08, 2013	Moai statues presenting ceremony; The opening of Minami-Sanriku portal centre	31.03.2017	The completion of disaster public housing reconstruction
21.01.2013	The completion ceremony of collective relocation complex No. 1 (Fujihama Complex)	23.04.2017	The opening of Hamare Utatsu permanent shopping facilities
24.03.2014	The completion of disaster debris burning（Kesenuma Block, Minami-Sanriku area）	05.6.2017	The opening of Utatsu general branch office
28.03.2014	Being selected as bio-mass town	15.07.2017	The opening of Sanore Sodehama Beach
14.07.2014	The start of reconstruction of	03.9.2017	Minami-Sanriku New

	Minami-Sanriku public Hospital and Integrated Care Centre-Minami-sanriku.		Town Hall in operation
01.08.2014	Moving into disaster public housing (Iriya, natari)	09.12.2017	Sanriku expressway Utatsu IC system in operation.
12.08.2014	The start to reconstruct Togura primary school		
17.12.2014	Minami-sanriku-cho Reconstruction Promotion Plan (Tourism Special Zone) Certification		

Source: based on the information from Minami-Sanriku town website and Minami-Sanriku Reconstruction Progress Reports in Japanese.

As the table shows priority was given to public facilities and infrastructure building after the disaster. With joint efforts from local government and community, the reconstruction has made some progress but is still facing a lot of challenges such as the relocation of housing, livelihood recovery, aging and rural depopulation etc. In my view, it will still take many years to meet the reconstruction goals set in the Minami-Sanriku Reconstruction Plan (2012).

Despite all the challenges in the process of reconstruction, local people did not just sit there waiting for government support but re-started their lives by working collaboratively. Media attention often focuses on government support, other external support and achievements, while the community’s efforts from within and their approach to dealing with disasters are often ignored.

The existing literature on disaster impact and traditional intervention in disaster recovery and other social aspects of recovery strategies could provide a useful understanding of current disaster research and justification for the importance of community-based bottom-up strategies for disaster recovery.

Chapter Three: Disaster impact and assistance in disaster recovery

3.1. Introduction to literature review

This chapter discusses the disaster impact on environmental, economic, socio-political life and traditional interventions in disaster recovery, which focus on how government, business leaders and NGOs outside the disaster-stricken areas responded to the crisis with the top priority on infrastructure recovery. However, little research has been done to capture the voices, coping strategies and aspirations of the individuals and communities affected by the disaster in terms of their effort to rebuild from within.

3.2. The disaster impact

The richter-scale-9 magnitude earthquake and ensuing savage tsunami and nuclear crisis that struck Japan in March 2011 had devastating consequences in terms of the natural environmental, "built" environment, and economic social-political impact. The effects have been worldwide. The severity of the damage incurred by the triple disasters in Japan was enormous with an estimated cost of about 16.9 trillion Japanese yen (Cabinet Office, Disaster Management, as of 2011). It claimed around 20,000 lives and washed away many infrastructures and residential buildings. It is widely thought that it will take decades for these areas to be fully rebuilt and indeed to "rebuild back better".

3.2.1. Natural and "build" environment

The immediate impact can be seen from the severe damage to the natural environment. Having been perceived as one of the best prepared nations for earthquakes and tsunamis, Japan's sea defence structures (e.g. seawalls, sea dikes) and earthquake warning system were designed to withstand destruction and provide high-standard protection to its residents and facilities (Raby et al, 2015). However, the catastrophic destruction resulting from the unexpected scale of the earthquake and the tsunami shocked people around the world. The seismic damage, followed by the powerful sweeping tsunami, resulted in massive environmental damage along the coastline areas of Japan, but the effects go beyond the geographic area in Japan. For example, the scale of debris in Miyagi, Fukushima and Iwata, the three most damaged prefectures, has reached an estimated 24 million tons containing massive amount of materials such as concrete, metals, vehicles, wood, appliances etc. (Japan Times, 2011). The vast amount of debris cast into the ocean by the earthquake-triggered tsunami is still floating in the ocean to other countries (BBC News, 2016, the Guadiana, 2015). Even worse is that the technological disaster of the nuclear crisis at Fukushima Daiichi Nuclear Power Plant has released radioactive substance to the sea and air at a Chernobyl-level, becoming a world energy safety issue and the Japanese government has made an official request for international assistance. It has been six years since the disaster, yet we can still see the scar of it and feel its trace of the “darkness”. While motorcycling around the area during my fieldwork research, I could see the bare skeleton of a former Disaster Prevention Centre standing erect where 43 government officials had died; as well the busy trucks being loaded with tonnes of dirt around the area where land is being raised by 10.6 metres to enable rebuilding of the commercial shops and seafood processing factories, while residential dwelling is planned to be re-built in the surrounding hills. Though the town is in the process of recovery, the reconstruction has been very slow.

Some scholars have sketched out the characteristics of the damage exerted by the tsunami in the affected areas (i.e. urban area, port, coastal structures, fisheries, and agricultural areas) and coastal structures such as breakwaters, seawalls, tsunami gates and evacuation buildings, suggesting that education and experience, along with proper design of coastal structures and resilient building structures are vital for tsunami countermeasures, and for reducing the loss of life (Suppasri et al., 2012). Similarly, Ogasawara, Matsubayashi and Sakai (2012) have identified the severe impact on the coastal areas of Iwate prefecture. Apart from offering similar suggestions regarding the proper design of coastal structures, they argue that people should not overly rely on the disaster prevention facilities, nor forget such a tragic event; essentially, everyone should all remain mentally well-prepared for such eventualities. The research conducted by these scholars on the impact and damage characteristics of affected areas could stand as a record for future reference, and for reducing the vulnerability of communities. Along with the damage of the natural environment, the “built” environments were also severely damaged. The number of buildings that had completely collapsed reached 121,739 and 279,088 partially-collapsed including residential housing, shops, factories, offices and machinery, lifeline facilities, and social infrastructures such as road, railways, ports, market places etc. (National Police Agency of Japan, 2016).

3.2.2. Economic impact

The 3.11 earthquake was reported as leading to the “worst economic damage, up to 16.9 trillion Japanese yen’ in the world” by the Japan International Cooperation Agency (JICA, S-3, 2013) who carried out a study of the reconstruction process. Many infrastructures were disrupted, affected or closed for a significant period of time such as the power plants, transportation systems, railway lines and Sendai airport.

The effects of the natural disaster quickly spread from the disaster stricken areas into many other areas in Japan and abroad. Many of the existing studies focus on the impact on the business sector, in particular the retail system, supply chain and production networks. Trade was hit especially hard, as many countries restricted imports from Japan because of risk of harm from radiation and any shipping containers were strictly tested to ensure they were safe to transport. The nuclear contamination concern had a very negative impact on the agricultural and fishery sectors in particular**.** For example, prohibition for the import and supply of food from five prefectures including Fukushima, Ibaraki, Tochigi, Gunma, Chiba prefecture Japan was issued by the Hong Kong Centre for Food Safety (2011). Other countries such as the U.S., China, and Korea also banned the import of certain products from Japan due to unsatisfactory radioactivity test results. To reduce the potential risks to the food safety chain, the EU, in 2016, published the Commission Implementing Regulation to reinforce the safeguard controls on feed and food products imported from certain regions of Japan (UK Food Standard Agency, 2016). Even after six years since the crisis, the impact still remains. A more recent news report from the Japan Times (January, 2017) reports that the Japanese government plans to provide millions of Japanese yen subsidies to farmers to gain food safety Global GAP (Good Agricultural Practice) certification, which is required to participate in supplying food supplies to the Olympic Games in 2020, which will be a great opportunity for promoting Japan’s food culture, alleviating fears induced by the Fukushima Daiichi Nuclear Plant accident, and potentially expanding the Japan’s agricultural exports to the world (The Japan Times, 2017).

In the manufacturing sector, some auto parts factories in north-eastern Japan were destroyed by the tsunami, causing severe supply shortages for Toyota and other automakers (Ilie, 2011) and affecting business operations locally and globally. A more recent study by Kuropka and Jankowiak (2016) investigates the disaster impact on the economy and production networks in ASEAN economies suggesting that the disaster could result in the decline in production networks and affect the economic security and stability of member countries. To reduce the impact, in a disaster-prone area like Japan where shared interests are at stake, the priority for regional endeavour should be given to mechanisms of mutual assistances (Ames and Koguchi-Ames, as cited in Kingston, 2012). Similarly, Ando (2015) discusses how the 2011 disasters in Japan affected the regional production networks in machinery industries and trade, highlighting that the impact on the production network was very negative at the outset, but the current focus is on the network functioning and the formulation of strategies to adjust to it and rebuild the business environment as soon as possible. After all, if the networks were moved away from Japan, it would be hard to re-establish them back. The author also discusses the negative impact on exports from technological disasters, such as the Fukushima nuclear crisis, and in particular, the exports of agriculture and food products. Due to the issue of nuclear contamination, many countries refused to import the food and agriculture products from Japan, which had a great impact on the people who depend on seafood products and agricultural products as their lifeline.

The severe disruption of global supply chains caused by the Japanese disaster and the subsequent power supply interruption have led some scholars to focus on how to better manage the global supply chain in such crisis situations (Park, Hong and Roh, 2013; MacKenzie, Santos and Barker, 2012; Matsuo, 2015; Bradley, 2014; Day et al, 2012; Holguin-Veras et al, 2014; Kumar and Havey, 2013). Their work discusses - from the perspective of design and implementation of humanitarian and disaster relief supply chains - the development of robust communication plans for disaster relief supply chains and post-disaster humanitarian logistics efforts. They describe the supply chain restoration process, disaster response and recovery and improved methods for managing catastrophic supply chain disruptions. These discussions on the supply chain restoration process, and the lessons learned from the catastrophic natural disaster in Japan, have to some extent already contributed to the disaster reconstruction process in

Japan, and can potentially be shared with other disaster-prone countries from the perspective of managing supply chains in a crisis situation. However, the cases discussed in these papers only involve large businesses and global supply chains; they do not investigate how small businesses, which operate at grassroots level, helping each other and their communities, in response to such disasters.

3.2.3. Social impact

Apart from severe physical economic loss, the 2011 disasters have had a massive social impact in terms of population, social value and trust issues. According to the National Police Agency of Japan (as of 2016), the death toll reached 18,449 (including 2,556 missing) across the 22 disaster-affected prefectures. Iwate, Miyagi and Fukushima prefectures were the worst hit areas. Large numbers of people were evacuated to temporary shelters such as schools and community centres before temporary housing was built. Even today there are still people living in temporary housing or unable to go back to their homes especially in the Fukushima area. The traumatic Fukushima crisis has led people to rethink the energy safety issue and has revitalised the anti-nuclear movement. Thousands of protesters demonstrated at Meiji Shrine complex in Tokyo on 19 September 2011 and a massive number of signatures of petition were collected calling for the abolition of nuclear power in Japan, which stimulated a social political turbulence regarding the safety standard of energy and regulation, leading to trust issues between government and its citizens.

In terms of employment, young adults have long left their villages for education and city life. The tsunami deteriorated the situation; more people left and looked for job opportunities in the city. As such, the affected coast fishery town became lifeless with predominantly only the elderly as inhabitants. There has been an increase of emigrants from disaster-affected area in particular in the area of Fukushima due to nuclear crisis

(Higuchi et al, 2012). Though the job offers of reconstruction-related work had increased to some extent such as professional technical posts, along with the gradual recovery in production, the employment situation was not very positive as there was a mismatch between the job offers and applications (Higuchi et al, 2012). Therefore, the limited job opportunities for young people could further worsen the situation of the demographic disproportionate of fishery town.

For socially vulnerable people, such as the elderly, children and disabled, there was insufficient preparation and support available (Japan International Cooperation Agency Report, 2013), due to the unexpected size of the earthquake and tsunami. These people are at greatest risk during disaster and need greater support, leading to calls for programmes to deal with this better in the future (Takeda, 2011).

Despite the massive negative impact of the disaster, Ferris and Solis (2013, p.2) applauded the merits of Japanese civil society and the citizens' reaction to the disaster in that "the dignity, creativity and orderly response of the Japanese population to this mega- disaster is indeed the best measure of Japan' s potential." Similarly, Veszteg, Funaki and Tanaka's (2015) research on the impact of the disaster found that mutual trust increased through the impact of disaster. By contrast, other critics suggest that the government's poor response during the crisis resulted in the loss of public trust in the government institution (Aldrich, 2016). As a result, the power of civil society, the value of mutual help and social bonding in the crisis situation was activated and reinforced and has become a collective narrative for recovery.

3.3. The pace of recovery

The pace of recovery varied and was affected by factors such as the level of damage, the availability of support, the engagement of different actors and whether those responsible for the disaster management provided active leadership. For example, in some communities, the administrative government service was disrupted by the tsunami due to the death of the key community leaders and staff, which delayed communication to the higher level of hierarchical government reporting system which led to delays in receiving support. For example, in the town of Otsuchi in the Iwate prefecture, the government buildings were damaged and the mayor, seven key staff and 31 municipal employees were killed leading to the government administration being temporarily paralysed (EERI Special Earthquake Report, 2011). In Minami-Sanriku (the case under study), the Disaster Prevention Centre was destroyed by the tsunami with 43 people killed including a young female employee who continued to broadcast the tsunami warning and evacuation alarm until the last minute of her life. The adjustment of personnel in this town might be one of the many factors that delayed the process of recovery.

In some areas, the scale of destruction was more severe than others. For example, in Minami-Sanriku, the tsunami almost wiped out the whole town centre. To prevent future destruction by a tsunami, the land is being raised by 10.6 metres before rebuilding the commercial areas commences and the residential area is being planned to be built in the surrounding hills. This takes a lot of time and effort but should ensure less risk from future natural disasters. In addition, to ensure the land for house building was also difficult as commented by the Mayor “The private land ownership rules are a challenge….it is a complex process, which slows down the recovery process” (Oregon Public Broadcasting, 2015). Thus, the reasons for the slow recovery are complex, involving many factors.

Six years after the disasters, there are still some people living in the temporary houses, struggling to restart their lives, so it is not surprising that people have the impulse to find out and explain rationally why the reconstruction has been very slow. As commented by Dunns (cited in Kingston, 2012, p.176) “the pattern of people’s reaction to catastrophic disaster can be broken down into several overlapping phases: blaming, coping, hoping, learning, and forgetting”. Who is to blame for the disaster and for the inefficient response and slow pace of reconstruction? There is a tendency to blame the government for the disaster and the way they responded and handled it as there is an expectation that the government is responsible for handling any mega catastrophic disasters quickly (Arceneaux and Stein, 2006). Many academics and practitioners have pondered over the best coping strategies, recovery processes, and reconstruction approaches that could be learnt and shared (e.g. Ikeda and Nagasaka, 2011; Aldrich, 2012; Nakamura and Kikuchi, 2011; Orts and Spigonardo, 2013). One important question that has been raised is whether physical recovery is more important than the social dimension of recovery or vice versa (Aldrich, 2012; Aldrich, 2016).

3.4. Physical infrastructure recovery versus social capital?

The importance of infrastructure recovery has been discussed by many scholars (Cimellaro, Solari and Bruneau, 2014; Zorn and Shamseldin, 2015). For example, Palliyaguru, Amaratunga and Haigh (2008) explore the critical role and challenges of post-disaster infrastructure reconstruction for economic development in particular in developing countries though it is not directly focused on the 2011 disasters. The authors suggest that measures should be taken to increase the capacity of the infrastructure to the economy, which echo Ando’s research that business infrastructures are important for business continuity and economic recovery. Various other aspects of physical recovery have been discussed by scholars including housing reconstruction (Abulnour, 2014; Comerio, 2014; El-Anwar et al, 2010; Ophiyandri, Amaratunga and

Pathirage, 2010; Maly, and Shiozaki, 2012), transportation (Nakanishi, Matsuo and Black, 2013), and coastal structure (Udo et al, 2016).

Conversely, critics argue that social capital is more important than the physical infrastructure recovery (e.g. Aldrich, 2017; Aldrich and Meyer, 2015; 2012; Cox and Perry, 2011; Olcott and Oliver 2014). For example, Aldrich (2015) conducted research on the factors that could facilitate the speed of recovery based on the 2011 disasters. His research suggests that the number of influential politicians representing the affected area in the central government is the most important factor that determines the pace of recovery. How to balance physical infrastructure recovery and social capital has been a long debate for both academics and practitioners.

Looking back at the disaster history of Japan, catastrophic large richer scale disasters have occurred many times (See section 2.3.1, table 4). Given this history, we might think that Japan might have already established its own culture of disaster preparedness and pattern of response and recovery to enable a quick recovery after disaster. It is perhaps logical to think that a country with a lot of experience of dealing with nature hazards would have their best coping strategies (Hood, 2012, p.2). However, even for a well-prepared disaster-prone country, there still have many loopholes and it takes decades to recover.

The impacts of this recurring disaster are broad and far-reaching, beyond the economy of Japan, having worldwide effects. This might serve as a warning that unexpected disaster can occur in any country and affect other countries. We might need to think how we can work collaboratively to reduce future risk from disasters and approaches than enable communities to ‘rebuild back better’.

3.5. “Building back better”

The concept of “building back better” has been at the heart of many disaster recovery projects providing the guiding principle for recovery efforts. Its critical importance has been reiterated in the Sendai Framework for Disaster Risk Reduction 2015-2030 adopted at the Third UN World Conference on Disaster Risk Reduction in 2015. One of the four priorities for action outlined in the document is “to enhance disaster preparedness for effective response, and ‘building back better’ in recovery, rehabilitation and reconstruction” (Sendai Framework for Disaster Risk Reduction, 2015, p. 21). This indicates a global commitment to reduce disasters and risks.

The recent frequent occurrences of disasters such as the horrific London Grenfell Tower fire, the 2017 Manchester Arena attacks, the 2015 Nepal earthquake, and the 2011 Japan three catastrophic disasters arouse world attention and rekindled the discussion of how to reconstruct whilst aiming to ‘build back better’. The concept of ‘building back better’ first coined by US President Bill Clinton after the devastating tsunami across the Indian Ocean region in 2004, has been researched by many scholars such as Mannakkara and Wilkinson, 2012; Fan, 2013; Kennedy et al, 2008; Clinton, 2006; Lloyed-Jones, 2007 and Alexander, 2006. It advocates that the rebuilt community should not only restore what existed previously but should be built better, stronger, and fairer than before. Since then, this concept of “build back better” has been advocated in many situations of reconstruction after disaster, and quickly became an inspiration and guiding principles for recovery efforts. The report by Clinton (2006) captures key lessons learned from the Indian Ocean tsunami recovery, and includes ten propositions for ‘building back better’, emphasizing the joint efforts of government, Non-Governmental Organisations (NGOs) and other multilateral agencies for disaster recovery. Meanwhile, many other scholars have suggested principles or measures of “building back better” in their disaster recovery and reconstruction strategies (Mannakkara and Wilkinson, 2012; Fan, 2013; Kennedy et al, 2008; Alexander, 2006; Lloyed-Jones, 2007), from which we can draw on lessons for improving current disaster prevention and recovery practices. Apart from those useful strategies provided, there are some more optimistic views that disaster can be seen as an opportunity to ‘build back better’ (Fan, 2013; Gunewardena and Schuller, 2008; Birkmann et al, 2010; Archer and Boonyabancha, 2011). As Gunewardena and Schuller (2008) pointed out that the damage of disaster had great impact on many aspects of lives including physical, environmental and social aspects, yet it can be an opportunity to make change and “build back better”. However, how these principles or theories or opportunities of ‘building back better’ can properly be implemented in practice through real life cases, and how the role of international organizations, government and NGOs at different levels, political leadership can interact with communities in the recovery process are issues that remain wanting. How the science and policy and politics can work together to tackle what Rittel and Webber (1973, p.155) termed it as “wicked problem”, dilemmas in social policy and planning to address the problems, and find a better way of dealing with disasters?

3.6. Dealing with disaster: the traditional intervention in disaster recovery

For large-scale disasters, it is quite common that there are expectations that the government will intervene and provide support, which certainly is important for recovery in particular in the forms of funding, providing troops and resource mobilization. The civil society in Japan has received a lot of positive comments for their active role in dealing with disasters, along with support from many other sectors. However, there are many other factors that can influence the success or speed of recovery such as the scale of damage, social, cultural and economic conditions, population density, post-disaster aid from different channels, the efforts of the affected community and reconstruction approaches.

The role of government in disaster recovery

With respect to disaster recovery, it is appropriate to study existing recovery theory and practice from past experience. Studying the role played by government, NGOs, large businesses and international agencies in previous disaster recovery situations is an important aspect of these enquiries. Many scholars have conducted comparative studies between the East Japan Earthquake in 2011 and the Kobe Earthquake in 1995 (the nation's biggest natural disaster after the Second World War), in an attempt to draw lessons for recovery in East Japan. Okada (2012) examined the differences in terms of disaster reconstruction between the Great Kobe Earthquake and the Great East Japan Earthquake highlighting that, for the former, reconstruction served as a starting point for the modernization of urban space, but for the latter, the focus of reconstruction needs to be placed on community and local society, not on the nation-state. This is because the stricken areas of the Kobe area were urban-based, with less neighbourhood ties, while those that suffered most from the Great Eastern Earthquake 2011 are from primary industries e.g. fishing and agriculture, which do have strong neighbourhood relationships. From Okada's discussion, we can see that the socio-cultural context and the community's need should be considered in the process of the reconstruction of the Tohoku disaster areas. There is no "one size fits all" model as a solution (Olshansky, Johnson and Topping, 2006, p.372), which makes the assessment of response and recovery more difficult and complicated to ascertain.

Another piece of research by Hayashi (2012) compared these two large-scale earthquakes from the perspective of economic reconstruction efforts. This research highlights three differences in terms of political leadership, the administrative central/local government nexus and the intellectual community's cooperation for post disaster reconstruction, and identifies the problems encountered due to the government's inability to promptly respond to the Tohoku crisis. Meanwhile, Matsumura (2011, p.23) offers a similar criticism - that the "Kan administrative government failed to exercise strong leadership in managing the crisis", and calls for strong and decisive leadership to generate swift reconstruction and a long-term plan for development. By contrast, Samuels (2013) reveals his differing opinions on post-disaster Japanese politics, and provides a detailed account of controversial debates over local government reform – decentralization, local autonomy and regionalization, and gives a scholarly assessment of the 3.11 disasters' impact on Japan's government and society, on national security and energy policy. Other research focuses on government-led recovery in terms of its inflexibility to meet local needs (Murakami and Wood, 2014) and the government's dilemma in balancing the duties, responsibilities and financial conditions when the "state budget remains the Achilles' Heel" for post disaster aid (Erber and Schrooten, 2011, p.16).

Despite the criticism levied on the government's response to disaster, we have to acknowledge that central government played an important role in terms of emergency response, funding support, rescue operation, troop mobilization, and acceptance of international assistance in the wake of the 2011 Great East Japan Earthquake. A countermeasure office was quickly set up in the Prime Minister's office crisis management centre (Cabinet Office, Government of Japan, 2011). The National Police Agency had dispatched around 307,500 staff by 31 May 2011 and a total of 180,000 troops from the Japan Self-defence Force were sent to rescue or provide logistics (White paper, Cabinet Office of Japan, 2011). The Government also accepted international rescue teams from 28 countries including the US “Operation Tomotachi” navy team. As commented by Samuels (2012, p.33), “it is difficult to find many observers who were satisfied with the quality of Japanese leadership after the crisis”; equally it is difficult to deny the efforts they have made in terms of infrastructure rebuilding and funding support. The Reconstruction Agency was established in 2012 soon after the disaster. The Japanese government promptly made a reconstruction plan and allocated budgets of $250 billion for the first five years from 2011- 2015 and another $65 billion for the latter 5 years from 2016-2020 (Reconstruction Agency, 2012). Temporary houses were soon set up and the seawall re-building is in the reconstruction plan. Priority was given to infrastructure reconstruction, though whether government services are well linked to community’s needs is less certain and the seawall building has been a controversial issue. These studies have great value in identifying the important roles and the existing barriers of political leadership and administrative government for reconstruction, and the need for a collaborative mechanism.

International support

Considering the severity of the damage, especially the ensuing crisis of nuclear meltdown and contamination, it would appear that even Japan, a developed country, is incapable of singlehandedly coping with such a complex and critical situation. The disaster response and reconstruction require joint efforts both internally and externally. Japan did have international “friends in need” (Ames and Koguchi-Ames, as cited in Kingston, 2012, p.207) from Australia, New Zealand, South Korea, and the United States, including United States Force Japan, offering military disaster relief where needed. The latter was referred by the media as “Tomodachi Sakusenin” in Japanese, meaning "Operation Tomotachi"[1] or "Operation Friends" (Japan times, 2012 by Johnson). Self-reliance has been a proud hallmark of Japanese culture but it is also important to value cooperation and mechanisms of mutual assistance in dealing with global challenges (Ames and Koguchi-Ames, as cited in Kingston, 2012, p.217). Japanese have developed a quite strong mind-set of self-reliance and mutual aid in coping with disasters based on their traditional value of Kyojo (Mutual-aid), Jijyo (self-reliance). The decision to change from "resistance to acceptance" of foreign government support after the 1995 Kobe earthquake to requesting foreign assistance and calling for *kizuna* following the 2011 disasters, can be seen as a change, a symbol of international cooperation in facing shared challenges. As put by Ames and Koguchi-Ames (cited in Kingston, 2012, p.217), "the Tohoku disaster and operation Tomotachi demonstrate the value of cooperation and the need to nurture such mechanism of mutual assistance in preparing for the next disaster". This is particularly important in Japan where the nature hazards occur frequently to nurture such mechanism of mutual assistance. In total, Japan has received help from 163 countries and 43 international organizations following the disasters, within which 29 sent rescue teams and medical personnel during the first week of recovery (Samuels, 2013).

The on-going mutual assistance in disaster reconstruction (internally and internationally) can also be seen on numerous on-line websites and archives, created to generate and share the knowledge and experience of the reconstruction. For example, a website "Tasukeai Japan" was launched ten days after disaster to coordinate volunteer activities. The Digital Archive of Japan's 2011 Disasters (JDA) was developed by Harvard University in collaboration with many partner institutions. It stores a large collection of digital records relating to the 2011 disaster. In addition, many foundations or institutions, such as the Institute of Humanity Research on Catastrophic Disasters in Tokyo, and the Disaster Research Centre at Tohoku University, were set up after the disaster. A large number of photos relevant to the East Japan Earthquake have been collected and presented by the disaster locations via Yahoo Photo Archiving to remember and learn from this tragic event. These archives and research institutes offer an extensive collection of articles, photographs and stories from the disaster-affected community, the government, research institutions and volunteers, as well as various other organizations, which could offer a panoramic picture of how different organizations make efforts to support disaster recovery.

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[1] https://www.japantimes.co.jp/news/2012/03/03/national/operation-tomodachi-a-huge-success-but-was-it-a-one-off/#.W6d7AmhKiUk

But there are very few systematic works that shed light on how the affected communities acted in order to rebuild from within, in particular looking at the role of community leaders in disaster recovery and the community-based coping strategies implemented.

Civil society-Volunteer Fire Corps (VFS), Non-Profit Organisations (NPOs), and Neighbourhood Associations (NAs)

The civil society is defined as "non-state, non-market sector that exists above the family and individual…including non-profit organizations as well as community groups like neighbourhood associations and volunteer fire fighting groups" (Yuko, Pekkanen and Yutaka, as cited in Kingston, 2012, p.79). Japan's civil society played an important role after the disasters by enhancing collaboration. Indeed, "The vitality of Japan's local civil society group mitigated the painful effects of the triple disasters" (Yuko et al, as cited in Kingston, 2012, p.79). In particular, neighbourhood associations and volunteer fire fighting groups had played a vital role in terms of disaster preparedness and response in a crisis situation. Earlier research by Aldrich (2008) shared similar views that strong civil society can facilitate quicker disaster recovery arguing that trust and connectivity among community members are important factors that make them to stay and rebuild their community. The contribution of civil society can also be seen from their response to the Fukushima nuclear crisis. The anti-nuclear activists launched a "10 Million People's Action to say Goodbye to Nuclear Power Plants" Rally (http://sayonara-nukes.org/english/) to protest against government policy on the energy safety issue and call on Government to abandon nuclear power plants. Nuclear accidents stimulated the anger of people, especially those who had been displaced due to the nuclear fallout. The petition and parade comprising large groups of people indicates a great change, a change from an image of the Japanese who are unwilling to criticize their own Government to an image of actively challenging authority. As commented by Aldrich (2013), after the nuclear accident, the previously relatively stable relation between civil society and government had changed. Politicians' indeterminacy and manipulation around the nuclear policy has had a huge impact on community trust in the government and has led to doubts about the "safety myth" proclaimed by politicians (Aldrich, 2013, p.263). The nuclear accident in Fukushima reinforced the anti-nuclear activist groups and strengthened the cohesive force of Japan's civil society.

The neighbourhood associations (Jichikai and Chonaikai in Japanese) and Volunteer Fire Corps (VFCs) are very common forms of Japan's civil society consisting of residents living within the same area, in town or housing complexes. Jichikai and Chonaikai are organized by local members with funding from local government subsidies and membership fees. They often hold activities like community cultural events, festivals, disaster prevention drills, information sharing and community safety and development activities (Nishide, 2006). These community organizations are not only encouraged to engage with social, and community activities such as disaster preparedness and response to strengthen coordination, but also function as a bridge to negotiate the needs of the community are met by local government's service (Yuko et al, as cited in Kingston, 2012). In a crisis situation, Jichikai and Chonakai can be quickly organized and formed into a supporting team to handle the situation together.

In Japan, VFCs (Syobodan in Japanese) are another important form of civil society. The numbers of volunteer fire fighters is much greater than the numbers of career fire fighters and are distributed through cities, towns and villages. The majority of them are male, but in recent years this is becoming more diverse including women and salaryman (Japanese サラリーマン, Sararīman, salaried man, often refers to those whose income is salary-based, and often work in a corporation. In some context, it refers to Japanese white-collar male workers.) The stereotypical salaryman is expected to commit to long hours of work in the corporation and less likely to have time be a volunteer fire fighter for the community. Members or the VFCs are given the status of special public officials of the municipality and need to regularly undertake training such as rescue training, training for dealing with large numbers of casualties to ensure they have the skills to respond to disaster in line with the Fire and Disaster Management Agency guidelines (https://www.fdma.go.jp/en/). Their role involves firefighting, maintaining community safety, running fire drills, raising public awareness of fire risk as well as organizing community events (Haddad, 2010). These activities are particularly important in rural areas where the issue of depopulation of younger citizens leaving an aging population makes dealing with disasters in these areas more challenging. In the aftermath of the 2011 disasters, the VFCs were highly praised for their contribution in terms of checking the safety of residents, confirming the number of deaths, looking for the missing, and implementing rescue operations (Yuko et al, as cited in Kingston, 2012, p.79). Some of them had lost their own family members but soon joined the rescue team to help others. Their immediate response to disaster saved a lot of lives when the government was unable to response immediately.

Volunteering and NPO efforts are also active forces for disaster recovery. In the Kobe earthquake (1995), over 1.2 million volunteers participated in relief activities within the first 3 months (Sazanami, 1998). Many scholars recognize the potential of volunteers' roles as a link to bridge the gap between government services and the needs of the people during disaster recovery (Yusui, 2007; Sazanami, 1998; Takayose, 1999), but also highlight possible challenges. For example, if there is no coordination mechanism among the volunteers, local government, and other NPOs then their role is less effective (Yuko et al, as cited by Kingston, 2012) and the large number of volunteers visiting the affected areas could add more complexity to the situation. Many NPOs have learned from past experience and have developed their expertise to work in a coordinated fashion with local government to arrange the movement of volunteers to affected areas. For some this is perceived as strengths of Japanese civil society, yet others argue that too much unnecessary bureaucratic rules or Japanese volunteer culture could hinder the purity of volunteering as participation in the civil society is commodified and packaged (McMorran, 2017). Such debates and experiences of volunteer support have been valuable for Tohoku's reconstruction planning and decision-making. For example, Avenell (2012) compares the differences in the post-disaster voluntary response in Kobe and the Tohoku earthquake at different levels - from national government, quasi-governmental groups, business groups and civil groups and networks in Tohoku. He identified that the volunteer response in Tohoku was more structured and systematized than in Kobe, which was considered less integrated and collaborative. He also shows his concern about whether institutional volunteerism would become a trend for future volunteerism in Japan and the potential risk of systematic volunteering, which might hinder the volunteers' "individual spontaneity"(Avenell, 2012, p.71). His comparison of the two disasters in terms of volunteering might draw on the valuable experiences from Kobe earthquake for reconstructing Tohoku, but his analysis mainly focuses on the volunteering efforts from outside stricken areas, such as the government, quasi-government, business and NGO and NPO groups - through such means as donation, distribution of financial aid, material relief and a reconstruction plan for post disaster recovery, etc. Many news media also gave very high coverage of the NPOs' coordinated efforts in terms of preparing volunteers to visit Tohoku, delivering the relief resources, and implementing their rebuilding efforts. In many discussions, the voices of those living in the stricken areas are almost "absent"; we are yet to learn how they themselves made efforts to rebuild their community. If local voices are not heard, the continued reconstruction efforts from the outside might not meet local needs, or may even impede the recovery.

We have seen the massive impact of disaster on the physical and social environment and the recovery assistance from government, international teams, civil society, private sectors and business organizations. There is no doubt that all this assistance is of critical importance to rebuilding physical infrastructure but a lot of these discussions focus on physical and economic support and tend to be short-term. Two questions remain crucial: What are the community's long-term recovery strategies? And will these communities be ***resilient*** enough if there is another disaster in Japan in the future?

An important body of literature that attempts to address these questions argues that social capital is more important in disaster recovery than the physical infrastructure as it is able to help to build resilience and community cohesion (e.g. Aldrich, 2012; 2015; 2017; Cox and Perry, 2011; Olcott and Oliver 2014).

Chapter Four: The role of social capital and leadership in disaster recovery

4.1. Introduction to literature review

This chapter explores, in more detail, the role of social capital in disaster recovery. In particular it explores how social capital is enacted at different levels including the community level and how it contributes to enhancing community resilience to help “bouncing forward” to a new, improved state, rather than “bouncing back” to the original state.

The review starts with a definition of resilience and social capital, then moves on to review the role of different types of social capital for disaster resilience. It is followed by a discussion of existing community disaster practice, Machizukuri (Community building/making) to foreground how social capital operates in the context under study. An important role in how social capital operated is played by community leaders who through a distributed form of leadership could create an environment that supports social innovation and enables creative tourism development strategies for disaster recovery.

4.2. Social capital and community disaster resilience

4.2.1. Disaster resilience

The term “resilience” stems from resilire, resilio (Alexander, 2013; Klein, Nicholis and Thomalla, 2003), hence the ideas of “bouncing back” (Manyena et al., 2011) though others claim that it originates in ecology, with most contemporary definitions of resilience finding their roots in Holling’s work from 1973 (Berkes and Ross, 2013; Djalate et al, 2011; Meyer, 2013). This indicates the ongoing evolvement of contextual meaning of resilience. For example, Holling’s (1973) ideas of resilience as capacity rather than outcome; as adaptability rather than stability have been extended to other fields such as psychology (Bronfenbrenner, 2004; Bonanno, 2004; and Ross, 2013), sociology and human geography (Tobin, 1999; Adger, 2000) and disaster research (Bruneau et al, 2003; Manyena, 2006; 2009; Manyena et al., 2011). The conceptualization of disaster resilience is also varied. Some scholars argue that disaster resilience should be viewed as the ability to “bounce forward”, rather than just “bounce back” to the original state after disaster (Manyena, 2009; Manyena et al., 2011), while King, Bosher and Kayaga (2013) claim that “adaptive resilience” should be applied and developed by the international community in urban contexts, capitalizing on the existing local resources and capacity. Other terms like “transformative resilience” (Shaw and Maythorne, 2013) convey similar ideas. The essence of these discussions posits that the change should be acknowledged and embedded in the rebuilding efforts to achieve the aim of “building back better” (Clinton, 2006; Mannakkara and Wilkinson, 2012; Fan, 2013, Kennedy et al, 2008; Alexander, 2006; Lloyed-Jones, 2007). These discussions suggest that change is central to the efforts of enhancing disaster resilience. Consequently, community disaster resilience can be described as the community as a whole that includes community members, business organizations, government and non-government organizations and other institutions working collaboratively and developing the capacity of building back better after a disaster.

However, some critics seem sceptical of the resilience discourse. O'Hare and White (2013) argue that there is considerable discrepancy between the concept of resilience and its practice. As the interpretation of resilience differs over time and is also contextual and processual, planning policy makers and practitioners find it hard to adopt theories of resilience from the literature. Similarly, Gillard (2016) is concerned about the ambiguity of resilience and the inability of communities to address existing theory-practice disconnections, to challenge policies and be able to bridge the hierarchical power relation to accentuate social change.

Such concerns appear to be related to the issues regarding the interaction between multi-stakeholders including government and the local community, policy makers and practitioners. This begs the question of what can be put to work in order to enhance community resilience.

4.2.2. Definition: Social capital

Although there is no clear undisputed definition of social capital, the existing literature regards it as a very important resource to enhance community resilience (Aldrich, 2012; Meyer, 2013; Hawkins and Maurer, 2010; Adger, 2003; Nakagawa and Shaw, 2004; Ritchie, 2012; Murphy, 2007). Bourdieu (1985, p.248) classed social capital as one of the four forms of capital (social, economic, cultural and symbolic), defining it as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition”. These different forms of capital could be influenced and transferred from one form to the other for the benefit of certain groups. His definition takes a pessimistic view of social capital, seeing it as a source of inequality depending on the people you know and the size of social capital of your networks. This may explain how the dominant classes retain their position, as social capital can be used as a device to exclude others and create inequality in society. However, Coleman’s (1988) view is quite different from Bourdieu’s, seeing social capital as a potential for public good, highlighting the benefits not only for the elite but also for marginalized groups and the powerless, offering the potential to provide a solution for social inequality. He argues that the closure of social structure is useful in certain situations, as the very elements of social capital such as trust, norms, and networking function better within closed social structures. However, as social ties are weakening and society is becoming less close-knit, it is much harder to mobile social capital to achieve the public good.

For Putnam (1995, p67) social capital refers to “features of social organizations, such as networks, norms and trust that facilitate action and cooperation for mutual benefit”. For him, social capital is a collective feature of larger groups, functioning at a collective level, rather than individuals and small groups. He laments the decline of social capital in the United States such as the voting rates, civil participation, social trust, networking and emphasizes that elements of strong social capital (e.g. trustworthiness, norm, networks) can be a tool to “diagnose” the political and social health of a society (Putnam, 2001). Though the definition of social capital has been ambiguous and disputable, we can see the relationship between aspects of social capital (e.g. trust, obligation, norm, and networking) and the well-functioning of society are important. In disaster settings in particular, where there is time pressure and resource constraints, these social resources can be utilized in a way that enhances community recovery. Therefore, government, policy makers and other stakeholders should take these into consideration and strengthen community-based social infrastructures to increase disaster resilience (Aldrich and Meyer, 2015).

4.2.3. The roles of different types of social capital in disaster resilience

Social capital can be categorized as bonding social capital, bridging social capital and linking social capital (Szreter and Woolcock, 2004; Kawachi, Kim, Coutts and Subramanian, 2004; Aldrich, 2012). The boundaries between these types are rather fluid but for heuristical purposes we will treat them as separate entities. Aldrich (2012) defines social capital as the “resource available through bonding, bridging and linking social networks along with the norms and information transmitted through those connections” (2012, p.33), which is the key to facilitating disaster recovery. This is evidenced by community practice in disaster recovery revealed in four case studies conducted by Aldrich (2012), including the Tokyo earthquake of 1923, Kobe earthquake of 1995, and Indian Ocean tsunami of 2004 and Hurricane Katrina of 2005 in the U.S. to advocate the effectiveness of social capital in disaster recovery. My PhD goes a step further in illustrating the social capital could played a significant role not only in efforts of disaster recovery but towards building disaster resilience in Minami-Sanriku.

Bonding social capital and disaster resilience

Bonding social capital is the most common type of social network that is characterized by close connections within homogeneous groups within certain boundaries: i.e., bonds between family members, close friends, neighbours and community members. The positive elements of bonding social capital for disaster resilience can be easily found within the literature. Cox and Perry (2011) examine two communities affected by McClure Fire in British Columbia, discussing the role of place and social capital in community resilience. They claim that place serves not only as an orientating framework but also as ground where bonding social capital and community resilience are built. Without it, the place is like a fish out of water (Cox and Perry, 2011), so when engaging with community resilience, the dynamic of context and culture of the affected community need to be considered. Ritchie (2012) also highlights the importance of social capital because individual stresses and collective trauma caused by disaster can affect the capability of individuals and communities to generate social capital. The author argues that during the recovery process, investment should not only be given to financial and human capital but also for social capital development to ensure that social networks, associations and trust are maintained (Ritchie, 2012). By contrast, Tse, Wei and Wang (2013), provide evidence that a high level of bonding social capital can facilitate recovery. Their paper examines the relationship between social capital and disaster recovery after the 2008 Sichuan earthquake and finds that those with close family ties did better in house rebuilding than those without. They also found that those who were part of a community network, in this case were part of the 2008 Spring Festival Planning Network, were able to draw on the larger networks and receive support from more people. Aldrich (2008), who investigated the factors that may promote a quick recovery, concluded that a community with deeper social networks would be more likely to collaborate in rebuilding their neighbourhood. This is because the connectedness of community members and networks could help preserve their culture and history and transform the individuals into a powerful integrated group to make their voice heard (Amorim, 2009). These informal ties especially neighbour and family ties served as actual first responders during a disaster (Aldrich, 2012; Horwich 2000, Shaw and Goda, 2004; Garrison and Sasser, 2009, Hurlbert et al, 2000, Meyer, 2013) and are most commonly available social resource (Aldrich and Meyer, 2015) for disaster resilience.

Bridging social capital in disaster resiliencecoat

Another type of social capital "bridging social capital" refers to the social groups or networks which bring together members that are different in some ways in terms of socio-economic status, race and education levels (Szreter and Woolcock, 2004). "It is a loose, open, horizontal and crosscutting connection between and among diverse people and groups" (Nishide, 2006, p.9). This type of social capital can connect diverse parties to provide and share information and get access to resources that can help disaster recovery. Research by Chamlee-Wright and Storr (2009) illustrate how both bonding social capital and bridging social capital operated during disaster recovery through the case of Hurricane Katrina. In this case study, bonding social capital is evidenced by the fact that villages with tight relationships rebuilt quicker while bridging social capital is exemplified by how the religious organizations played a crucial role in deploying social networks and bringing external sources to meet the challenges of Hurricane Katrina. This is supported by research conducted by Airriess et al (2008) that found that church-based social capital and networks proved to be useful for bonding and bridging social capital and networks beyond the geographical location. A more recent study by Fisker-Nielsen's (2012) in East Japan Earthquake of 2011 also suggested that religious organizations rooted in communities were most active at providing immediate assistance at the grassroots level, and even that the victims themselves worked as volunteers and joined the social groups to help disaster recovery when inadequate national leadership hampered the recovery process. These diverse groups have the potential of providing the professionalism, knowledge and resources across sectors, which are critical for disaster resilience.

Many other scholars also point out the important role of social capital in disaster response and recovery (Elliott et al, 2010; Hawkins and Maurer, 2010; Chamlee-Wright, 2011; Aldrich, 2012). For example, Munashinghe (2007) highlights the importance of social capital through a comparative study of the 2004 Tsunami in Sri Lanka and the 2005 Hurricane Katrina in New Orleans, while Ritchie (2012), points out the relationship between social capital and chronic individual stress and collective trauma following the Exxon Valdez Oil Spill, arguing that decreasing social capital can deteriorate the situation and increase individuals' traumatic experience thus highlighting that enhancing social capital is as equally important as investment in economic and human capital. Similarly, research by Olcott and Oliver (2014) examining the role of social capital, through the empirical study of five disaster-affected companies after 2011 earthquake, suggests that these companies were able to bounce back quickly by drawing on resources from across their networks and mobilizing their resources for production restoration, thus suggesting the core principle should be applied more widely for recovery. In a similar vein, Amorim’s research (2009) demonstrates the power of collective forces by investigating the displacement and resettlement of residents in Jaguarbara and their resistance against the construction of a dam. The findings suggest that when individual efforts changed into an integrated group effort, it became a more powerful force to articulate their interests and needs. This echoes with research by Aldrich and Sawada (2015) that shows the strength of social ties and the level of political support greatly improve mortality and survival rates during disaster.

More evidence of bridging social capital can be traced back to the Kobe earthquake in 1995, when over 1.2 million volunteers participated in relief activities within the first three months after the disaster (Sazanami, 1998). Such volunteer support was invaluable for Tohoku’s reconstruction planning as volunteers provided a link between the government services and the community needs (Yasui, 2007; Sazanami, 1998; Takayose, 1999). Following the 2011 disaster in Japan, many foundations or institutions, volunteer groups, non-profit organizations were set up and became active social capital for disaster recovery. Examples include the Disaster Research Centre in Tohoku University, the Minami-Sanriku Volunteer Centre, and the Tsunagari Non-Profit Organization etc. These diverse social groups comprising volunteers from outside the area and volunteers from within the disaster affected areas (who they themselves were victims of the disaster) were able to exchange information and ensure that the needs for community recovery were fulfilled. Universities also made great efforts working with local communities to help with the disaster recovery (which can be seen as evidence of bridging social capital) by providing professional knowledge and resources across sectors. For example, Keio University launched a “Minami-Sanriku Support Project”, in which students and faculty worked together with local communities to address the communities’ needs. The Keio University Hospital dispatched nine Medical Assistance Teams to the disaster-affected communities and offered timely medical assistance while Tohoku University was involved in the disaster victim identification project using dental record techniques (Aoki and Ito, 2014). The efforts of all these players were a key part of bonding and bridging social capital, and thus played a crucial role in ensuring disaster resilience. However, there are limitations in these studies, as they do not ask how these strategies were informed and developed on the ground as a way of coping and rebuilding.

Linking social capital

Linking social capital refers to vertical, hierarchical connections between individuals and social groups in different power positions (Nishide, 2006). This connection can have the greatest influence but is also the most challenging to generate. Despite the efforts made by government, there is still a lot of criticism of government service not matching the community’s needs. Research from past disasters has emphasized that there still remains “a missing link in disaster recovery: social capital” (Nakagawa and Shaw, 2004). This is critically important in terms of establishing the link and dialogue between government and other official parties on the one hand and the affected communities, on the others in any rebuilding process to ensure that communities can reflect their needs (Olshansky, Johnson and Topping 2006; Healey, 2009; Olcott and Oliver, 2014; Nakagawa and Shaw, 2004). These studies shed light on the effectiveness of social capital in building community disaster resilience but do not show how each type of social capital influences and interacts with each other in the process of disaster recovery.

4.2.4. Is Kizuna (bond, connection) a new form of social capital?

The term, Kizuna means bond or connection in Japanese. It flooded the post-disaster broadcast media as a "metaphor for social solidarity" (Samuels, 2013, p.43) and "new forms of social capital" [2](Slater, 2012) following the disaster. It topped the annual public poll, conducted by Japan's Kanji Aptitude Testing Foundation, as the Kanji of the Year to best represent the characteristics of the year, which highlighted the human bonds and support that followed the 3.11 disaster (BBC News, 2011)[3]. The term Kizuna can be found repeatedly in official government speeches, public places, as a marketing slogan, on printed T-shirts, souvenirs, project titles, pamphlets of NGO and company names. It was also mentioned repeatedly by participants in my interviews from Minami-Sanriku. There are however some criticisms regarding the overuse of Kizuna, with critics arguing that 3.11 only reveals that Japanese society lacks solidarity (Azuma, 2011) longing for political change for a better world (Morris-Suzuki, 2017).

Kizuna: social solidarity or social exclusion?

Kizuna has been widely accepted as a positive term that represents "solidarity" in post 3.11 disaster, becoming part of the collective discourse for disaster recovery, for a number of reasons. Firstly, the concept was already popular prior to the disaster, for example, on 29th January 2011, the then-Prime Minister, Naoto Kan delivered a speech at the World Economic Forum in Davos entitled "Opening Japan and Reinventing Kizuna" [4](Prime Minister and his Cabinet official website, 2011). He again used the term to officially express his gratitude for international support after the 3.11 disaster in a speech entitled "*Kizuna*: the bonds of friendship" (Prime Minister and his cabinet official website, 2011), which was disseminated via the media around the world and had a wide impact on the public and enhanced the image of the Japanese to the world.

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[2] Kizuna: New forms of social capital https://www.youtube.com/watch?v=5Q8wZm8Na_c

[3] Japanese public chooses 'kizuna' as kanji of 2011. https://www.bbc.co.uk/news/world-asia-16321999

[4] Prime Minister Kan Calls for "Opening Japan and Reinventing KIZUNA" in Davos. https://www.mofa.go.jp/policy/economy/wef/2010/overview.html

Secondly, its vague meaning can be a very convenient and safe term to use in government discourse. Tokita (2015) pointed out that the concept is useful for Japanese authorities, who wish to unite all Japanese to reconstruct and divert their attention from social issues. *Kizuna* was reinvented as part of Japanese identity to "make it seem as though prioritising national goals is part of the natural disposition of a Japanese citizen" (Tokita, 2015, p.2).

Thirdly, the term was internationally adopted on several occasions which legitimated its use as public discourse. For example, it has been adopted by UNESCO for a campaign in 2011 (Kizuna: a message of hope for Japan's school children) where school children around the world were asked to write a message of hope on a postcard for the disaster-affected school children in Japan as an act of solidarity (UNESCO, 2011). In addition, when Japan's women national football team, Nadeshiko Japan, won the 2011 FIFA Women's World Cup, they also attributed their success to *Kizuna* - their bonding as a team. Furthermore, many international *Kizuna* projects were launched after 3.11. For example, *Kizuna* Project (The Youth-Exchange Project with Asia-Oceania and North America) was launched by the Japanese government to enhance understanding of the Japanese disaster recovery efforts by other countries (Japan International cooperation centre, 2012). The Japan Foundation conducts the "*Kizuna* (bond) Project (USA)", "Japan-EU *Kizuna* Project", a youth exchange project between Japan and other countries as a part of programs to support Japan's recovery from the 2011 disaster (Japan Foundation Centre for Global Partnership, 2012)[5]

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[5] http://www.jpf.go.jp/cgp/e/archive/archive_promotion.html#anc_cate1_2

The disaster context has served as a warning to remind Japanese people of the importance of their social bonds and the need of *Kizuna* as some research have shown that their values changed after the disaster (e.g. Uchida, Takahashi, and Kawahara, 2014). Some people have realized the loss of *Kizuna* in a real sense in contemporary Japanese society and have started to value again the bonds/connections among family members, communities and countries in the world after the devastated disasters (Uchida, Takahashi, and Kawahara, 2014)

In addition, Kizuna in the disaster context was frequently used to rally support, strengthening existing bonds and working collaboratively to overcome difficulty, which fitted with the public image of Japan by matching Japanese culture such as collectivism, group action and mutual help (kyojo in Japanese). Media further enhanced the public image of the Japanese as the progress of the disaster situations was reported almost in real-time. Various stories about disaster-affected people, their strong bonds of community, their mutual support (kyojo) flooded the news and media, and this helped to stimulate public empathy /resonance associated with *Kizuna* or other similar Japanese terms such as Tsunagari (connection in Japanese) , and popularized its usage. However, some scholars have been more sceptical about the *Kizuna*, in particular, in the case of the Fukusima Nuclear issues, when the Mayor of Minami-Soma called for saving Minmi-saoma in a Youtube video showing that the city lacked supplies and the community was left isolated and starving, which shocked the world. This was criticized as a case of social isolation and exclusion, distrust between government and citizens, rather than *Kizuna*. As the post disaster reconstruction is very complex, it is hard to pin down the dynamics of *Kizuna* within different contexts. However, the combined reasons mentioned above might indicate why it has been recognised as a

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positive term that represents “solidarity” in post 3.11 disasters and has become part of the collective discourse for disaster recovery. It can be understood as a form of social capital in its general meaning, reflecting government’ attempt to mobilize the public and promote the *Kizuna* (social connection) as a “metaphor for social solidarity” (Samuels, 2013, p.43) for disaster recovery in its reconstruction rhetoric.

4.2.5. Limitations of social capital

Whilst social capital can have many positive effects, negative outcomes have also been recorded (e.g. Portes, 2014; Aldrich and Crook, 2008; 2013; Ganapati, 2013), with Aldrich and Meyer (2015, p.9) claiming there is a “potential dark side from strong in-group cohesion”. Aldrich (2011) conducted research in India after the 2004 Indian Ocean tsunami suggesting that the high level of social capital reduced the barriers for the collective action for certain groups but at the same time it had negative effects for other groups such as women, migrants and Muslims. Aldrich’s earlier research (2008) also suggests that social capital is not always “public good”, that some collectives of civil society can work together to mobilize social capital against others as seen after Hurricane Katrina when some communities blocked the development of trailer parks in people’s backyards and blocked the construction of temporary housing because they wanted a different solution to the housing crisis. Similarly, Hero (2003) argued that social capital is easier to foster within homogenous communities, but might not be easy to reconcile in communities characterized by cultural and ethnic diversity, thus potentially producing worse outcomes for racial minorities.

The literature highlights positive practices of bonding and bridging social capital but how these are to be re-activated when the existing social capital is disrupted by disasters is not always clear. In terms of linking social capital, it is also less certain whether communities or individuals are able to alter the social mechanisms, bridge the power relations in order to put into action *linking social capital.* Some studies suggest that facilitating community-based planning and bringing the residents to the forefront of the decision making process are critical for disaster recovery (e.g. Aldrich, 2012). These processes take place not in a void but in particular socio-cultural contexts defined by certain norms and place based practices. In the next section, I explore one such practice: Machiazukuri, which is central to how social capital operates in Japan.

4.3. Machizukuri (community building/ making) in disaster situations

As Japan is naturally a disaster-prone country, community-based disaster resilience is not a new concept within Japanese disaster management culture. The concept of machizukuri (community building) in Japan indicates the need for a collective mindset within the community to make decisions and to make plans for their communities. The word machizukuri, literally means community building/ making (Watanabe, 2016) and was coined in 1960 as a way of interaction between civil society and formal planning institutions with the aim of addressing the "negative environmental and social consequences of rapid economic growth and the centralised control of the development associated with that growth" (Woodend, 2013, p.9). However, Japan is perceived as a country with the culture of high social hierarchy and collectivism, and as such it is likely to have high levels of bonding social capital and low levels of linking social capital. This calls into question how well community's needs can be communicated to those in power and whether community-based planning can inform government service to enhance disaster recovery.

Machizukuri, as a Japanese model of community planning (Healty, 2009), has been practiced in Japan for many decades but the knowledge of this concept has not been widely shared to non-Japanese due to the limited publication of works in English, so it is worthwhile to explore what the Japanese machizukuri experience (Woodend, 2013) could offer. Sorensen’s (2007) research provides useful insights into the development of Machizukuri as a long-term process of change and institutional innovation. It refers to change of power dynamics between civil society and the institutional system in the process of managing shared spaces. Sorensen’s (2007) research shows that the roots of machizukuri can be traced back to 1960s but have not widely applied until the1990s due to the difficulty of changing the power dynamics between civil society and formal institutions in the decision-making process. The author unpacks why the change to a more inclusive governance has been so slow by introducing the governance process through a historical institutionalist approach to show its evolution from pre-world institutions of urban governance, to the post-war development of machizukuri. This provides a better understanding of how the change of place governance has been made, structured and developed. In this sense, the development of machizukuri is about working towards an increasing role of civil society in community building. The positive role of civil society for community planning is also shown in the work conducted in the city of Kobe by Healey (2009), who explores how residents’ initiatives can interact and influence urban planning practices to shape and develop the neighbourhood management capacity. The findings show positive results and demonstrate the important role civil society can play in city planning. The author argues that valuable input can be contributed by residents, academics and professional city planners offering different perspectives on issues such as creating a plan, making decisions on how the land is to be used and developed, and issues of resource mobilizing etc. The research highlights the benefits of integration of urban planning (government-oriented) with machizukuri (citizen participation) for planning activities. Similarly, Hein (2002) examines both city planning and community initiatives in three cities reconstructed after the Kobe earthquake, suggesting that Toshikeikaku (urban planning which is often government-led) and machizukuri (community building) should be integrated for future planning activities via further decentralization and strengthening of community activities, social networks and working together with consultants and citizens, architects and planners. Both Hein (2002) and Healey (2009) emphasize integration of both ways of planning and collaboration among the different stakeholders.

Evans (2002) seems more sceptical about the effectiveness of machizukuri, providing two case studies of machizukuri (community-based planning/ community building) of Kobe, Japan, by highlighting that the results from the two cases are different. One case shows that the concept of machizukuri (community-based planning) works well while the other case indicates that the concept of community-based planning was executed in a top-down fashion and involved little change from traditional practice. From the results we cannot simply conclude whether or not machizukuri works in Japan. As such, Evans questions whether machizukuri as a new paradigm in Japanese urban planning is “reality or myth” (2002, p.443). By contrast, Okada, Fang and Kilgour (2013) have assessed three approaches to disaster management: “Jiishu-boai-soshiki; Machiaukuri; toshikeikaku” (meaning self-support disaster reduction association; citizen-led town-creation; government-led urban or city planning, respectively), which are developed from three Japanese concepts of disaster planning and management: “Jojo; Kyojo; Kojo” (meaning individual/household self-reliance; neighbourhood or community self-reliance; government assistance). The findings from this research suggest that community-based decision-making is effective in both models of Jiishu-boai-soshiki; Machiaukuri aligns with the Toshikeikaku model to reach group decisions and negotiate for disaster responses and reconstruction, thereby enhancing the community’s disaster resilience. These findings are consistent with Ireni-Saban’s findings (2013), who evaluates an alternative model of disaster management – one that emphasizes the interactive community-based resilience, increases local communities' capacities and collaboration in handling crisis situations, rather than focusing on a top-down 'traditional' approach. This view is shared by Murakami and Wood's research (2014) - which advocates planning innovation and citizen-oriented planning and sees the government-led city planning as being inflexible to local needs. Theoretically, their discussion of Japanese machizukuri (community-based /neighbourhood planning) is ideal in terms of meeting the community's needs, pointing at the potential of moving toward a more decentralized, bottom up fashion, but this is not without its challenges. Although social capital or machizukuri (community building or community-based planning) in general have been widely researched, there is limited empirical research exploring how they interact with the view to understand how the social capital is enacted in the machizukuri practice.

The top-down tradition, however, is not easy to challenge in a culture so characterized by high social hierarchy. Top-down local governance mechanisms still dominate in Japan (Sorensen and Funck, 2009), a country which "does not right now have a culture or set of institutional arrangements to be able to realise a bottom-up reconstruction process" (Matanle, 2011 p.841). To transform the structure and principles of national and local governance to a bottom-up model, implementing community involvement, requires cultural shifts as well as confrontation; it is essentially a process of institutional evolution (Matanle, 2011, p.841). This transformation has been slow, and takes time. The devastating disasters in Tohoku might be an opportunity for those involved to hasten this transformation, "an opportunity to have a springboard to build a new Japan." (Ilie, 2011, p.5). Similar discourses of using this disaster as an opportunity to re-make the nation have also been discussed by Samuels' (2013) who explores the disasters' impact on Japanese government and society, rekindling the debates over government reform and the role of leadership in response to disaster and in enabling positive change.

4.4. Leadership in disaster recovery

Many scholars argue that effective leadership practice is critical to disaster recovery (e.g. Muskat, Nakanishi, Blackman, 2013) and leaders' reaction to a disaster can turn them into "a James Bond-like hero or a villain" (Nezaki, 2011, p22). The critique of the ineffectiveness of government and political leadership for reconstruction can be found in many studies (e.g. Samuels, 2013; Hayashi, 2012; Matsumura, 2011). For example, research by Hayashi (2012) compared two large-scale Japanese earthquakes in Kobe and Tohoku from the perspective of economic reconstruction efforts. The research highlights three differences in terms of political leadership, the administrative central/local government nexus and the intellectual community's cooperation for post disaster reconstruction, and identifies the problems encountered due to the government's inability to promptly respond to the Tohoku crisis. Meanwhile, Matsumura (2011, p.23) offers similar criticism - that the "Kan administrative government failed to exercise strong leadership in managing the crisis", and calls for strong and decisive leadership to generate swift reconstruction and a long-term plan for development. By contrast, Samuels (2013) reveals differing opinions on post-disaster Japanese politics, and provides a detailed account of controversial debates over local government reform – decentralization, local autonomy and regionalization, and gives a scholarly assessment of the Tohoku disasters' impact on Japan's government and society, on national security and energy policy. Other research sheds light on government-led recovery in terms of its inflexibility to meet local needs (Murakami and Wood, 2014) and the government's dilemma in balancing duties, responsibilities and financial conditions (Erber and Schrooten, 2011). All these examples have great value in identifying the important role and the existing barriers of political leadership and administrative government for reconstruction, but provide very little understanding of the paramount role played by the communities themselves in supporting recovery and how community leadership emerges and its role during disaster recovery.

The concept of community leader is not a tightly defined notion (e.g. Sullivan, 2007). Community leader can refer to those who are appointed to play a role in the local community or local government, which is often perceived as positional leader, but it can also refer to those who are non-elected, with no tittle and position, but are very influential in the local community. The research on community leadership spans many disciplines such as local government (Sullivan, Downe, Entwistle, and Sweeting, (2006); Dhillon and Randle, 2005), disaster management (Leadbeater, 2013; Nakagawa and Shaw, 2004; Lin, Kelemen, Kiyomiya, 2017), and education (Riley, 2012). Sometimes community leadership is referred to in general terms, and the line between formal community leaders and informal ones is blurred. For example, the importance of community leadership was emphasized in the New Local Government Network Summit Report (2005) which defines the role of community leadership as representing local communities, engaging those communities and helping in the building of social capital, while influencing a wider set of services (Dhillon and Randle, 2005) and promoting a greater capacity to link government services with communities' needs. Here the idea of local government as community leader is presented as a symbol of shifting power from central to local and, to varying degrees, local authorities have performed the role of community leaders.

Although the role of community leadership in disaster recovery is critically important and community leaders could be important figures in transforming the situation and linking people across hierarchies, this concept is less explored in existing literature. Only a few researchers have shown an interest in this area. For example, Leadbeater (2013, p46) conducts a case study in the community of Strathewen, Vitoria after the Victorian bush fires suggesting that the locally-endorsed community leaders were critical in shaping and driving the community recovery. The research reinforces the community capacity in enhancing community recovery and suggests it is important to enhance community resilience by acknowledging the community's existing social cultural values, network, knowledge, rather than imposing the "fit for all" model of recovery. A more recent study by Lin, Kelemen and Kiyomiya (2017) explores the role of 'active leadership' in disaster recovery from a project management perspective, highlighting the positive role of community leadership in managing stakeholders, understanding the socio-cultural context and ultimately the success of the recovery project. Both cases show the important role of community leadership, after all, community leaders are insiders who live and know their own community well and have the potential of implementing machizukuri practice to meet their needs and enhance social capital and disaster recovery. A report produced by Orts and Spigonardo (2013) also discusses leadership in crisis and some key areas that are essential to leadership for future improvement, but their discussion of leadership is primarily focused on criticism of positional leaders, such as the leadership in the Kan government –rather than giving voice to those informal leaders emerging from affected communities.

Despite a lot of criticism in the literature of government-led efforts mentioned earlier, we cannot deny that administrative government at different levels, business sectors, volunteering groups, NGOs and the community themselves all make great efforts in the disaster response and recovery, especially in terms of handling disaster relief, infrastructure rebuilding and funding support. However, there remain problems in terms of linking government services to the community’s needs, which begs the question of how this fits with the on-going debates as to how to ‘build back better’. The concept advocates that the rebuilt community should not only be restored back to what existed previously but should be built better, stronger, and fairer than before. Since then, the concept of “build back better” has been advocated in many situations of reconstruction after disaster, and has quickly become an inspiration and guiding principle for recovery efforts. The post-disaster report by Clinton (2006) , the United Nations Secretary-General’s Special Envoy for Tsunami Recovery, captures key lessons learned from the 2004 Indian Ocean tsunami recovery, and includes ten propositions for ‘building back better’, emphasizing the joint efforts of government, NGOs and other multilateral agencies for disaster recovery. Meanwhile, many other scholars have suggested some principles or measures of “building back better” in their disaster recovery and reconstruction strategies (Alexander, 2006; Lloyed-Jones, 2007; Fan, 2013; Kennedy et al, 2008; Mannakkara and Wilkinson, 2012; Mannakkara, Wilkinson and Potangaroa, 2014).

Research from past disasters also emphasizes that there still remains “a missing link in disaster recovery” pointing out to the important relationship between community leaders and social capital in disaster recovery (Nakagawa and Shaw, 2004), particularly, in terms of establishing the link and dialogue between multi-parties and the affected communities in a rebuilding process in which communities can put forward their needs (Olshansky, Johnson and Topping, 2006; Healey, 2009; Olcott and Oliver, 2014; Nakagawa and Shaw, 2004). This is particularly significant for a culture that is characterized by indirect ambiguous expression and strong social hierarchy. With so many challenges and issues being raised during the process of reconstruction, could social innovation be one of the solutions for sustainable community recovery?

4.5. Social innovation and sustainable recovery

Social innovation has become a popular concept and has been widely used across disciplines. Existing discourses suggest that social innovation is essential in dealing with ever growing challenges such as environmental issues, health, employment, energy, resource scarcity etc. There is a general tendency to place great hopes in social innovation to find solutions for social problems though some scholars like Grimm et al (2013) have started to question whether social innovation can be the solution to all contemporary societal challenges. Nevertheless, policy makers may need to consider how to create an environment that is conducive to social innovation and to find ways in which social innovation can be integrated into policy making.

As a multi-disciplinary concept, it is hard to give social innovation an “agreed” definition. Mulgan, Tucker, Ali, and Sanders (2007, p.8) defines it as “new ideas that work in meeting social goals” while Mumford (2002, p.253) argues social innovation “is the generation and implementation of new ideas about how people should organize interpersonal activities or social interactions to meet one or more common goals”. Similarly, Phills, Deiglmeier and Miller (2008, p.36) define social innovation as “a novel solution to a social problem that is more effective, efficient, sustainable or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals”. These definitions show us that there are certain criteria that need to be met such as ‘new, social aspects’, though it is hard to reach consensus as Grimm et al (2013) pointed out, social innovation in different disciplines tends to place emphasis on different aspects of the concept.

For example, for scholars of environmental studies, social innovation is often used to highlight the complexity of global ecological problems while for social policy, it can refer to new forms of governance and hierarchies. Scholars from entrepreneurship organization studies or disaster management will have a different focus. However, there is a common division of social innovation into three categories including goal-oriented (Mulagan, 2006), process-oriented (Howaldt and Schwarz, 2010) and a combination of goal-oriented and process-oriented (Murray, Caulier-Grice and Mulgan, 2010). The first category explores social innovation as an outcome manifesting in the form of new products and services (Phills, Deiglmeier and Miller, 2008), the second category regards social innovation through organizational and social processes. In the third category, "the process is part of outcome and social innovation is an end in itself." (Grimm et al, 2013, p.438).

Arguably, Japan needs social innovation urgently, considering its existing social challenges (e.g. aging society, economic decline) and recent catastrophic disasters, along with facing controversial issues of seawall rebuilding or "just-run" strategy for life-saving and safety concerns around nuclear energy issues. In the aftermath of the 2011 triple disasters, in particular the nuclear crisis, the Chernobyl-level of energy safety issues and UN sustainable development goals became key debates worldwide, along with a number of other challenges the country is facing such as the difficulty of post-tsunami reconstruction, rural depopulation, and the decline of many primary industries. With the severity of destruction, rebuilding is urgent and complex, with many challenges ahead and with very limited resources, thus to "rebuild back better" will require some form of social innovation. In addition, being a disaster prone country, Japan needs social innovation to enhance community resilience such as the capacity of self-sufficiency, to reduce disaster impact and achieve the aim of "bouncing forward", rather than "bouncing back".

The Japanese government also places a great emphasis on innovation projects. For example, Fukushima Renewable Energy Institute (FREA) was established in 2014 to conduct research for renewable energy such as producing hydrogen from wind/solar power, hydrogen utilization etc (Japanese Science and Technology Agency, 2017). The Science and Technology Research Partnership for sustainable Development Program was set up to enhance international research cooperation in an attempt to address global issues and capacity development (Japanese Science and Technology Agency, 2017). Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted at the 3rd United Nations World Conference on Disaster Risk Reduction held in Sendai (2015). However, there is no consensus as to whether social innovation is a “Buzz word or enduring term” (Pol and Ville, 2009, p. 878).

The need for social innovation and the plan for social innovation projects do not necessarily ensure that social innovation is successfully implemented. There are many difficulties as pointed out by Li (2013) as the Japanese has a culture that respects rules and expects strict adherence to those rules. There are also old ways of thinking and bureaucratic political systems that could hinder social innovation. Even after disasters, the old ways of disaster restoration tend to be continued such as increasing taxes, rebuilding large infrastructure buildings (e.g. seawalls, sea dikes), collecting public opinions but with no intention of using the information, and adopting specialists’ suggestions only to validate their own ideas and interests (Li, 2013).

Many scholars have also discussed disaster as an opportunity to make changes and development (Fan, 2013; Birkmann et al, 2010; Archer and Boonyabancha, 2011; Thurairajah, Amaratunga and Haigh, 2008). However, for those with fewer resources, there is less opportunity to recover, so there is a need for more innovative ways of recovery by empowering them with tools and techniques and by enhancing their capacity to rebuild, rather than implementing the traditional way of restoring the lives by just giving disaster relief (Archer and Boonyabancha, 2011). Birkmann et al, (2010) argue that many studies focus on the impact of disaster and the relief operation, but the features of change and progress are largely ignored. They examined the changing process following the 2004 tsunami in SriLanka and Indonesia and suggested that the mega-disaster could potentially change people’s ways of thinking and acting. Their research indicates that if people realize there is a need to make a fundamental change of the relation between human beings and nature, this creates an opportunity to abandon old ideas and embrace new ones, which is one of the most important features of social innovation, yet one needs to understand what makes this change possible, in particular the promotion of more inclusive practices (Grimm et al, 2013) or more context-based strategies.

Renings (2000) argues that isolated top-down technological innovations cannot endure long-term development without considering the inter-relation with other actors and with nature. The technological disaster of the 2011 Fukushima Daiichi Nuclear Plant accident is a case in point. When government selected the location to build the nuclear power plants, they deliberately chose sites where civil society was weak (Aldrich, 2008) and less likely to be challenge their plans. On the contrary, others might place more emphasis on the bottom-up community-based solutions and local active engagement (Seyfang and Smith, 2007; Aldrich, 2012) and believe “social networks and processes themselves are important resources to anticipate change and to make societies more cohesive and resilient” (Grimm et al, 2013, p.440). These discussions provide great insights to understand the role of social innovation and its potentiality for sustainable recovery. If the 2011 Great East Japan Earthquake and Tsunami are taken as an opportunity or as a driving force for social innovation, it is important to think under what conditions the social innovation can be more successful, to address the issues and enhance community recovery and under what conditions ‘rebuilding back better' can be achieved. In particular, in a rural Japanese community, aging and depopulation are more serious than other areas. A great deal of projects were launched in an attempt to revitalize the Japanese rural communities (Takano, 2016; Ji and Fukamachi, 2016). Disaster tourism is a good example of a community bottom up social innovation aimed at revitalizing the community and 'building back better' by innovatively incorporating non-dark activities which concentrated on the beauty of nature, social and environmental sustainability and the development of an enriched tourist experience.

Chapter Five: Research Methodology[6]

5.1. Introduction

This chapter introduces the pragmatist philosophical assumptions which have influenced my research design, the subsequent selection of my research strategy and methods used for my research. Then I move onto the justification of ethnography as my methodology and the specific methods selected for data collection, including interviews, participant observation, document examination and visual methods. The chapter concludes with a discussion of the importance of reflexivity, research ethics and fieldwork challenges and the process of data analysis.

5.2. Philosophical assumptions: American pragmatism.

My research is underpinned by a classical American pragmatist framework. John Dewey, Charles Sanders Pierce and William James are regarded as the founders of classical American pragmatism, while Donald Davidson, Willard Quine, Hilary Putnam and Richard Rorty are categorized into 'second-wave pragmatism' (Baert, 2005, p.127). Some of their philosophical concepts such as inquiry, knowledge generation, participatory democracy and methodological pluralism, have greatly influenced many fields beyond philosophy, such as education, public administration, politics, religion and more recently, organization management.

American pragmatism has also shaped research methodology for social science research. Some claim it is an alternative paradigm for social research alongside interpretivism and positivism (Wicks and Freeman, 1998; Gole and Hirschheim, 2000). In fact, Lee and Nickerson (2010) argue that pragmatism is a more adequate research paradigm for research design than positivism because it sees the world full of complexity and it is open to multiple ideas, approaches and explanations to understand and respond to the world Pragmatism has been described as a ‘new guiding paradigm in social science research’ (Morgan, 2007, p.48) and a ‘useful bridging framework’ (Oliver, Nesbit and Kelly, 2013, p.180) for academics from different disciplines to move beyond the positivism and interpretivism divide, ‘dissolving the dualisms’ (Oliver, Nesbit and Kelly, 2013, p.180). Despite such efforts to promote pragmatism and add more options for methodological solutions for social research, pragmatism has rarely been applied to disaster research.

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[6] Part of this chapter has been submitted for publication in a book chapter.

For my research, American pragmatism is employed as a theoretical framework, influencing the way knowledge is generated and interpreted and setting a basis for the selection of the methodology, methods, and research design for my research in a disaster situation.

One of the most influential concepts of pragmatism is Dewey’s notion of inquiry, which sees the problematic situation as the departure point for inquiry. Dewey claims that the impetus of inquiry starts with an ‘indetermined situation’ and by subjecting it to inquiry, it ‘transforms to a determinately unified one’ (Dewey, 1938, p.117). That is to say, when the situation is examined and judged to be problematic, it needs inquiry, which would trigger a proposal for action, but the outcome of the inquiry or ‘problem-solution’ (1938, p.108) is only temporal, shifting and context-oriented; in a new situation, there are means of attaining updated knowledge through a new cycle of the inquiry process. In short, classical American pragmatism believes that knowledge generation from inquiry is intentional, provisional and problem-driven (grounded in a problematic situation) and progressive.

The pragmatist notion of inquiry is therefore useful and relevant to my research on disaster reconstruction. Undoubtedly, the areas affected by the triple disasters in Japan in 2011, were characterized by problematic situations and in urgent need for practitioners and researchers to engage with participants to seek multiple points of view to aid the recovery process. Their eagerness to transform the devastated situation becomes a stimulus for further action. The outcomes of the research must be useful to the practice of the community in which it is conducted, as well as to other communities affected by similar disasters, to transform a current problematic situation into a new one. The new condition will infer new problems; the knowledge from previous experience becomes a tool for on-going inquiry in this new situation through a new cycle of the inquiry process. But 'knowledge is always contextual, because it is always related to the specific inquiry in which it was achieved….It is the continued inquiry that defines knowledge in its general meaning' (Kelemen, 2013, p.8). This general meaning is seen only as a temporary truth, collective wisdom through dialogue and discussion with the community at different levels and for the benefit of the community in the present and in the future.

Another important concern for pragmatists is the reciprocity between theory and practice. From a pragmatist perspective, theory and practice should not be isolated. Scholars like Kelemen have strongly called for 'bridging the gap between academic theory and community relevance' (Kelemen and Bansal, 2002) emphasizing that the aim of research should not be only an academic outcome but be useful to the practice or as provisional truth to guide further action. They are mutually influencing, and their relation is progressive; knowledge is generated from the practice of communities and the emerging theory is oriented to future application. Indeed the verification of knowledge has to get back to the practice of communities and be tested by the community (Vo and Kelemen, 2013) because pragmatist researchers are genuinely interested in applying the knowledge to help improve local communities' lives and their social and economic conditions. This has implications for my own research on disaster recovery. The purpose of my research is not only to understand 'how the social world works' (Watson, 2013, p.65) but also how it could work better for the community either from the perspective of disaster reconstruction practice or disaster theory-construction through the process of co-design and co-creation with the community itself. The ultimate goal of my research is to seek knowledge that is both academically rigorous and useful to communities.

In addition, pragmatism's participatory democracy principle (Dewey, 1938) also has implications for knowledge co-creation and cooperation for disaster reconstruction. Given the complexity and multi-layered consequences of disasters, a thorough understanding of this problematic situation will require drawing on many disciplines such as planning, urbanism, geography, architecture, design, project management and leadership etc. Knowledge from one single discipline is not enough to deal with these complexities. Such an interdisciplinary approach facilitates a fuller and deeper understanding of the problematic situation (Shields, 2008) which will serve as the stimulus for inquiry and eventual actions.

Furthermore, the nature of the disaster requires a response beyond the affected community and an involvement of governmental, non-governmental organization, communities at different levels and even international cooperation, which indicates the potential of democratic inquiry. 'If inquiry is democratically organized, then socially distributed knowledge is not represented anywhere but in the group as a whole….the full collective knowledge of the group can achieve social control and effective social policies' (Bohman, 2000, p.594). In this way, communities are brought together to participate in a democratic way to the problem-based context. They can exchange their experience and capture a more complete picture of the problem and develop approaches to resolve it. Problem-driven-solutions will be defined and redefined by participants from stricken-communities, government and non-governmental organizations at different levels. Similar natural disasters might occur and have occurred across many countries in the world. The disaster in Japan provided an ideal scenario for this research; but such a crisis can occur anywhere, hence my research is relevant to environmental crises and global crises across the world (Visnovsky, 2010, p.326). Dewey's participatory democracy allows us to appreciate the values of different cultures, 'embrace human interconnectedness at all levels from local to global' (Visnovsky, 2010, p.326) and share the collective wisdom for problem-solving.

Because pragmatists reject dualisms and 'do not see the world as an absolute unity' (Creswell, 2013, p.28), pragmatism 'offers an immediate and useful middle position philosophically and methodologically' (Johnson and Onwuegbuzie, 2004, p.17), which will not only benefit the practice of co-creating knowledge with, and for, the community but also will allow the researcher to select methods which are inclusive and allow for different voices to be heard, represented and better understood.

Ontologically, pragmatists believe that there is no single version of reality out there waiting to be explored. Rather, the world is open-ended, dynamic, and relational, and there are multiple practices involved in lived experiences. This fits with the main purpose of my research for it is lived experiences and the day to day practices of reconstruction that have been studied. Epistemologically, pragmatism holds the view that knowledge is tested in its application to local communities and its validity can only be assessed in terms of the consequences it has on individuals, communities and their problematic situations. The ultimate goal of my research is not only to produce robust theory but more importantly, to be useful to the local community. Therefore, pragmatism is a suitable theoretical and philosophical stance for helping me to develop my research methodology.

5.3. Research approach: ethnography

According to Mertens (2005, p.7) a 'researcher's theoretical orientation has implications for every decision made in the research process, including the choice of method'. The research approach that is most closely aligned with this paradigm is ethnography as ethnographers are interested in what is going on rather than in presenting a "correct" reality. Ethnography's focus is on understanding "how the social world works" (Watson, 2013, p.65) and attempts to capture the complexity of the ever-changing socially constructed realities through various methods based on the different social contexts and purpose of the studies, though there is universally agreed definition for the ever changing forms of ethnography.

5.3.1. What is ethnography?

Like many other methodological terms, there is no-agreed standard of what ethnographers do. The ethnography can be referred to both as a process and a product; it is both a methodology and a written account of an ethnographic research (Madden, 2010; Savage, 2000). In Madden's (2010) words:

> "Ethnography is a direct, qualitative social science research practice that involves ethnographers doing fieldwork with human groups, societies or cultures, experiencing the daily ebb and flow of life of a participant group. Ethnography is also a form of non-fiction writing that is based on systematically

> gathered data from fieldwork and other relevant secondary sources. From the combination of research and writing ethnographers build theories about the human condition" (Madden, 2010, p34).

This definition clearly reflects the dual function of ethnography as a methodology and as a final product. It is widely acknowledged that ethnography does not always carry a standard meaning or is used "in an entirely standard fashion" (Hammersley and Atkinson, 2007, p1). Ethnography is rooted in British social anthropology, American cultural anthropology and the qualitative sociology of the Chicago School (O' Reilly, 2009, Madden, 2010). It has evolved into many different forms, among which two popular one are realist ethnography and critical ethnography but over the course of time, these have undergone many changes. For example, historically, the early practice of ethnography was often dominated by westerners and often associated with anthropology and qualitative sociology. Research often focused on indigenous, exotic and disadvantaged groups (Madden, 2010). In the latter half of the twentieth century, ethnography was favoured by researchers from different backgrounds and disciplines and the ranges of studies varied across and within cultures involving research both of "home" and "away".

While classical ethnography often required physical immersion in the field for a prolonged time to collect data, one year or longer in order to be labelled as ethnographic study, ethnography from the latter half of the 20th century legitimised a shorter length of time in the field, variously through changing contexts and technology. This can be exemplified by other forms of ethnography such as net-ethnography or virtual ethnography, where data is collected from the internet without physically being present in the field (Markham, 1998, 2005; Hine, 2000; Mann and Stewart, 2000) or other terms like “rapid ethnography” “short-term ethnography” which in contrast to the key principles of traditional ethnography, requires a shorter time in the field to build trust relationship and generate in-depth data. However, Vindrola-Padros and Vindrola-Padros (2017, p.3) acknowledge that rapid ethnography might be too “quick and dirty” to be able to capture the complexity of the situation and the changes over time. The authors point out that the major issues identified in this case are lack of a robust processes for reporting of study designs and a lack of reflexivity, but if importance is attached to reflexive interpretation and good application of research methods, rapid ethnography has great potential to generate insightful understandings (Vindrola-Padros and Vindrola-Padros, 2017). Similar views are shared by Pink and Morgan (2013) who claim that rich ethnographic data can be generated over short timeframes and high intensity fieldwork if it is well-designed in advance (Loosemore et al, 2015). Other forms like team ethnography (Clerke and Hopwood, 2014) or collaborative ethnography involve more than one researcher working to co-produce insider knowledge of the community where individuals might contribute asymmetrically in terms of time and areas of expertise.

Despite its changes over the course of time, ethnography continues to be an important way of inquiry to understand particular groups and their everyday human existence. The key essence of ethnography to capture in-depth understandings of the researched, remains unchanged. The application of wider ranges of sources of data (e.g. participant observation and semi-structured interviews, artefacts collection, document analysis and other technology-based methods) in the ethnographic tradition continues to thrive and enhance our understanding of participants’ everyday lives.

5.3.2. Why is ethnography appropriate for my research?

This approach conforms to the aim of my research since I am interested in what is going on within the disaster stricken community of Minami-Sanriku and in understanding how the local community is rebuilding from within when government support is inadequate, and how community leadership emerges in a bottom-up fashion in the Japanese social cultural context. Ethnography has helped to address my research questions in a cross-cultural disaster setting, where there is a need to understand "how a cultural group works and to explore their beliefs, languages, behaviours and issues facing the group, such as power, resistance…" (Creswell, 2013, p.94), which requires immersion in the field, in particular, in Japan, a country often seen as "high context culture" (Hall, 1959), in which the culture is homogeneous, and there is no need to verbalize everything explicitly because of their shared social cultural background. I am fortunate to speak Japanese well as prior to my PhD I worked for two years in Japan. Communication is often indirect and subtle and there are a lot of unwritten rules that "you are supposed to know". Perhaps unsurprisingly, Japan has more of these subtleties than most countries, which makes understanding even more difficult. In particular, it is hard to know what the truth is when people say what they don't really mean as they are just being polite. For example, in Japan, it is common social etiquette to be able to use Honne (true/real feeling) and Tatemae (shown behaviour in public) to maintain social harmony. However, for an outsider, it is often quite frustrating to figure out what they actually mean. In addition, Japanese culture is perceived as having a high social hierarchy, which reflects on every aspect of social relationships. Even the Japanese language system itself reflects hierarchy where people with higher status use casual speech while people with lower status use "respectful" speech. All these subtleties are quite challenging. Thus it would require researchers spending sufficient time to observe and to understand the discourse and power relations, which could help “dig deeper” into the meaning behind their politeness and their ambiguous or indirect expression in communication. Ethnographic research enables the researcher to situate the self in a suitable position from where to understand these subtleties.

My research setting of the post disaster reconstruction in the tsunami-affected town involves not only physical reconstruction but also social recovery as suggested by the literature. In the process of disaster recovery, *Kizuna* (social connections, bonds) was used as a collective narrative to call for support from various stakeholders to work collaboratively and enhance social solidarity. At the same time the multi stakeholders involved in the process of reconstruction could trigger potential conflicts or frictions due to the time urgency for disaster recovery, limited resources, long-term development and power dynamics of different social groups etc. All these required an ethnographic approach to understanding the dynamics.

In addition, post-disaster reconstruction is a complex project and requires joint efforts of government, local community and the general public, both at home and abroad. The complexity of reconstruction and the sensitive nature of the traumatic experience requires building up close relationships between the researcher and the researched. Again, as my research aims to capture the voices, coping strategies and aspirations of the local community affected by disaster and explore how knowledge is co-constructed for rebuilding efforts, the ethnographic approach provided the best opportunity to “position yourself” (Creswell, 2013, p.20) in the role of participant observer to understand the complexity of the reality and to see the “holistic picture of how a system works” (Fetterman, 2010, p.10).

Furthermore, my pragmatist theoretical frame encouraged methodological pluralism for data collection, which is consistent with the ethnographers' common practice to employ various strategies, methods and approaches to accommodate the specific nuances of the context. A mixture of different methods are employed and discussed in the following paragraphs.

5.3.3. Is three months enough?

Compared to traditional ethnographic research, my three-month fieldwork was relatively short, but shorter time scales are not necessarily viewed as a limitation. As Pink and Morgan (2013, p.351) point out this could offer "intense routes of knowing", and "a route to producing alternative ways of knowing about and with people and the environment of what they are part" (Pink and Morgan, 2013, p.359). The necessary amount of time required for fieldwork could be affected by many factors, such as the level of initial understanding of the field, the pre-fieldwork preparation, my own background, the practice of reflexivity, etc.

Initially, I was planning to do a six-month fieldwork, but I could not make it due to funding, and teaching commitments, so I decided to go to Minami-Sanriku for three-months. This actually gave me more time to do my fieldwork preparation and design my research strategy. I followed the updates on websites of the affected areas daily and paid attention to all the media reports and relevant background reading as well as creating a list of potential participants' profiles, before I started my fieldwork.

My previous work experience in Japan and my volunteer experience in disaster-affected areas have provided me with a sense of familiarity of the place before I started my fieldwork. My roles as both volunteer and researcher, enabled me to maintain the quality of first hand engagement with people's everyday lives and experience in a very intensive way and to have meaningful dialogues with locals daily. This resonates with the views of Pink and Morgan (2013) that the intensity of the research encounter, the focus on the detail, the ethnographic-theoretical dialogue are important qualities for a short-term ethnography. In particular, the ethnographic and theoretical dialogue is critical as it involves the process of both data collection and data analysis. This helped me to make sense of the field and the data that I had collected. The emergent themes from the data became input for guiding the research process further.

In addition, the practice of reflexivity throughout the entire research process played an important role in my research as my own cultural and education background and my previous experience of Japan inevitably had an impact on the research process and the interaction in my dual role as volunteer and as researcher with the researched. A heightened sense of reflexivity allowed me to account for my subjectivity enabling me to better understand and portray the human condition in the crisis situation.

In short, my previous work experience, volunteer experience in Japan and my preparation for my fieldwork have made my three-month fieldwork effective. The next session will focus on how I actually conducted my ethnographic study.

5.3.4. Volunteering ethnography

5.3.4.1. Volunteering as access to the disaster setting

My experience of volunteering in the region in 2012, provided a good background knowledge and feel for the area. In addition, I had kept up-to-date on Minami-Sanriku through relevant websites, NPO activities, and local businesses. My initial research access to the fieldwork was facilitated through my supervisor’s network and the by help I received from Japanese scholars. The first place I visited and stayed was at the Minami-Sanriku Learning Centre. I was received by one of the founders of the Leaning

Centre who later introduced me to many of his networks. I was granted access to the Disaster Learning Tours held at the Learning Centre, Local Story-Telling tours, local Residents' workshops and other events and activities that the centre was holding. This allowed me to meet many people including academics, research students, local university students, local residents and also key figures of the town, such as the mayor, local storytellers, disaster tours coordinators, etc. The founder of the Learning Centre himself had a lot of stories to share. I was lucky that he offered me the opportunity to go with him to the Temple where the statue of the Octopus was worshipped every morning at 8am followed by attending the morning meeting at the Yes Factory as a daily routine, which was a great opportunity to talk with him and other people. A lot of stories unfolded and a lot of background information and documents were collected through the involvement in everyday life there.

I was introduced to the Beans Club, Fish Market Factory, Agricultural Farms, Fishery Farms and other organizations which had connections with the Learning Centre. I was busy joining in all kinds of activities and doing all kinds of volunteer activities. After a couple of weeks, I felt I was reasonably familiar with the situation, though I was not quite sure whether I was collecting the "right" or "enough" data, nor was I following my original plan, instead the many of the activities that I participated in were completely unplanned. My approach to the study was more proactive as I tried to grasp every opportunity to be involved in local activities in an attempt to capture all the nuances of local practices of recovery implementation. I often volunteered for a period of consecutive days to ensure I understood the setting before I moved to the next site. This enabled me to have a holistic picture of the whole town and their bottom-up recovery efforts of rebuilding before I narrowed down my focus in later stages of my fieldwork.

However, “access is not a simply a matter of physical presence or absence. It is far more than the granting or withholding of permission for research to be conducted” (Hammersley and Atkinson, 2007 p.43). As in many sites within the town, “while physical presence is not in itself problematic, appropriate activity may be so.” (Hammersley and Atkinson, 2007, p.43). I had to consciously remind myself to be culturally and ethically sensitive when making appropriate inquiries. The access to the Minami-Sanriku Learning Centre was a helpful step as through the learning centre, I was able to volunteer or participate at local farms, fishery farms, the Restoration Market, forestry tours and community cooperatives, etc. My network was quickly expanding from one site to another within the town, which provided many more opportunities to meet a lot of my prospective participants/ informants.

5.3.4.2. **The dual role of volunteer and researcher: hands in the mud, head and heart in the community’s everyday experiences**

My role as a researcher and volunteer for three consecutive months, sharpened as well as challenged my taken-for-granted understanding of Japanese culture and behaviours. My hands were mostly in the mud, volunteering with farms. I had to cut weeds, plant seeds, and pick vegetables on the agricultural farm. Other days, I was in the local market selling fish-filling dumplings, promoting seafood products or working with the fishermen’s families, cleaning fish ropes, nets, processing seafood for the morning market, or participating in the disaster tours, tidying and removing the weeds around the temporary housing, celebrating their festivals and visiting the tombs of their beloved. My constant and sustained efforts to negotiate my roles in the field in order to better understand and document everyday experience for three months is what gives my research study its validity.

After a short while, as a volunteer, I began to resemble the other Japanese volunteers. I kitted myself out with 'volunteer uniform' items, such as waterproof boots, working gloves, jackets, caps, masks, etc., in order to physically and culturally fit into the setting. At the same time, I was genuinely willing to offer my help. I hired a motorbike to be able to travel more easily from site to site (see figure 9), which gave me the chance to talk with more people and to visit local families, and a medium for conversation

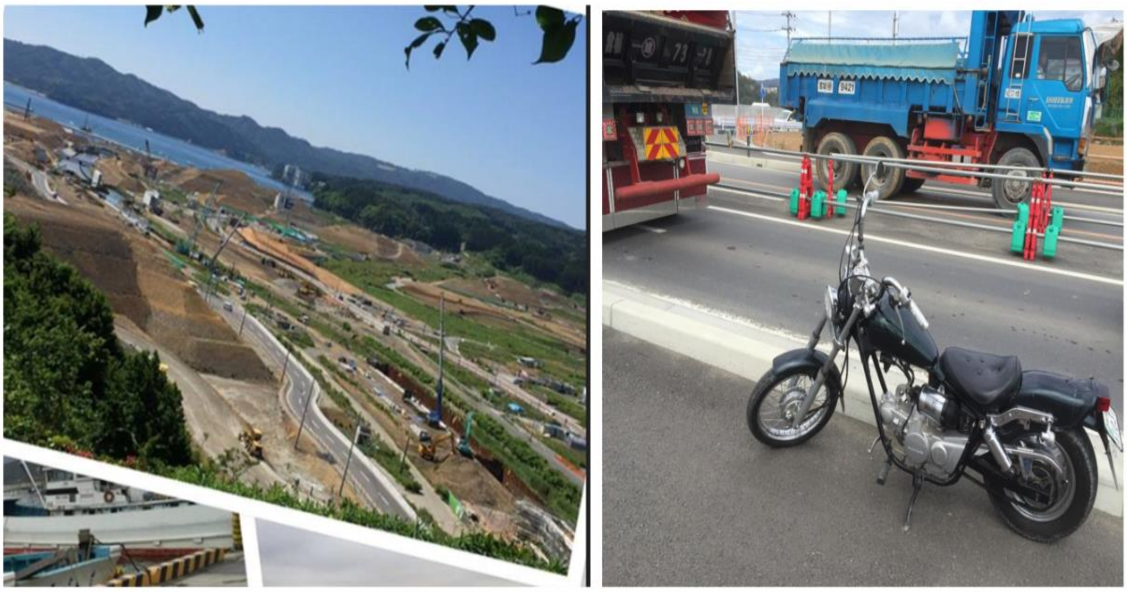


Figure 9: Volunteering ethnography by motorbike

Volunteering creates a natural atmosphere for dialogue as conversation flows naturally when people are working together. The 'authorial identity of the field worker' (Alvesson, Hardy and Harley, 2008, p.483) was undermined and vague, while more spaces were open for the research subjects to construct their stories. At times, people forgot that I was a researcher they invited me into their kitchens, opened up about their private lives and talked about their emotions, as my reflective notes show:

> I had moments when asking for ‘consent was forgotten’ …. I forgot I was a researcher, I forgot all about research ethics …they forgot too… it was dialogue between two humans, I felt it was unethical to interrupt the stories… for I felt her pain… (Reflective diary, 2016)

However, I deeply acknowledged that moment and respected it enormously. I felt I was trusted and I wanted to do something for them, but all I could do was to work harder on the farm. Especially when I worked with elderly local people, somehow I was often treated as if I did not know anything about what had happened there. They were willing to share their disaster experiences with me. The story of the disaster unfolded naturally, from how they survived to how they re-started their lives, the challenges they faced such as the conflicting views surrounding the seawall, fishermen’s livelihoods, and their concern for the future of the fishery, the relationships with daughters-in-law, grandchildren etc.. An example of this can be seen from my field notes from when I worked with a fishermen’s family,

> I was absolutely exhausted after a full day’s working on the farm and felt like I could just crawl into bed and fall asleep at any minute. I finally arrived home but I had trouble falling asleep. My mind was still in the dialogue with the farmer. I just realized that women actually played an important role in a small village like this for post disaster recovery and the elderly have so much wisdom to share. I was wondering whether there were any policy makers who made efforts to consult women’s perspective or record the elders’ wisdom, to include their voices in the disaster reconstruction plan. (Field diary, 2016)

I was trying to tidy up my writing, but “messy” thoughts kept cropping up. The sea was not calm that day and the fishermen could not go out to sea: I reflected on how little security there was in this profession. I worked on the fisherman’s farm and I could hear the sea waves. I had long informal conversations with the elder fishermen, it felt like chatting between two generations working on the farm together. They showed me how to do the work and praised me by saying I was twice as efficient as the other volunteers. I was trying to please them and even felt an obligation to work faster, to be more helpful. I flipped my diary, and found this note,

> There was no volunteer on the Farm today. I was the only one. I cleaned the whole pile of ropes, then, used the machine manually to insert the specialised pins into all the ropes which were prepared for attaching the baby scallop to the rope known as ear-hanging sea scallop cultivation. There was no automatic scallop pinning machine on the farm. Even now I feel my hands still have the smell of sea creatures from the rope. She seemed to worry that I might get bored and constantly checked whether I was ok…. she said, ‘I am lucky to have my daughter-in-law, …local young girls had left the town for a more exciting city life and do not want to come back…not many girls want to marry fishermen as it is hard life. .... Some of the fishermen left too, after the tsunami.’.. ‘It was great that my son loves the sea, a small group of his fishermen friends love it too…They are trying to revive the fishery industry’. (Field diary, 2016)

Clearly there is a marked discrepancy of being a country with deep fishing roots, world-renowned for its Sushi and its fishermen’s experiences who are struggling with life existence. This left me with questions about the rhetoric and reality of recovery and whether policy makers could do something to improve the fishermen’s lives. This experience also made me even more eager to document their experiences. I have witnessed how the place looked after the tsunami and how they now live their lives in the fishing village. Often, it is the spirit of local people that makes me feel the importance of sharing their experience, struggles, and their collective efforts to revitalize their town. They want their voices to be heard, their stories to be passed on, and this tragedy not to be forgotten. I admitted sometimes it was hard to handle my own emotional reaction when listening to their stories. The reflexive practice was a useful way to distance myself from falling into the 'other' lives too much, as shown in the research by Rager (2005) who describes her emotional experience of crying with her participants during her research and provides some strategies for emotional self-care. My reflexive field diary helped me to mediate, distil and understand that moment within that particular social cultural setting.

Similarly, I volunteered to work on the agriculture farms, where I met local farmers, fire fighters, news journalists, corporate employees and a lot of university students. I learned how the local fire fighters became first disaster responders to save people's lives and how the Minami-Sanriku Nokobo Agriculture Farm was established to create job opportunities. The Farm, utilizing the abandoned land, had created a new type of agriculture industry by combining agriculture and volunteering, while sustaining itself through producing value-added organic products for the community recovery. The agriculture farm can be seen as a boundary object (Star, 2010) and process that enables interaction among members of various social groups and that links the local people's efforts with outsiders' support. By volunteering with other urban employees on the farm, I understood why the farm was seen as a social space where urban corporate employees could provide corporate social responsibility, while relieving the pressure and weariness of their urban lives. I also shared student volunteers' feelings that it was great to support the community while gaining practical experience in interdisciplinary learning in such an extraordinary setting, including in disaster reconstruction, community design, organic farming, sustainable recovery, etc. Through social interaction with different groups actively, I was able to see different perspectives while understanding their shared value and collective efforts; as there has long been issues of rural depopulation and shortage of agricultural labour force, they tried to work collaboratively to address the issues and enhance transient population. By experiencing their experience, I was even more eager to share my own understanding of how the local community was making great efforts to revitalize the area through bridging external support and internal efforts to create a sustainable future for Minami-Sanriku's agriculture industry.

Even at the individual level, local women farmers' spirits were amazing. The challenge of disaster had made them more creative. A small group of local women who engaged in agriculture in the Iriya district set up a club named the "Beans Club" by making use of fallow rice fields to produce soybeans but their activities have been extended to making Natto (fermented soybeans), tofu (bean curd), kinako (roasted soybean flour) and a Tofu-making experience project for visitors and the younger generation. They enjoyed working as a group and having yearly group trips using part of their shared income from the Beans Club. By volunteering in the bean field with them, I experienced how this system worked. This collaborative approach enhances the bond between different generations of local women and brings the physical energies of the younger generation and the traditional wisdom of the older generation into full play. In doing so, the long years of experience, knowledge of traditional ways of living (e.g. making traditional soybean foods, dried fruit storage for disaster-use) can pass onto the next generation, as Ms Sato, an 82 year-old lady told me "these skills have been passed on from generation to generation, so they should not be forgotten, but should be handed down”

The Fishing industry sustained even worse damage after the tsunami than the devastated agricultural sector. To capture the traumatic experiences and losses of local fishermen, requires “engaging head, hands and heart” (Sipos, Battisti and Grimm, 2008). During my volunteering on the fishing farms I was able to engage closely with people in order to gain a better understanding of the paradoxical life experiences: I felt their passion for the sea and their pride in their profession, the joy of harvest and optimistic spirit for the future, meanwhile I also felt their pain of going to the sea at 3am, the insecure feeling of bad weather, the harsh preparation for selling products at early morning markets, the hardship of everyday work and the uncertainty of continuity of their fishermen craftsmanship, even though these everyday life existences and their concerns were not always articulated explicitly in words. By working alongside and talking with both young and elderly fishermen, I could capture such nuances and subtleties, identify the gap between different generations and the action taken by the younger fishermen to lead change. They launched a community-led initiative, Blue Tourism, to counteract the environmental, social and economic hardships that the locals had faced after the 2011 Tohoku earthquake and tsunami. Through ethnographic participation at the site, I was able to understand how the Blue Tourism project was established and the effects it was having on both tourists and local communities and the fishermen’s everyday lives and their group identity. This approach has led to a gradual transformation of dark emotions associated with loss of human life and property to positive engagement at the communal level to rebuild from within.

The local’s efforts to rebuild from within cannot be separated from the support from other stakeholders such as volunteers, NGOs and from business. In the chaotic situation that followed the tsunami, the difficulties were not only to manage the logistical challenges of a large number of displaced residents but also to coordinate the support provided by NGOs and volunteers. The Minamisariku Learning Centre was established to host volunteers, link their support to the communities’ needs while passing on their disaster experiences to the young generation. Like a chameleon, I had to adjust my role and time in the field, in order to better understand different ways of living. By participating in the learning tours and the workshops with students, what struck me most was how the Minami-Sanriku Learning Centre had managed to bring local people together but also provide a bridge to the external stakeholders (e.g. volunteers, NGOs, business corporates and students) to co-design services that helped community development. The inquiries for reconstruction were democratically organized in a way that learners/visitors were invited to participate in problem-based inquiry to generate reciprocal learning and collective knowledge for recovery. As one of the university students commented “I visited with two purposes: to learn and to contribute… but I was amazed by their achievements and spirit. They almost rebuilt their lives out of the debris, and they reinvented themselves and created more sustainable ways of living”. The efforts were evidenced by the two awards Minami-Sanriku was granted: the FSC certification (Forest Stewardship Certification) and the ASC certification (Aquaculture Stewardship Certification), which indicate the recognition of their achievement in managing their forest and fishing farm in a sustainable way. The inspiring anecdotes of strength and perseverance of local people to rebuild a sustainable community, the social responsibility shown by various stakeholders, and the knowledge co-produced through the process of reconstruction, made me feel strongly that all these needed to be celebrated and disseminated to make a wider impact on society.

Without immersing in the field as a volunteer and researcher, it would have been impossible to have such a holistic and in-depth understanding of the collective endeavour to rebuild from within. For example, the Fukko-ichi, (Restoration/Reconstruction Market), was first initiated just a month after disaster by some locals through their social connections to create the atmosphere of a normal market and to bring a vision of hope for community recovery. The temporary Sun Sun Shopping Village was established by a group of around 30 pre-disaster shop owners with the support of Minami-Sanriku Chamber of Commerce to bring back the vitality of the town. They abandoned market driven norms of doing business and returned to a more traditional model of Kyo-jo (Japanese, meaning collaboration) and restarted their businesses collaboratively. The local Hotel Kanyo at Minami-Sanriku which acted as an emergency evacuation shelter for months after the tsunami, has been committed to sharing disaster experiences by operating a "storytelling bus" since 2012, taking hotel passengers to the areas hit by the tsunami, with hotel employees turned into storytellers to share their disaster experiences. They were determined to make Minami-Sanriku a place where people could learn about disaster risk reduction as the owner of the Hotel Kanyo emphasized: "this once-in-a-millennium disaster also happens to be a once-in-a-millennium learning opportunity" (Interview, Okami). I have tried hard to negotiate my roles in the fieldwork to understand the community's bottom-up strategy for recovery, yet, by no means have I felt that I could grasp all their knowledge and experiences of post disaster recovery which is still on going.

The dual position as volunteer and researcher, allowed me to gain better insights into how the community worked together to co-design their future. Thanks to the motorcycle offered by the local people, as a tool for transportation and as a medium for conversation, I was able to travel from mountain areas to coastal areas, participate in many activities (e.g. agricultural farming, fishing processing, working in the Fukko-ichi Market, participating in learning tours, etc.), engaging with many different people. In doing so, different voices could be heard and shared. Understanding their needs could be captured along with their imaginative solutions to make their town a better place to live. Though there is still long way to go for the "imagined community", I hope my research on their disaster experience will spread awareness of this tragedy and its lessons. This approach also guided my research design in ways that disaster reconstruction knowledge was co-produced through social interaction with multi-stakeholders such as the indigenous knowledge from the local community, along with the interdisciplinary knowledge from researchers, students and volunteers in the field. The following cases were selected to illustrate these points.

5.4. Selecting cases

I did not have a clear idea about which cases to study. I started my fieldwork in Minami-Sanriku town with a general interest in community-based bottom up strategy in post disaster recovery from a social cultural perspective. Given the complexity of post disaster recovery and the limited time frame of three months, "the researcher must make a trade-off between breadth and depth of investigation" (Hammersley and Atkinson, 2007, p.31). Case selection was something I needed to deal with strategically in order to immerse myself in the situation relatively quickly and identify the characteristics of the particular setting under study, though generalization was not a main concern for my ethnographic study of this post disaster recovery town.

In the early phase of my fieldwork, I did not set a clear target for my research, rather I started with the initial access I had in the Minami-Sanriku Learning Centre. All activities there were viewed as equally important. I took every opportunity to familiarize myself with the setting through volunteering, talking with people, participating in various tours, and writing in my field diary. I soon realised that many local people I talked to would talk about the early stage of recovery, life in the evacuation shelter and the establishment of the Fukko-ichi Market, and Temporary Sun Sun Shopping Village, which were considered a very important part of their disaster experience. I felt that studying the shopping village and its impact on the community would be interesting to explore further. Meanwhile I still kept engaging in various volunteer activities and doing participant observation and collecting relevant documents.

Three weeks later, I moved to another site. I refined my research questions as my research progressed. New themes gradually emerged which helped me to narrow down my focus in the latter phase of my study on how community-based small businesses, local farms and individual fishermen rebuilt their lives (See the case selection below figure 10). Through the selected cases at different levels from macro to micro, I was able to zoom out and zoom in to gain ‘panoramic views’ and ‘microscopic focus’ of the different situations and their relations.

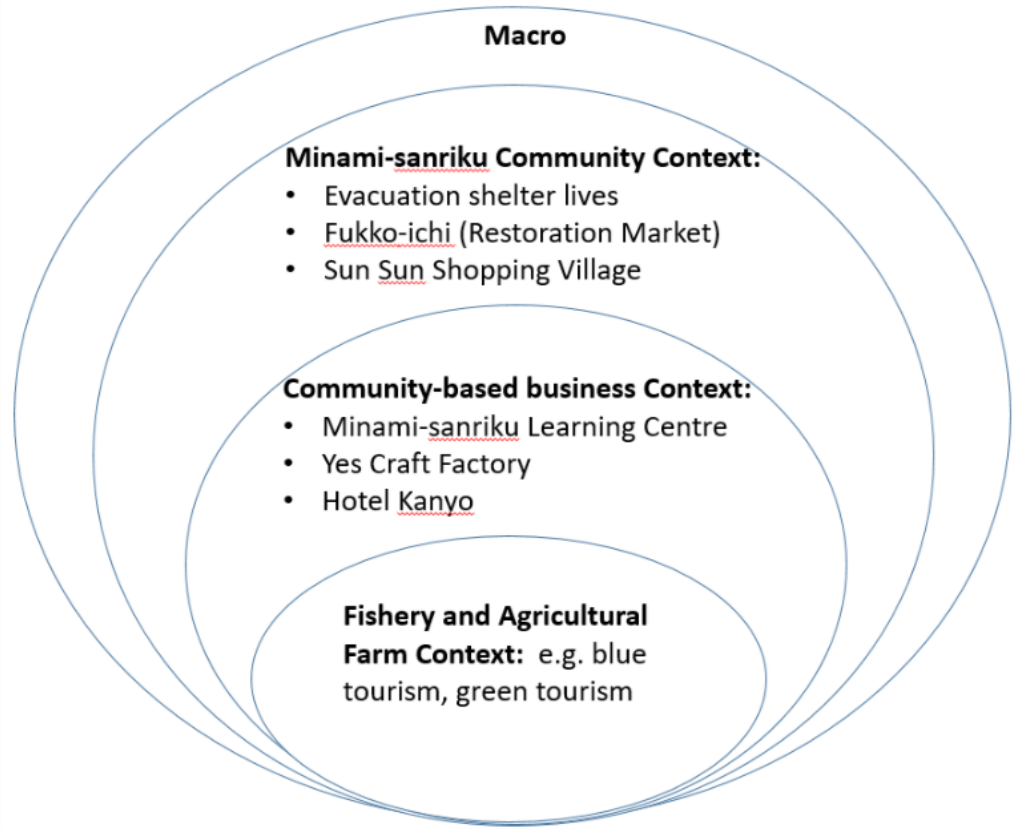

Macro
Minami-sanriku Community Context:
• Evacuation shelter lives
• Fukko-ichi (Restoration Market)
• Sun Sun Shopping Village
Community-based business Context:
• Minami-sanriku Learning Centre
• Yes Craft Factory
• Hotel Kanyo
Fishery and Agricultural Farm Context: e.g. blue tourism, green tourism

Figure 10: Embedded multiple cases

The aim of using case studies is to "look deeply into the behaviour within a specific social setting rather than at broad population" (Holliday, 2007: 5). I chose embedded multiple cases (Yin, 2009) based on my understanding of their typical case status which emerged from my active participation in the fieldwork.

I started with the outer layer (Macro level) through reading literature and various documents to understand the general picture of the 2011 disasters before I started my fieldwork in the affected town, Minami-Sanriku. The next layer was the Minami-Sanriku town context, in which three cases were selected including life in the evacuation shelters, the establishment of restoration markets and the temporary Sun Sun shopping centre, as the stories of these three cases were frequently recounted by many participants during my interaction with them, which represented important disaster experience of how they worked together to overcome the disaster. In addition, market and shopping village have its important nature of the contexts of everyday existence involving majority of the population of the whole town.

The cases in the middle layer and inner layer have their representative status of their collective recovery efforts from different sectors including small businesses, agriculture, fishery and hospitality sector. All selected cases have its own specific solution to disaster but also are inter-connected and intertwined, collectively contributing to community recovery. This case design enables me to look deeply within the disaster-affected town Minami-Sanriku to understand the role played by community leadership in strengthening and deploying social capital. As Yin (2009) claims, the research design is the logic that links the data to be collected and the conclusions to be drawn from the initial questions being studied (Yin, 2009: 24), as shown in my thesis development process.

5.5. Research process

There is no-agreed standard of what ethnographers do. The research process varies given the flexible nature of ethnographic studies. The figure 11 below briefly outlines the stages of my thesis development. However, the research process was subject to change, continuous inquiry and revision throughout the process of the study.

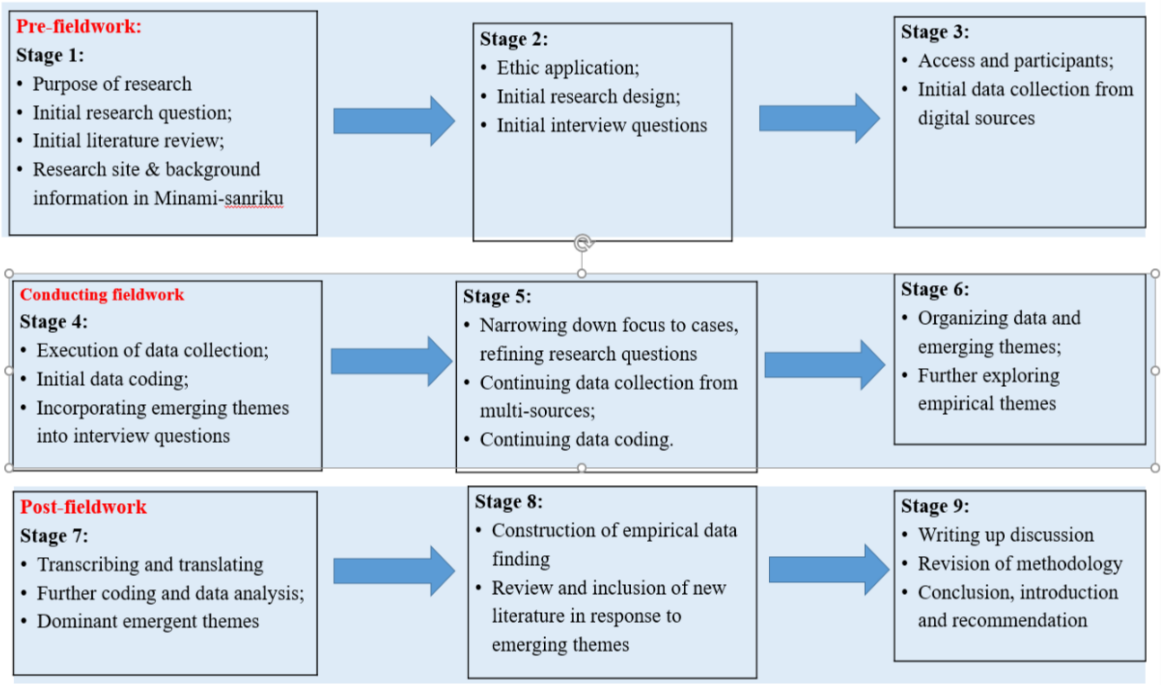

Pre-fieldwork:
Stage 1:
• Purpose of research
• Initial research question;
• Initial literature review;
• Research site & background information in Minami-sanriku
Stage 2:
• Ethic application;
• Initial research design;
• Initial interview questions
Stage 3:
• Access and participants;
• Initial data collection from digital sources
Conducting fieldwork
Stage 4:
• Execution of data collection;
• Initial data coding;
• Incorporating emerging themes into interview questions
Stage 5:
• Narrowing down focus to cases, refining research questions
• Continuing data collection from multi-sources;
• Continuing data coding.
Stage 6:
• Organizing data and emerging themes;
• Further exploring empirical themes
Post-fieldwork
Stage 7:
• Transcribing and translating
• Further coding and data analysis;
• Dominant emergent themes
Stage 8:
• Construction of empirical data finding
• Review and inclusion of new literature in response to emerging themes
Stage 9:
• Writing up discussion
• Revision of methodology
• Conclusion, introduction and recommendation

Figure 11: The stages of my thesis development

5.6. Data collection methods and procedure

The methods selected for data collection include interviews, photography, participant observation and documentary analysis and media reports.

Interview:

A mixture of different types of interviewing has been employed based on the different social contexts and the purposes for interview, including semi-structured interviews, informal conversational interviews, photo/video- elicitation interviews and walking interviews. With semi-structured interview, I had a pragmatists' problem-driven list of questions in my mind but at the same time I gave the interviewees freedom to elaborate the points of their interests and talk freely about their own experience regarding disaster reconstruction. In informal conversational interviews I allowed my participants to be more relaxed and talk about their own traumatic experience in whichever way they felt appropriate. They were keen to share their stories as they did not want people to forget what had happened to them: by being a volunteer and working with them, I created "comfortable space" where they were able to share their emotions and pain. Volunteering facilitated the process of trust building and gave me the opportunity to conduct in-depth interviews.

Prior to the interviews, interviewees were informed of the research ethic underpinning the project and were asked to sign consent forms that were translated in Japanese. (Ethic issue as discussed in section 5.9). I conducted interviews with 58 participants including local community leaders, shopper owners, chefs, tourism guides, storytellers, hotel owners, small business owners, fishermen, farmers, housewives, NPOs, students, volunteers, journalists, corporate employees, etc. The interviews were conducted and recorded in Japanese before being transcribed and translated into English.

My interviewees were selected on both a targeted and opportunistic basis. For the targeted interviewees, I conducted background research and created a list of potential interviewees' profiles and made appointments to interview them such as community leaders, community-based business leaders, NPOs, storytellers and shop owners etc. I also had a lot of conversational interviews with volunteers with whom I volunteered on various occasions. This type of interviews was conducted in different contexts such as during volunteering activities, events, lunch breaks or evening drinking time or after disaster training sessions.

The questions of the interviews were constructed and refined during the process of my fieldwork and sometimes they were reconstructed based on previous interview or based on my participant observation. Most of the interviews I conducted were in the latter phase of my fieldwork after I had a better understanding of the setting through other methods such as participant observation and documents analysis. The questions were designed in an informal style in that they were open-ended, which gave my participants enough scope to talk. The aim of my interviewing was to understand without imposing my own presumptions: as such unexpected themes emerged.

The style of interview I used was often dependent on the context and person whom I talked to. For example, I interviewed the same fisherman at different venues using different interview techniques. I had an informal interview at his farm, then I interviewed him again through a walking interview, a useful technique for engaging participants “on the move” (Evans and Jones, 2011), which emphasizes the role of the environmental feature in shaping the conversation. In particular it was useful to capture my participant’s sense of place, his attachment to the devastated town as my participant was more likely to take me to the areas which were more meaningful to him and constructed his story while walking around his “places”. When I interviewed the volunteers, the conversation style was used as it made the conversation flow naturally while doing the volunteering. While having the same tasks in hand, we established a common ground as a volunteer. I found the conversation more natural and easier if I started with very informal conversation like “where are you from?”; “Why do you come all the way to do volunteering work?”; “How do you feel about this place?” They often spoke a lot more than I expected. However, if I asked the fishermen some sensitive topics such as the building of the seawall, I used different interview techniques. Instead of asking them “does the seawall affect your lifeline or daily life?” I would use information that I had read from news media to generate questions like “I read in the news that people here do not like the government’s large project of building the seawalls, is that right?” By using the technique of “speaking about the opinions of vague others” (Flachs, 2013, p.99), my informants were more comfortable to confirm what the news said, without necessarily revealing their own position. As I was in the field long enough, my role as a researcher became forgotten or blurred. Therefore the style of my interview constantly adjusted based on the context and relations. As a researcher I was always aware of power dynamics and the relation between researchers and researched.

Photo/ video elicitation (visual methods):

As disaster research involves a lot of photos and video clips from the affected areas, a selection of photographs were also used as a trigger for further questioning during interviewing when needed. A large number of photos relevant to the East Japan Earthquake have been collected via the Yahoo Photo Archiving Project, which were accessed and used for my research project. This method is important for my research, because it elicited more detailed responses on certain topics. In addition, the disaster occurred some years ago and past memory sometimes can be fallible, and also there might be some cultural barriers and social conventions prohibiting participants to express themselves “freely”. Through the photos as a material medium, participants may feel less pressured and freer to reveal difficult memories and powerful emotions when reflecting on their traumatic experience. Methods of “handing over the camera” (Pink, 2013, p.114) were also used for my research as participant-produced videos can demonstrate how they saw themselves, the communities they lived in and their reconstruction efforts, which might reflect their preference for their community and have implication for knowledge co-creation for rebuilding their community.

Documentation

Documentation recorded during and after the disaster was collected from different archives, libraries and websites. This provided a great deal of information about my research setting. These documents greatly enhanced my understanding of the complexity of the situation. For example, the Digital Archive of Japan's 2011 Disasters (JDA) developed by Harvard University in collaboration with many partner institutions including NHK archives, Disaster Research Institute at Tohoku University, Sendai Mediatheque, Asahi Shimbun Asian and Japan Watch, Yahoo Japan and National Diet Library etc., stores a large amount of digital records relating to the disaster. Other documents from libraries, town government website, other foundations or institutions were also collected. These sources offered an extensive collection of articles, photos and stories from disaster-affected communities, government, research institutions and volunteers as well as various other organizations, offering a panoramic picture of how different organizations made efforts to support the disaster recovery and how community itself engaged in the rebuilding process.

The documents I collected included government reconstruction plans, statistics from Japan's Reconstruction Ministry, Minami-Sanriku issued pamphlets, Minami-Sanriku Town Planning Meeting, documents from Minami-Sanriku Tourist Association, documents from Minami-Sanriku Learning Centre, documents from Japan Digital Archives, NHK's 'Great East Japan Disaster Archives', Sophia University's 'Voice from Tohoku', documents from NPOs websites such as 'Tasukeai Japan'. These documents can be accessed virtually or physically through official websites or physical spaces. The selection of documents was made on the basis of the interconnectedness of such data, with other types of data, such as interviews, and media reports. For example, the documents I read might integrate into my interview questions or validate my observations. This type of data was complemented by the data collected from a variety of other sources, such as local newspapers, TV News and social networking sites (e.g. Blogs, Facebook and Twitter etc.)

Media reports:

Media reports were also part of my data collection, as Japan’s triple catastrophic disasters have aroused great attention both at home and abroad, there were a wide coverage in the media such as NHK news report, local newspapers, video documentary that recorded the catastrophic moments, and some interactive on-line social networking sites. These media reports displayed public opinions on the issues under study. Opinions may diverge on reconstruction plans, priority and policy for the community reconstruction. For example, government’s discourse on rebuilding large infrastructure structure, seawall, might not necessarily be welcomed by disaster-affected community and reflected their needs. The general public also have different views on whether funding priorities should be given to relocation of those displaced people and evacuation training.

These media reports were collected on-line including from the local newspaper Kahoku Shimpo, NHK News, Mainichi Daily News, and The Japan Times. They were selected based on the relevance to my topic. Then I categorized them into different folders respectively, which was useful for both the process of data collection and analysis as they could be used as medium to elicit conversation and to stimulate analytical ideas. The data from different sources were compared and complemented to explore how their perception was socially constructed and how they rebuilt their lives and identities.

Participant observation:

“Participant observation characterizes most ethnographic research and is crucial to effective fieldwork. Participant observation combines participation in the lives of the people under study with maintenance of a professional distance that allows adequate observation and recording of data” (Fetterman, 2010, p.37). As I mentioned earlier, Japanese culture is characterized by ambiguous and indirect communication and distinctive social hierarchy, which requires the researcher to observe and experience the situation to dig deeper and to explore what they do in their daily lives and what they say about their lives. Through participation as an insider, I was able to see what the real happenings were and the hidden reality, which helped to formulate my own interpretations and deepen my understanding of the issues under study.

To immerse myself in the field undertaking participant observation, I chose to live and volunteer in the Minami-Sanriku town for three months to 'see' how the local community went about disaster reconstruction. As suggested by Fetterman (2010, p.39) "the acquisition of ethnographic knowledge and understanding is a cyclical process. It begins with panoramic view of the community, closes in to a microscopic focus on details and then pans out to the larger picture again". In order to have a panoramic picture, I observed at "random" in the early stage of my fieldwork and "searched out experiences and events as they come to my attention" (Fetterman, 2010, p.37), rather than through a systematic process of observation. I grasped as many opportunities as I could to participate in activities and moved from place to place so that I could have a holistic picture before I narrowed down my focus. As I can speak Japanese, and having worked in Japan for two years I was able to read a great deal of background information to familiarise myself with their basic beliefs, culture, etc. It took me a while to "de-familiarize" my perceived image of disaster setting and actively engage with locals as shown in my early phase of my fieldwork diary,

> On my first evening I stayed by the seaside quite late though it was only a two minute' walk away from my house. Two men and a lady were fishing leisurely. The elder lady gave me a tin of ice coffee. …. I was ridiculously scared of the empty house in which I was living, I could not see the beauty of the town when I first moved there. Each time I passed the empty land nearby the house all I

> could see was that statue covered with a red coat stand in the field. What occurred to me was: victim and 'Tsunami ghost' which I read from news and articles… (Field diary, 2016)
>
> A local NPO representative whom I volunteered for, told me that 'you could have been more open-minded at the beginning. You kept saying no to people's offer to visit them at home. You actually shut the door on them'… I thought their invitation was simply the Japanese way of being polite and that was based on my prior understanding of their culture…and my visit might be intrusive to their family space. When in fact I later realised they really wanted my company, and also that the culture of a fishing town could be very different from the workplace I worked in. (Field diary, 2016)

These are just two of many examples to show how my previous knowledge about Japan affected my initial perceptions of the place. Because of my own previous work experience in Japan, I had already formed a view of the place and people. I had to learn how to question myself by constantly stepping back to "see" myself in the research process and manage my own subjectivity. I constantly reflected on the impact of my cultural baggage on the research and on the write up and acknowledged that "active participant in the ethnographic field also means properly confronting the influence of the ethnographer on research and representation is an unavoidable precondition of a reliable ethnographic account" (Madden, 2010, p. 23). Through my active participant observation in various activities in the field, I was able to identify issues and feed these observations into my interview questions as well as refine my questions with data from other sources to make further inquiry.

Although the mixture of different methods and strategies were discussed above, they were subject to change and adaptation as my research progressed. My pragmatist methodological stance allowed for flexibility in my research for it gave me options to select the most appropriate methods. This is also recommended by Onwuegbuzie and Leech (2005) that ‘all graduate students should learn to utilize and to appreciate both qualitative and quantitative research, and developed into what we termed as pragmatic research’ (2005, p.376). Pragmatist research can help the researcher ‘re-think the theory in terms of its practical application and promote a process of investigating people’s concrete experiences’ (Rumens and Kelemen, 2010, p.1) by challenging the quantitative and qualitative divide in organization research (Kelemen and Rumens 2012).

Therefore, the data collected via these multiple methods provided a thick description of what was going on in the disaster-affected town of Minami-Sanriku, capturing the complexity of the situation and bridging the gap between my academic pursuit and its relevance to the community I studied (Kelemen and Bansal, 2002).

5.7. The data analysis process

“In ethnography, the analysis of data is not a distinct stage of the research.” (Hammersley and Atkinson 2007, p.158). Indeed, my data analysis began in pre-fieldwork when I started to form my research question and search for theoretical direction, and continued throughout the entire process of ethnographic research. It is hard to give a clear procedure and document all interactions between data and theoretical concern, given the changing nature of the research context and the flexible nature of ethnography, but that does not mean a lack of rigour. Creswell’s (2018, p.194) data analysis in qualitative research (figure12) was useful for providing a general approach, but my ethnographic data analysis had many more nuances and considerations.

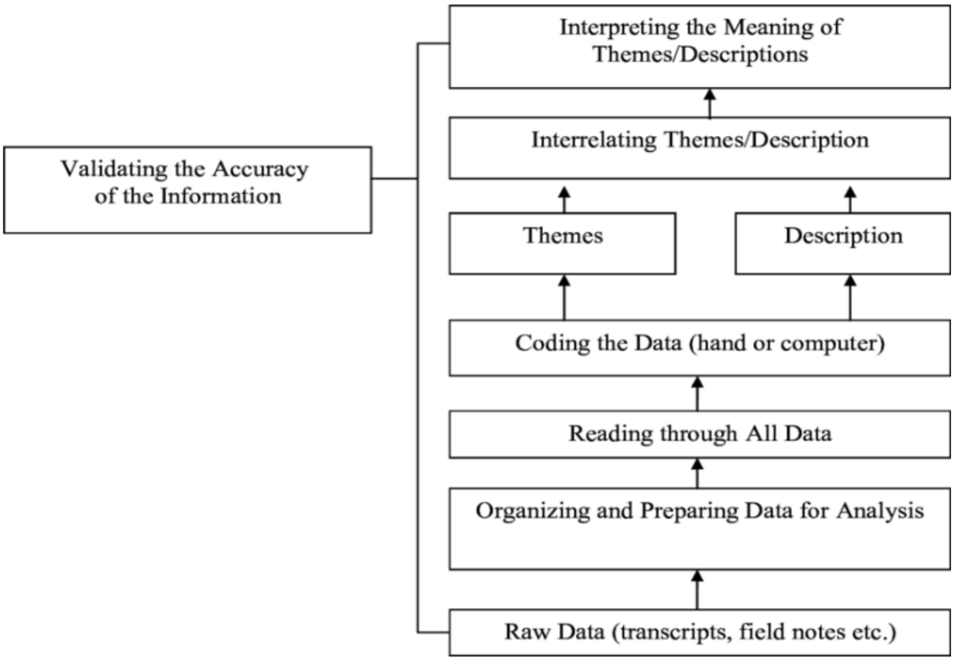

Interpreting the Meaning of Themes/Descriptions
Interrelating Themes/Description
Validating the Accuracy of the Information
Themes
Description
Coding the Data (hand or computer)
Reading through All Data
Organizing and Preparing Data for Analysis
Raw Data (transcripts, field notes etc.)

Figure 12: Data analysis in qualitative research (Creswell and Creswell, 2018, p.194)

The next section outlines the process of data analysis for my research including 1) Organizing the data 2) Coding and generating concepts and new knowledge.

5.7.1. Organizing data

The data collection section 5.6 shows that a mosaic of complementary methods of data collection were employed in my the ethnographic research which produced a wide variety of data including field notes, interview transcripts, observation notes, a newspaper cuttings collection, documents of all kinds such as government reconstruction guidelines, tourism development policy, archives of survival testimony, disaster news flooding the News Media and social media, government, NGO and civil society websites, photographs, visual audio records etc. which made the data sets very "messy". There is always a serious challenge in dealing with a wide variety of data.

There is in fact still a large amount of data which I have not included in my thesis due to thesis time framework for the thesis to be completed. In addition certain data sets were not useful to achieve my research objectives.

Given the large variety of data, it was useful for me to create a research database to store and organize the data for this project. First, the data were organized into two broad categories (Madden, 2010) including primary ethnographic data (e.g. field diary, observation notes, audio video recording, and photos etc.) and secondary data (e.g. government documents, news reports, media reports, published relevant articles, relevant ethnography studies etc.). All data were numbered or indexed. Fieldwork notes were organized chronologically. Audio and video were transcribed and translated by myself as I wanted to "feel" the data, ensure accuracy and build the relation between different types of data. For example, in a Japanese context, the pause, ambiguity, emotion, indirection expression or repetition as recurring themes in the audio and video material can be interpreted differently in different contexts thus offering additional depth to data analysis.

As the fieldwork progressed, I moved from the initial attempt to have a holistic view of the entire town situation to some specific case studies. The data were further categorized on a case basis. Each case included a set of both primary and secondary data. They were not seen as separated entities but interconnected. (For example, a relation map was drawn to show how the data in the Case of Blue Tourism was related to Case of the Hotel).

5.7.2. Coding, generating concepts and emerging knowledge

It would have been ideal to have a close interaction of data collection and data analysis in the fieldwork, but in reality, this was hard to sustain. As my role as a volunteer had occupied a large amount of time in the fieldwork, it was not possible to process all the data at night time. But the field diary was very helpful for both making sense and distilling the situation in the fieldwork and later to further my data analysis. My own positionality had a significant impact on how the Minami-Sanriku stories have been collected, analysed and written up. My reflexive field diary recorded not only my social interactions with the participants but also my feelings and emotions. These have been key to reflecting on the wider context and the role played by power/language discourses in shaping up individual and collective stories. At the end of each day, I made notes about the activities I participated in, people I met, places visited, conversations held, people's reactions and my own personal feelings.

Field notes were thematically coded. Analytical notes were added to the margin on the day or at a later time, which helped me to generate the concepts to make sense of the case under study. In particular I was very aware of the impact of their language and culture system. The initial analysis or analytical notes were used as input for my further interviews while the results of the interviews were used to reassure and enhance the credibility of my observation. Themes emerged through this reiterative process. A set of thematic codes were thus achieved in connection to the research questions and context. As Denzin and Lincoln (1998, p.4) claim, the researcher must continuously analyse extracts in light of the 'situational' and 'contextual' factors in which the data is embedded. Therefore, to ensure the quotes were situated in the context, some quotes I used in the empirical analysis chapter remained largely in chunk of meaning-group of the story or a larger paragraph to situate in the story. The thick description of ethnography and the ethnographic-theoretical dialogue (Pink and Morgan, 2013) throughout the whole process were critical to help me to make sense of the whole situation.

The analysis of the second-hand data was useful in triangulating the findings arising from the analysis of first hand data. A great deal of secondary data were collected and categorized as analytical notes after the initial coding and the labelling process. In addition, I regularly reviewed the development of analytical ideas and data re-categories before accumulating a large amount of data. This helped me compare and find connections between different types of data. Triangulation was employed with regards to the methods of investigation and sources of data as well as for cross-checking findings to ensure their credibility (Bryman, 2016). Reflexivity was a key ingredient in the process of research in that I constantly questioned the impact my presence had upon participants and how this might have affected my own interpretations and overall results of the study (Davies, 2008; Holland, 1999).

Similar procedures were applied to other types of data and case studies. Emerging themes from different cases studies were compared and connected, and guided the research process further. Once the relationships between different themes were assessed and built, the process moved from analysis to interpretation (Madden, 2010). Finally the synthesis of primary field data and secondary data were linked back to the issues discussed in the literature, showing how new knowledge emerged from my research.

5.8. Reflexivity

As the study is ethnographic, it is difficult to predict every detail on how the process will unfold: the most crucial issue is to be reflective about possible limitations, to be aware of how my own prejudices and my cultural background would influence the way I reconstructed these stories to an outside audience. Rather than “engaging in futile attempts to escape subjectivity”, the researcher must “account for that subjectivity” and set about understanding (Holiday, 2002, p147) by accepting “there is no value-free or bias-free design” (Holliday, 2002, p.52). The researcher’s own bias, personal values and work experience in Japan played an important role in understanding and interpreting the complexity of human actions. The voice of researcher and researched are both important for analysing and understanding the social phenomenon. The best practice to be reflexive or to formulate the “reflexive interpretation” (Alvesson and Skoldberg 2000, p.288) is to keep the research journal/ diary, thus documenting how reflexivity influences the various aspects of the research project.

It is futile to try to “hide” the effects that my own positionality might have had on retelling the stories of Minami-Sanriku. For me, the process of research was a journey of reflexivity and self-discovery, as much as it was a collective journey in which my respondents joined in. As my research on post-disaster recovery is inter-disciplinary in nature, it required drawing on multi-disciplinary knowledge to understand the problematic situation. Alvesson, Hardy and Harley’s (2008, p480) idea of “reflexivity as multi-perspective practice” was a useful practice, for example, views and strategies for the disaster recovery might vary from people with a natural science background to those with a social sciences background; people from the top of the hierarchy and those from grass roots might produce different knowledge. Reflexive practice allowed me to reflect on the limitations of using one perspective and draw on the insights from multi-perspectives, acknowledging that the phenomenon can be understood in different ways as suggested by Alvesson, Hardy and Harley (2008, p.483) “It is the accumulation of these perspectives that amount to reflexivity: the use of different perspectives is enlightening in that it helps to complement otherwise ‘incomplete research’ ”.

While it is important to incorporate multiple perspectives from different disciplines to understand the disaster situation, it is also vital to include the multiplicity of voices that account for a community's disaster recovery experience in my research text/accounts. The severity of the 2011 disasters required a response beyond the power of the affected community, involving multiple stakeholders and their collective wisdom of problem-solving. The ideas of "reflexivity as multi-voicing practice" (Alvesson, Hardy and Harley, 2008, p480) was applied in both conducting and writing-up the research to capture this collective wisdom for recovery. My active role as a volunteer engaged in various activities with participants in the field helped to reduce the power relation between the researcher and the 'researched' and enabled a larger and safer space for participants to construct their stories. My reflexive field diary where I recorded and documented my social interactions with the participants, helped me to explore the relationship between different voices, social connections, power, tensions in the language and rhetoric used in producing their stories, as well as my interpretation of their accounts. Nevertheless, I am aware that there is always a challenge of producing text, in particular in terms of power and politics representation, as suggested by Putnam (1996, p. 386), "researchers need to open up for multiple reading; to decentre authors as authority figures; and to involve participants, readers, and audiences in the production of research" .

In short, reflexive practice is not only to acknowledge my own subjectivity and its influences on my research, but also how I could properly confront my influence on the research process and participants' representations by drawing on multi-perspectives and multiple voices to produce a richer research account of post-disaster recovery.

5.9. Research ethics and challenges

Ethical issues were addressed at all stages of the research process and I went through all the necessary ethical approval procedures (as required by the Ethical Review Panel of Keele University). All the information I collected, through observations and interviews, were treated as confidential. I was very aware that the participants in the research would have had traumatized experiences but it was clear from the onset that people in the area were keen to share their stories as they did not want others to forget what had happened to them. Therefore, as a researcher, I always bore this in mind to work out the best possible way to minimise any possibility for causing discomfort or stress when reflecting upon what had happened to the participants during the period of the tsunami.

The main challenge was that Japanese culture in general is well known for politeness and being infused with linguistic ambiguity so it is difficult to communicate directly and to the point. In particular when dealing with traumatic experiences, people were reluctant to talk about their own feelings about it. I needed to think very carefully about how to capture the disaster reconstruction knowledge generated in this particular social and cultural context that is characterised by such an indirect/ambiguous expression and a high social hierarchy, which is often perceived as an obstacle for effective communication. There were some other challenges in the fieldwork. For example, ethnographic research in a cross cultural setting often requires a prolonged time in the field for data collection, which was constrained by my limited time and funding. I also needed to be aware of the difficulties of keeping appropriate distance in the dual role of insider and outsider and the issues of negotiating and renegotiating access.

One of the most challenging issues for me was to manage emotions and relations in the process of conducting my research and then in the writing up such emotionally laden work. As the research on post-disaster recovery inevitably would touch upon the loss, destruction and reconstruction, sometimes it was hard to handle my own emotional reaction when listening to the poignant stories of survivors and their traumatised experiences. Rager (2005) provides some useful strategies, based on her research experience on breast cancer patients, including journal writing, peer debriefing, personal counselling, member checking and maintaining balance. Personally, I found the field diary to be the best way to document and relieve my emotional experiences in the process of conducting my research and I also talked about some issues relating to Japanese culture to a few close friends in Japan and to my supervisors. The field diary was helpful in many ways including for mediating and distilling purposes and for synthesis and making sense of the data.

Chapter Six: Social capital and disaster recovery

6.1. Introduction

The qualitative data suggests that social capital has played an important role in all stages of this disaster recovery: evacuation, relocation and redevelopment. Following the 3.11 disaster, the term *Kizuna* (bond/ connection between people) was re-juvenated and deployed in order to rally support, becoming a collective discourse to accommodate all kinds of connections as social capital for disaster recovery. My research shows that bonding social capital, though temporarily disrupted by the disaster, became stronger in the immediate disaster response with bridging social capital being significantly developed during the early stage of the disaster recovery. During the longer term recovery and development, "bridging" social capital developed further and "linking" social capital became essential. Moreover, it appears that community leadership was key in developing both bridging and linking social capital and in creating the conditions for social innovation to flourish in order to rebuild a sustainable and resilient community.

As the post disaster reconstruction is very complex, it is hard to pin down the dynamics of *Kizuna* within different contexts. However, the combined reasons mentioned in section 4.2.4 might indicate why *Kizuna* (bond, connection) has been recognised as a positive term that represents "solidarity" in post 3.11 disasters and has become part of the collective discourse for disaster recovery. Though it is very hard to measure *Kizuna*, one cannot deny its existence in Minami-sanriku.

6.3. Bonding social capital in Minami-sanriku

In this section, I will discuss how *Kizuna* (in the form of bonding social capital) functioned at the community level in Minami-Sanriku after the disaster. Though the strong bond of community in Minami-Sanriku was temporarily disrupted by the evacuation of survivors, it soon became stronger as an effective initial disaster response and to facilitate reconstruction. This is evidenced by examples from the immediate evacuation operations, the operation of emergency shelter lives, the set-up of the Fukko-ichi (Restoration Market), and the reconstruction of the temporary Sun Sun shopping village. As we can see from one of the survivors who is thankful to her neighbour:

> My house was not at seaside, but in the Sanriku downtown area. It was around three kilometers from the seaside, nearby the mountain, so it never occurred to my mind that the tsunami would reach this area. Therefore I was not in a hurry to leave until my neighbour was shouting at me, '早く早く hayaku… hayaku (hurry)…. …..tsunami is coming….is coming….. like sandstorm….逃げてください' The moment I ran toward the mountain, I saw the black tsunami wash the house away. Luckily, at that time, I was the only person at home. My husband was at work and children were at school and my grandparents were not at home. Therefore our family survived from the earthquake and tsunami. I was saved by my neighbour. (Interview, local survival)

Her moving account of her own survival experience clearly shows that at that critical moment, it was the bonding relationship with neighbours who shared information and helped her to survive. In addition to individual bonds between neighbours, local community associations such as the Fire Corps (Syobodan in Japanese) were also part of the bonding social capital during the crisis situation. In Japan, the number of volunteer firefighters is much greater than the career firefighters, distributed among cities, towns, villages. It has become a social norm for men who reach the required age to join the local Fire Corp group as part of being a responsible community member. Being a member of the volunteer fire corps, requires the undertaking of certain training to attain skills to respond to disaster, so that these skills could help provide immediate help and emergency rescue before the official rescue team arrived, as accounted by one of member of the local volunteer Fire Corps:

> I am a member of the local fire brigade…On that day, it was dark, there was no electricity, no phone, not contact due to the tsunami. Fortunately, there was no death and injury in the area I lived, but I visited all other 40 of the households to confirm their safety. I told them if they were worried they can bring their own blanket and gather in one place. Many of them followed, we learned everyone was worried and preferred to face the situation together. Many people gathered in one place to stay for the night and women started to prepare food for everyone. We could not sleep as we were hoping the dawn came and we wanted to rescue those who directly hit by the tsunami. We hurried to the affected areas in the morning. The affected area was horrible, looked like it was hit by a bomb. The tsunami warning was still on, we saw many people on the roof of the hospital, and we walked through the debris and rubble in order to reach hospital. There were around 230 people on the roof. I found my uncle within the groups. It was a big relief but I could not go to him and hug him and show my emotions as so many people were around us. We were thinking about how we can safely evacuate these people from this building? We were not professional rescue team; we do not have knowledge or special equipment to rescue people. As a senior team member and highest rank of the local fire brigade, I had to pretend to be calm. After observing the sea and tide and making sure that tsunami would not come. Then I asked two members to secure the safety of evacuation road. We

> started to clear up the stairs and corridors inside the building in order to evacuate safely while facing many dead body there. Around 120 people followed our instructions and left the hospital, the rest of them were either patients and medical staffs or people who could not walk. They were waiting for helicopter to come to rescue them. (Speech in the workshop by local farmer, volunteer of Fire Corps at Minami-Sanriku)

Their immediate response to the disaster calmed the locals down and saved a lot of lives when the government were unable to respond immediately. At that time, the official service of firefighting, police and municipal government were unavailable; the Self-defence Force had not yet arrived. These volunteer Fire Corps are local and know the area, its people, and the evacuation routes well, which is crucial during disaster situations where time is pressing. They were highly praised for their contribution in terms of checking the safety of residents, confirming the number of deaths, looking for missing persons, and implementing the rescue operation (Yuko et al, as cited in Kingston, 2012, p.79).

Similarly, for those who were at work, the immediate and proximal relations of the work place were extremely important as their local knowledge helped them to judge and respond based on the situation:

> When the earthquake occurred, I was in the travel administration office, about one kilometre away from here. The building was shaking severely; I confirmed that everybody in the office was safe and then I walked out of the office. Some people were panic dashing out of office and standing in the street with anxieties and worries. Though I anticipated that it might cause a tsunami, I did not expect it could be of such an unprecedented scale. We tried our best to help

> them to evacuate to higher places, but we have not thought that the whole building could be immersed by the tsunami. The moment when we realized it was not quite right, we run toward the mountain. We set up a temporary shelter in the mountain and started our evacuation shelter lives. Most of us did not have much disaster prevention experience. When the tsunami occurred, it was too hard to believe it and we were mentally unprepared for such a reality…..we were so worried thinking the whole city might be destroyed at that moment. (Interview, Former government officer)

> I have experienced the Chile earthquake and tsunami when I was only primary student, I was told that ‘when tsunami comes, the only option is to run to higher place’, so I immediately asked my employees to run to higher place, the town designated evacuation place. Thus, all my employees survived. There was no time for hesitation, just run as soon as possible, that was what I learned from Chile experience. A few seconds’ hesitation and tsunami might take your lives (Interview, Shop owner).

Both accounts from the government officer and from the shop owner indicate that timely decision-making based on their local knowledge and disaster experience and trust helped colleagues or their employees evacuate promptly to the designated sites and reduced the number of casualties. Not all employees or colleagues were from the local area and may not have been aware of the severity of the situation, and the need to evacuate quickly or they might just have taken the warning system as a false alarm and chosen to ignore it. The trust relationship in the workplace therefore enhanced the disaster risk reduction.

6.3.1. Evacuation Shelter

People were soon evacuated to the designated evacuation sites such as the Shizugawa Primary school and secondary school and sport centre but there were serious issues with supplies such as water, electricity, heating, food, bedding etc. It was a harsh situation (see figure 13); "we could not sleep, partially because it was cold and we were hungry, and shocked and anxious. In addition, you could hear constantly that people were sobbing when they were reunited with family members there." (Interview, local survival)

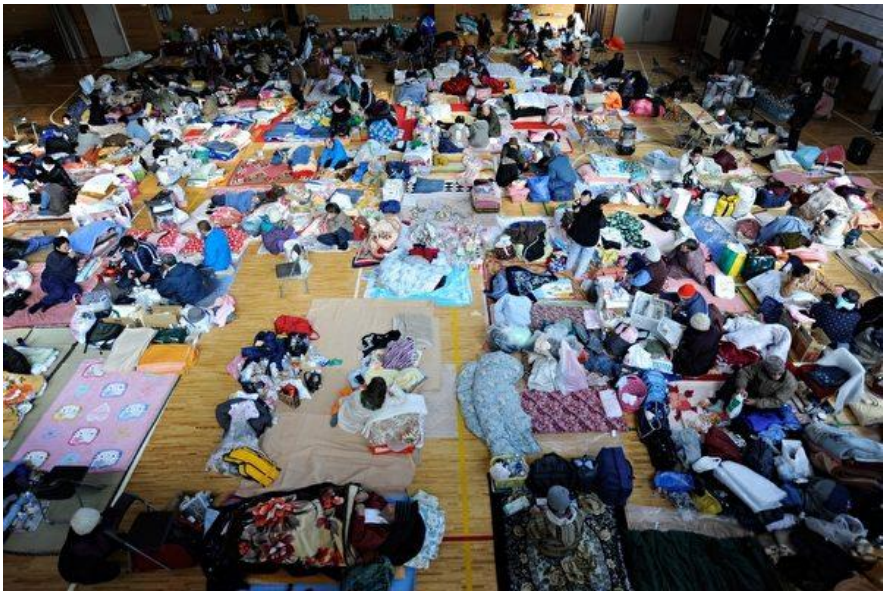


Figure 13: Evacuation Shelter

Picture source: Epochtimes News, 2011

http://www.epochtimes.com/b5/11/3/18/n3202098.htm (Toru Yamanaka/ /Getty Images)

Roads were destroyed and the rescue and relief teams could not reach the area immediately. To meet the basic needs of thousands of people in the shelters under such conditions, the initial support from the local residents was crucial as told by one of the survivors,

> The local residents from Iriya (from mountain area) collected rice from different households and made rice balls and sent them to all evacuation shelters the second day after the tsunami but as there was a large number of people in the shelters, each person could only have one very small rice ball. That was the most delicious rice ball I had in my whole life (Interview, local survival)
>
> I climbed across the mountain to meet the mayor. We discussed the food sources for the evacuation centres. After that we went out to search for the foods and found some refrigerated trucks/vans there. A lot of fishes were loaded in the refrigerated trucks which were then prepared to deliver before the tsunami occurred…. We brought them to the evacuation centre and kept some for the evacuation centre we stayed in but sent the rest to other evacuation centres (Interview, Owner of fish store)
>
> I usually conduct a lot of events at the shopping street such as events for the revitalization of town. We are still doing that now. It is held for several times a year like Fukko-ichi. High school students and staff are often recruited as volunteers to help so I know most of teachers there. They trust me, so this time I also received a lot of support from students and staff in managing evacuation shelter lives at the Shizukawa high school evacuation shelter (President of Fukko-ichi Executive Committee)

It is not surprising that it was the local members who provided most of the needed support for those affected by the disaster whilst waiting for the official disaster relief to be despatched to the shelters 3-4 days later and before volunteers were able to enter the town to help. As many researchers suggest, there is a strong positive relationship between social capital and disaster response and recovery (Chamlee-wright and Storr, 2011; Shaw and Goda, 2004; Chamlee-wright, 2010; Aldrich, 2012). This finding was supported by a more recent study by Simizu et al (2017) who provided useful examples of how strong bonding social capital operated in the evacuation centre/shelter. The research was co-conducted with local residents to make a record of their shelter lives and collated the lessons learned from these disasters to prepare future generations. The research by Simizu et al (2017) revealed that the evacuation centre association was established only three days after tsunami because the strong community bonds and community leaders played an important role in making quick decisions and managing the shelter lives including the setting up of rules, duties and responsibilities, resource allocation and managing relationships etc. This helped resolve conflicts and created a trust culture within the community as well as ensuring that activities in the shelter were managed in a democratic way (Simizu et al., 2017). The following quote from a TV interview given by the town Mayor of Minami-Sanriku in 2015 further demonstrates the importance of the support and recovery efforts from within,

> After the tsunami, almost 10,000 evacuees, more than half the town population was scattered in different evacuation shelters. Initially we had staff from the town hall to help operate the evacuation centres. As all 43 staff from the disaster prevention centre died, the town hall personnel was undergoing a big challenge. We had to ask the staff dispatched to evacuation centres to be back as the town hall could not function well without enough staff. It was those who were

> originally leaders for organizing community events who took lead to help operate the evacuation centres. (Speech, Mayor of the town).

More than half of the town population was in the evacuation centres. The whole town was in a depressing atmosphere with debris everywhere. In particular for those who lost their family, houses, livelihood and everything else, it was hard to deal with emotional strain and their traumatic experience. It was clear that providing disaster relief supply to meet their physical needs and aid recovery was not enough. There was a need for strong support for people to share their traumatic experience.

> “It was those senior community members who made great efforts to show positive aspects and try to cheer people up by giving them hope ….I was also very impressed by those local leaders, who had not only strengthened the community ties but also established the connections with shopping districts throughout Japan to show them the vision of hope”, (ibid).

Unlike competency approach to leadership, these community leaders were local small business owners, but they took a lead in the crisis situation, being able to mobilising their previous business network to enhance recovery. Community Evacuation Shelters Association was soon established and operated by a group of local merchants who made sense of the disaster through collective analysis of the disaster situation while living in the emergency shelters. The first initiative was the establishment of Fukko-ichi (Reconstruction Market) to give hope and the sense of business continuality and normality.

6.3.2. Fukko-ichi (Reconstruction Market)

Only a month after the disaster in late April, the two-day event “ Fukko-ichi” (in Japanese, means Reconstruction Market or Revitalization Market) was held in the school yard of Shizugawa Junior High School, attracting around 15,000 people (Japan Nikke News, 2011). This is another great example of how bonding and bridging social capital work to enhance recovery. At that time, most people were still living in the Evacuation Shelters depending on disaster relief supply to live and with very little idea of what they could do to rebuild their lives. Their shops and houses were swept away by the tsunami and some of them had lost family members, relatives, and friends. It was certain that they had nothing left to sell nor could they afford to buy anything while living in the disaster evacuation shelters. However, they had a very successful Fukko-ichi because of “Kizuna” and the determination of the local merchants to take action.

The planning stage of the Fukko-ichi (Reconstruction Market) within such short amount of time and in such conditions required huge collaborative efforts from the local community and from outsiders. In the normal discourse, speaking about establishing a market is associated with terms like commodities, buying, selling, crowd, profit etc. The local people had none of those but created it all. Most products and other necessary materials were brought from other shopping streets affiliated to the Disaster Prevention Morning Market Network throughout Japan, voluntarily. Nineteen tents were set up in the Shizugawa high School yard. Products and product’ origin were written in the respective Kanban/billboard (See figure 14)

> Of course, the products displayed in each tent might have nothing to do with the family business of local merchants. It was also impossible to have all our shopper owners to sell their products in the Fukko-ichi, but we wanted to show our determination to take action. (Shop owner)

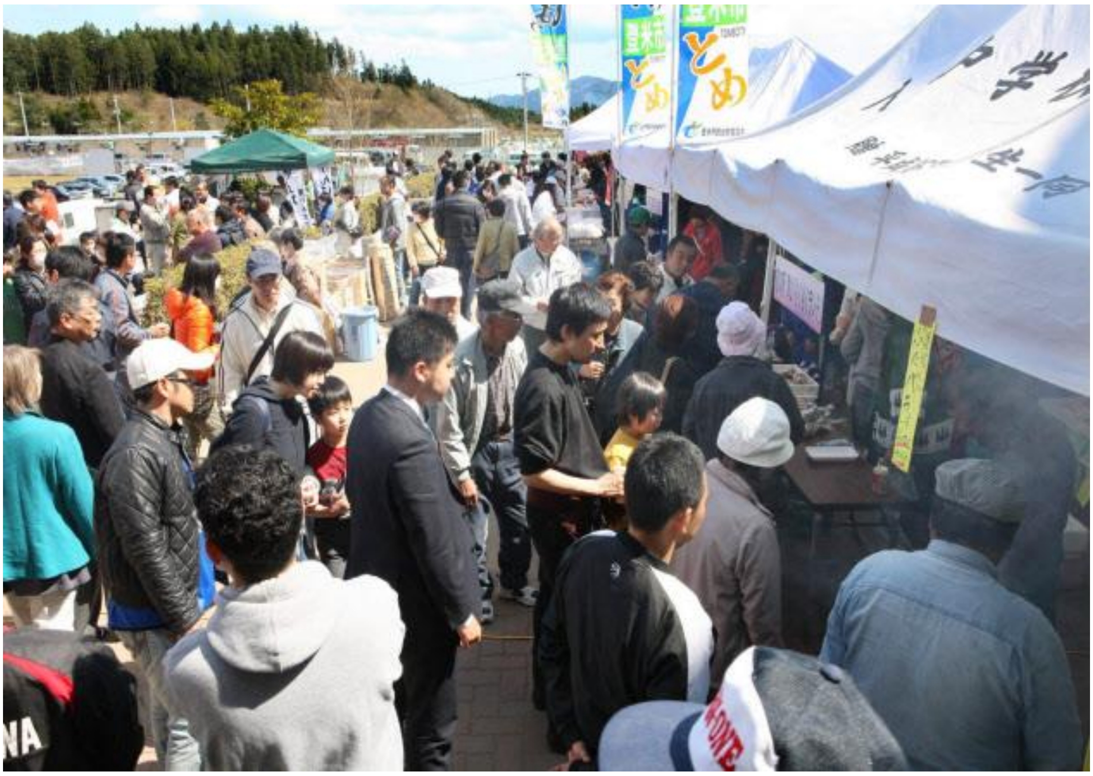


Figure 14: Minami-Sanriku Fukko-ichi (Reconstruction Market), Japan.

Figure source: Ogawa, 2011, Minami-Sanriku Fukko ichi, Japan Nikke News. https://www.nikkei.com/article/DGXZZO32920330W1A720C1000000/.

As local community members were lacking purchasing power shortly after the disaster, 3,000,000 yen Tako-ken (community currency in Japanese) was issued to 10,000 local residents. Volunteers distributed this money to local people. Tako-Ken was only valid for the Fukko-ichi so that locals could use the Tako-Ken to buy the products they needed but non-local participants needed to pay using their own cash. This created a feeling of “market”, an atmosphere of business transactions: buying and selling. As explained by the interviewee,

> People lived in the evacuation shelters depending on disaster relief. If they got used to this, it would be hard to be independent. By using Tako-Ken, local people were able to ‘purchase’ without actually paying the real cash. Thus, they

> could ‘purchase’ needed products and thought ‘it is not free; I bought it with my Tako-ken’ (Interview, local member)

For the organizers, this market not only provided daily necessities but was also a symbol of their determination and hope to return to normal lives. It aimed to encourage people to get out of the evacuation shelters and to start to rebuild their lives, morale, and self-reliance spirit. For locals, the market brought back the feeling of their old market and motivated them to work towards that direction. However, given the severe damage of the town, it was hard to depend on their self-help and mutual help (Jijyo and Kyojyo, in Japanese) within the community; they needed the power of *bridging social capital*, the social networking between and among diverse groups to help disaster recovery. This was clearly demonstrated by the success of the first Fukko-ichi (Reconstruction Market).

Kizuna is the term frequently associated to its success as explained by President of Fukko-ichi Executive Committee,

> “We issued 3,000,000 Yen Tako-ken (community currency in Japanese), but we did not actually own this amount of money. This amount of money was actually from those people from different shopping streets throughout Japan. They brought their own products to sell in the Fukko-ichi but left all money for us (as Fukko-ichi recovery fund). They also brought their own tent, chair, and table etc. that needed for the Fukko-ichi…..For example, when people from Sayo-cho, Hyogo prefecture came here, they came with their own truck loaded with gas cylinder/ tank, tents….. That was initial the connection built up for our 1st Fukko-ichi. Since then it has been held monthly and we would have had 60th Fukko-ichi by 30 August 2016” (President of Fukko-ichi Executive Committee)

> “In fact, the connection with the shopping streets in different areas of Japan was established before disaster. I actually have participated in various activities with Waseda Shopping Street before disaster. For example, we established Eco-station Networks to enhance eco-friendly shopping streets. We also established Disaster Prevention Morning Market Networks. If any disaster occurs, members from the network of shopping streets would make joint efforts to help recovery…. Actually, when the Niigata Chuetsu Earthquake struck, we and other members of shopping streets throughout the country sent disaster relief to Iiyama city, Nagano prefecture. Then from there, all the disaster goods were delivered to Niigata…. This time, Minami-sanriku… they all came to support us… financial support... material support, and…they visited us with trucks of goods…. (ibid)

These connections radiated among people and became a powerful force for community recovery. Civil society has also shown a vital role for the success of the Fukko-ichi by disseminating information and providing volunteer support. For example NGOs (such as United Earth) helped to recruit volunteers and arranged for buses from Tokyo to Minami-Sanriku to support the event such as parking support, venue cleaning, performance stage support, sales support etc. Corporations such as NEC have continuously organized their employees to help with the debris cleaning, seafood processing, farming related work and Fukko-ichi activities since 2011 (NEC official website, 2011). Teams and individuals from the entertainment industry (e.g. izanai さん) also supported the Minami-Sanriku by giving performances (United Earth website, 2011).

Initially, the aim of the first Fukko-ichi was to create the atmosphere of a normal market, such as commercial dealing, social gathering and entertainment and to bring a vision of hope for community recovery, but it ended up with new functions such as safety confirmation and reconnection. Given that after the disaster people were scattered and evacuated to different places, it was hard to confirm individual whereabouts. The Fukko-ichi brought people back to the heart of the town. Yet it not only brought those relevant community members back to Minami-Sanriku but also attracted many outsiders to visit as a way of support, as described by a local shop owner,

> Some visitors have long connections with Minami-Sanriku where various community events were held before disaster. Others are tourists, volunteers, and people from neighbourhood communities and corporate employees. Even buses were arranged by the Japanese Naruko Onsen Ryokan (Japanese Holiday Inn with hot spring bath) for those who evacuated to their Inn to visit here. It was really a collaborative effort….. People were hugging and crying when seeing each other alive. This feeling of escaping from death made me feel more connected to my town and people…..the first three Fukko-ichi (restoration market) were like 'hugging and crying Fukko-ichi' ... It became a place for safety confirmation and reunion. (Interview, local fish store owner).

There were around 15,000 people attending this market and without Kizuna, it would have been impossible to hold such an event successfully. Strong ties among community members and their connections with outsiders were critical for immediate support (evidenced in the form of self-help, mutual help in the process of evacuation, operating the shelter lives, managing resources etc.). This strong Kizuna or Tsunagari (human connection) among community members, together with new Kizuna / tsunagari developed in the aftermath of the disaster with outsiders further enhanced the disaster recovery.

Arguably, it is social capital that made the first Fukko-ichi with zero economic capital possible to continue to thrive today. The 79th Fukko-ichi was held on May 27, 2018. Now local people are able to run the Fukko-ichi themselves and continue to operate on the last Sunday of each month since 2011 as local people described “human connection is the most important treasure of our town”. Reflecting on my own participation in the Fukko-ichi, I could still feel the joy in people’s faces when customers say ‘Oishi (means so delicious), I want to come again’. The visitors’ support has given them motivation to re-start their businesses. For a community with an issue of depopulation, it is important to have transient population and bring people back. The scene of the Fukko-ichi is still fresh in my mind: local producers bring their products to the market. For example, fishermen bring fresh seafood such as sea pineapple, oyster, clam-digging, sea urchin, coho salmon, octopus, scallops, horsehair crab, codfish, seaweed etc. while farmers bring fresh vegetables and fruits; craftsmen showcase their craftwork etc, other kiosks are busy with preparing delicious food. Visitors came from different prefectures, some even came from further than Tohoku to buy fresh seafood or eat here or just to meet people here. The themes of the Fukko-ichi often are flexible and they are often based on the seasonal seafood of Minami-Sanriku (see the figure 15 below) as the ‘star’ product in combination with other products. For example, the sea pineapple harvest is in May and Coho salmon is best in June so that they could offer the best seasonal foods for the visitors while enhancing the product outlets to help them recover.

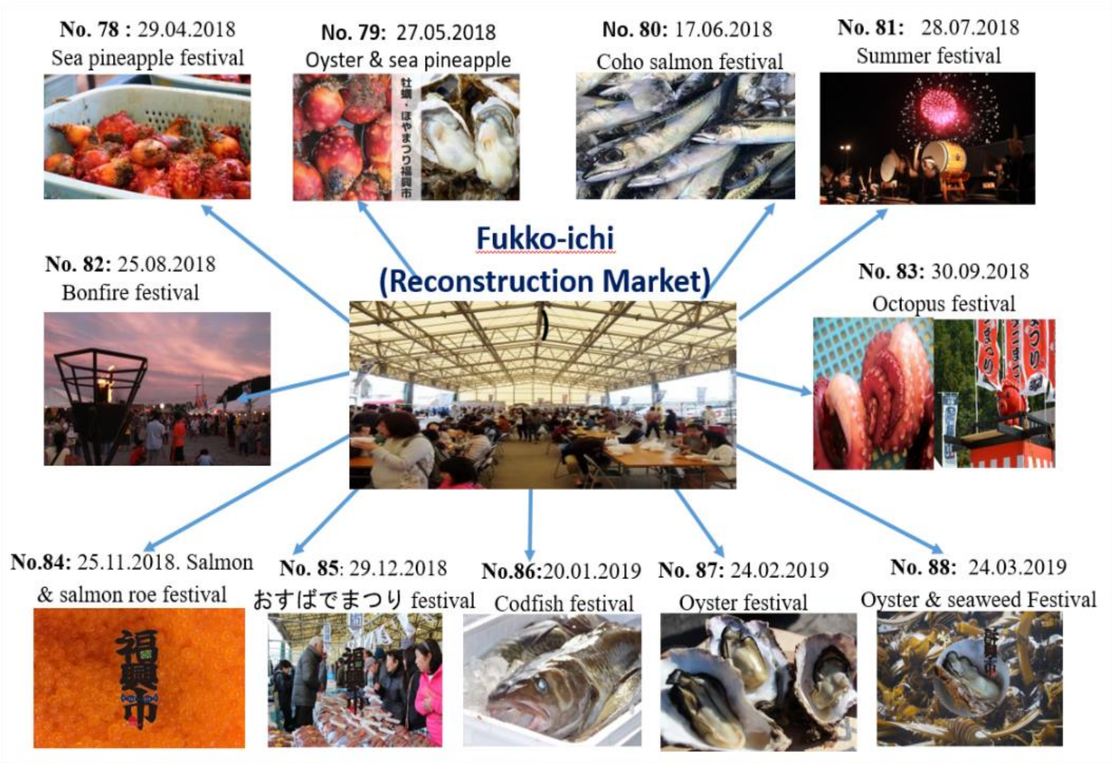

No. 78 : 29.04.2018
Sea pineapple festival
No. 79: 27.05.2018
Oyster & sea pineapple
牡蠣・ほやまつり福興市
No. 80: 17.06.2018
Coho salmon festival
No. 81: 28.07.2018
Summer festival
Fukko-ichi
(Reconstruction Market)
No. 82: 25.08.2018
Bonfire festival
No. 83: 30.09.2018
Octopus festival
No.84: 25.11.2018. Salmon & salmon roe festival
福興市
No. 85: 29.12.2018
おすばでまつり festival
No.86:20.01.2019
Codfish festival
No. 87: 24.02.2019
Oyster festival
No. 88: 24.03.2019
Oyster & seaweed Festival

Figure 15: The schedule of the Fukko-ichi from April 2018 to March 2019.

As one of the local seafood producer comments,

> Fukko-ichi was great that I can sell products directly to the customers. I can see their direct feedback. I have on-line shop but I could not see the customers' response. It was really great to see the customers' face expression, saying 'it is delicious', which really motivated me. There were a lot of people who visited Fukko-ichi, then became regular customers here. In addition, I have the opportunities to meet a lot of other producers who sell products in the Fukko-ichi, knowing everybody is making effort to revive Minami-Sanriku …. The network is expanding through Fukko-ichi (Minami-Sanriku Public Information, 2018, p.16)

This echoes with one of the volunteers who shared her experience of the Fukko-ichi in the report of Minami-Sanriku Public Information,

> I first visited Fukko-ichi as a volunteer from Okayama because of the connection of the Kasaoka Disaster Prevention Asaichi Network with Minami-sanriku. I have visited the Fukko-ichi for 45 times. At beginning, I participated with the group but now I came here individually. The beauty of Fukko-ichi is its ‘human connection’. I first visited here only thinking if I could do anything to help, but now, instead, each time I get inspiration from people here. I feel motivated by their smiling and their spirit. I like people here I want to keep this connection and it is my dream to live in this town someday. Actually I am going to spend one third of my time working here from June. I want to be the person to bridge the connection between Okayama town and Minami-Sanriku town. (Volunteer, Minami-Sanriku Public Information, 2018, p.15)

Another visitor to the Fukko-ichi whom I volunteered with commented,

> I like the Fukko-ichi, because each time I come here there is always delicious food based on the seasonal seafood produced in this area. I often go back Tokyo with a lot of Minami-Sanriku products… being here and my consumption is my way of support….

In the seven year anniversary of the Fukko-ichi, President of of Fukko-ichi Executive Committee revealed his feelings about Fukko-ichi to Minami-Sanriku Public Information,

> We had nothing to sell when we started, but it was the support from the shopping streets of different areas that made the Fukko-ichi operation possible, which I really appreciate. It was great that the Fukko-ichi was initiated because it was the first time after the disaster that we could have a place where we could do some shopping and also a place where we could meet our neighbours. It was

> the happiness shown from the local members that made me feel an obligation to continue. Since then we continue monthly. I did not expect it to continue that long but nobody wants to give up. Immediately after disaster, local business owners thought they could not start their business soon, but through Fukko-ichi, business transaction became possible, which gave them a light of hope for the future…. (President of of Fukko-ichi Executive Committee)
>
> …Through fukko-ich, we showed the spirit and persistence of our business owners in Minami-sanriku. The town's various events were also supported by small business owners. For example, local festivals were supported by local small businessmen…. In addition, since the first Fukko-ichi, local children were asked to help. Through Fukko-ich, the children could learn aboutbusiness ethics, gain their business interests, communicate with customers. The Fukko-ichi became a place for social leaning. (President of Fukko-ichi Executive Committee, Minami-Sanriku Public Information, 2018, p16).

By May 27, 2018, Fukko-ichi has been operated 79 times. More than 880,000 people have visited the Minami-Sanriku Fukko-ichi (Minami-Sanriku News, 2018). The impact of Fukko-ichi not only shows the immediate economic effects that the visitors brought but also the impact on the social wellbeing of the disaster-affected people and opportunity for children to learn how the older generation are dealing with these challenges.

6.3.3. Reconstructing the temporary Sun Sun Shopping Centre

In a similar vein, the town shopping centre was washed away by the 2011 tsunami to be replaced by the temporary Sun Sun Shopping Centre in 2012. Community shops in Minami-Sanriku are seen not only as important spaces to provide essential services for the community, but also as a key venue to perform social events and community activities. One of the community leaders noted that, ‘the atmosphere of depression and lifeless after the disaster needs to be changed… the shopping street is associated with the bustling, energetic atmosphere which are a necessity for daily life, so we want our shops back. ..’ Around 30 pre-disaster shopper owners with the support of Minami-Sanriku Chamber of commerce abandoned established market driven norms of doing business and returned to a traditional model of Kyo-jo (Japanese, meaning collaboration). They rebuilt the temporary Sun Sun Shopping Village by mapping what had been left after the disaster and sharing their own resources with others to restart their business collaboratively, rather than competing with each other. Their collaborative efforts can be seen from the initial planning of the Sun Sun shopping village to the operation of the shopping village as shown in the comments by those shop owners,

> I used to be a chef before the disaster. My store was swept away by the disaster…Within one month after disaster I started to prepare meal boxes for people in this area and began selling meal boxes under a tent. One hundred or two hundred boxes were sold per day. I wrote on the cardboard that I was selling the meal box to let people know I was doing the business. I seek not just to make a profit, but also for people to know where they can get some food and supplies and feel the sense of security. Many people still live in the shelters. They did not know where to go and what to do. I worked from 4 am in the morning preparing the meal box by candle light and serve them to people in this area. (Speech in the workshop by chef)
>
> Four months later the electricity and water supply came back … It took six months to build the temporary houses. Some people lost houses and family

> members and lived in the temporary house on their own and were isolated…no place to go. .while some families had to separate in two houses because the temporary house was so small.…. I was thinking what I can do to help other people….I was thinking to open a shop but my shop space was small with very limited capacity for customers. At that time, one of my friends who was then a BBQ fish restaurant owner, was interested in my idea and suggested that we could do it together. He said that we've got big space available in this area, why not write a proposal for building a shopping street? Therefore, we did and by April we can see the great potentials of implementing our proposal. We had meeting and about 100 shop owners made applications to join in the shopping street and 30 were selected (Restaurant chef).

Similar function to the Fukko-ichi discussed earlier, the temporary shopping street gave people a sense of belonging and hope. It provided a place which not only met the need of buying daily necessities but more importantly, offered social space for those living in temporary houses, enabling them to meet together and share stories. "Otherwise we would talk about the sadness. For example, who has died and who was missing from morning to night which would make us so depressed…. So it was very important to have such kind of business and to have some hope for ourselves and for the future." (Interview shop owner).

Some community members took the lead and were determined to bring the vitality of their shopping village back, to provide a space for people to re-start their lives and promote their products as well as to hold their cultural activities despite the difficulties of rebuilding out of the debris, as the restaurant chef explained, The reconstruction application procedure for rebuilding the shopping street through government was so complicated, but if everybody was responsible for their own field with expertise, it might simplify the process including the reconstruction of the Sun Sun Shopping village. At the initial planning stage, I happened to meet some people, who have shown similar interests, but everyone had their own opinions, and everyone had their own priorities. As it was something that had direct impact on their lives, their voices should be heard, but we need to have someone to bridge the links and make a balance. We had to compromise and negotiate otherwise it would be impossible to achieve anything. (Chef)

My store was located in another building around the intersection. I attended the initial meeting of seven members regarding the establishment of Sun Sun shopping village in early May. In the early stage of planning the shopping village, the staff from the Chamber of Commerce suggested that the key to the success of shopping street depends on how fast you could reach agreement and set up the shopping village. The staff from the Chamber of Commerce wanted to confirm the plan as soon as possible. Initially there were more than one hundred people attending the meetings, but some of them quit due to the difficulty of reaching agreements and some other personal reasons. Our stores were open on 25 February, 2012. We had some invited speakers to give guidance on the stage of developing ideas for building the shopping village. We had more than 30 meetings. Thanks to these meetings, the shopping village was established. (Bakery shop owner)

> If you want to be successful for your own business, you need to make joint efforts to create a better environment of the shopping village as a whole. (President of the temporary shopping village)

> We did not have close relation with all shop owners before the disaster, but the disaster has brought us together and we were determined to work together for recovery. I think this attitude became a positive connection for our shopping village. ” (Bakery shop owner)

The traditional concept of Kyojo (Collaboration) is the key discourse found in the process of rebuilding the Sun Sun shopping street in Minami-Sanriku despite a lot of difficulties in the process of post-disaster recovery. They made joint efforts to live in harmony, as one of the restaurant owners reflected,

> We care about not only our own shop but also the shopping street as a whole. For example, some visitors throw the rubbish here and there, if we see it and we will pick up so that the tourists will follow our examples and not to throw away the rubbish randomly. This also has positive impact on other stores. We all work together and create our shopping street. (Interview, shop owner)

> We reached an agreement that we would try not to have same menu as the other restaurant. For example, if one restaurant has this dish, other restaurants would try not to repeat. So in this way, we could live in harmony. At the beginning, fewer stores wanted to be interviewed, but now more and more stores are happy to be interviewed and it is a good marketing strategy, as we also have shops in other areas, apart from shops in the shopping village. We created a seasonal speciality for PR strategy. For example, our special dish Kirakira-don is very

> popular and has received good feedback. Many tourists came here for this dish. (Restaurant owner)

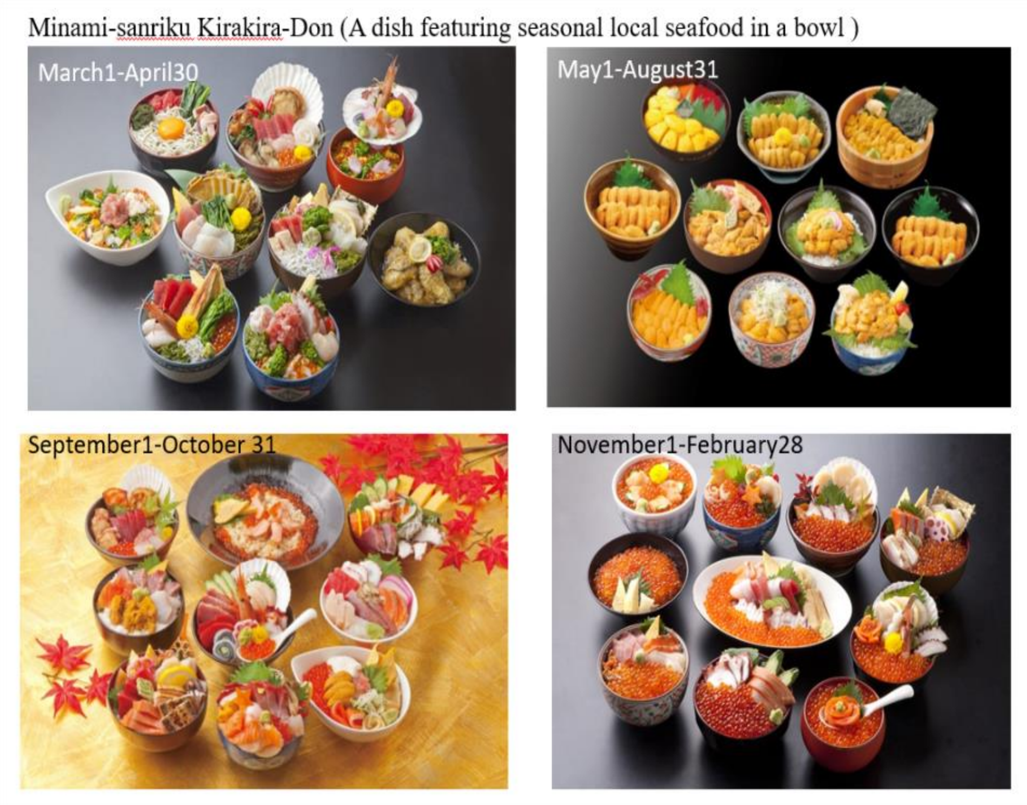

Minami-sanriku Kirakira-Don (A dish featuring seasonal local seafood in a bowl)
March1-April30
May1-August31
September1-October 31
November1-February28

Figure 16: Minami-Sanriku Kirakira-don

Kirakira Don (A dish featuring seasonal local seafood in a bowl) was initially created in 2008. It was interrupted by the disaster but was revived as a token of recovery when the temporary Sun Sun Shopping Street was open in February 2012. According to the Town Tourism Association (2018), there were 10 restaurants providing Kirakira Bowl in Minami-sanriku (See figure 16). Instead of competing with each other or keeping the best seller menu for own profits, the best seller of local seafood recipe was shared to other restaurants to co-create a local food speciality Kirakira-Don as a way of food branding the town. This shared goal of rebranding their town became a motivation and linked their lives together.

> The stores played a role of connecting people together. The local communities, fishermen communities also made a great contribution with their collective wisdoms to enhance the relationships. Some seasonal seafood speciality was co-created by fishermen and restaurant owners in order to attract the visitors….. Through word-of-mouth, the branded name will be spread out and attract more visitors…If you asked what were most important for building this place, I would say, I would like to create an environment that you felt it was cosy and pleasant, when you reflected your experience of being there, rather than a place giving you a feeling of depression and traumatic experience as the news reported or a feeling of pressure to compete" (Shop owner)

His view clearly indicates that the shared goals enhanced bonding social capital within the community and pushed them to make a joint effort to achieve the goal of attracting more visitors. He also revealed the positive expectation of building such a business environment which was cosy and pleasant and his resistance to the place being perceived as a place of depression by the news and media. This community-based planning in rebuilding the shopping village can be seen as their way of machizukuri / community building and it worked well. Murakami and Wood (2014) suggests this approach is more flexible to meet community's needs in opposition to top-down government-led planning. However, this certainly should not be an excuse for government to leave all responsibility to locals to rebuild on their own in a name of enhancing Japanese philosophy of "self-reliance". Self-reliance and mutual help are important community assets. The strong community ties facilitated the establishment of the temporary shopping village, but their long term recovery and development were constrained by existing issues such as limited resources and falling population etc. and they need external support and bridging social *capital* as the shopper owner comments,

> "We do not seek just for our own profit; the most important is the human connection. ….Even the community-run food kiosk 'on the move' was not for profit-making but to reassure other local people that you are not left alone fighting against disaster…we need to work together to find way out..." (Interview, Small business owner),

He continued,

> We started making pamphlets for propaganda one month prior to product promotion. For example, if we wanted to sell the products on March, we would start taking photos for making the pamphlets in February. We collaborated with the Bus Company at Sendai and made a special all-inclusive travel set for the tourists. For example, if the tourists pay 5,000 yen, it will include bus transportation fee, Kirakira dish, 500 yen vouchers for souvenirs. This was the fifth time for us to issue this type of tourist set. Our restaurant is the most popular one. Tourists sometimes see the long queue in front of our restaurant but they still will join the queue and become our customers. (Interview, Restaurant owner)

> Finally the media facilitated the progressions. The positive media coverage made us motivated. At the beginning, we did not know what to say to media, but when we were asked about the food recipes and ingredients, we've got a lot to say. This also helped us to build up more connection and receive more support (Interview, Restaurant owner)The colourful flags outside the buildings showed evidence of how social connection helped disaster recovery. These signed flags (see figure 17) were sent by the Japanese Football League in support of the community, which could inspire more people to follow suit and

attract more visitors to come, so that the human connections are developed, as one of community business members’ comments,

> I have been thinking that the most important thing is “human being” during the process of disaster recovery. By now the business we are in is to manage these relationships. I think many problems/issues can be addressed properly as long as we are honest and communicate well with each other. We could build up the trust relationship if we show our concern of others. (Interview, Businessman)

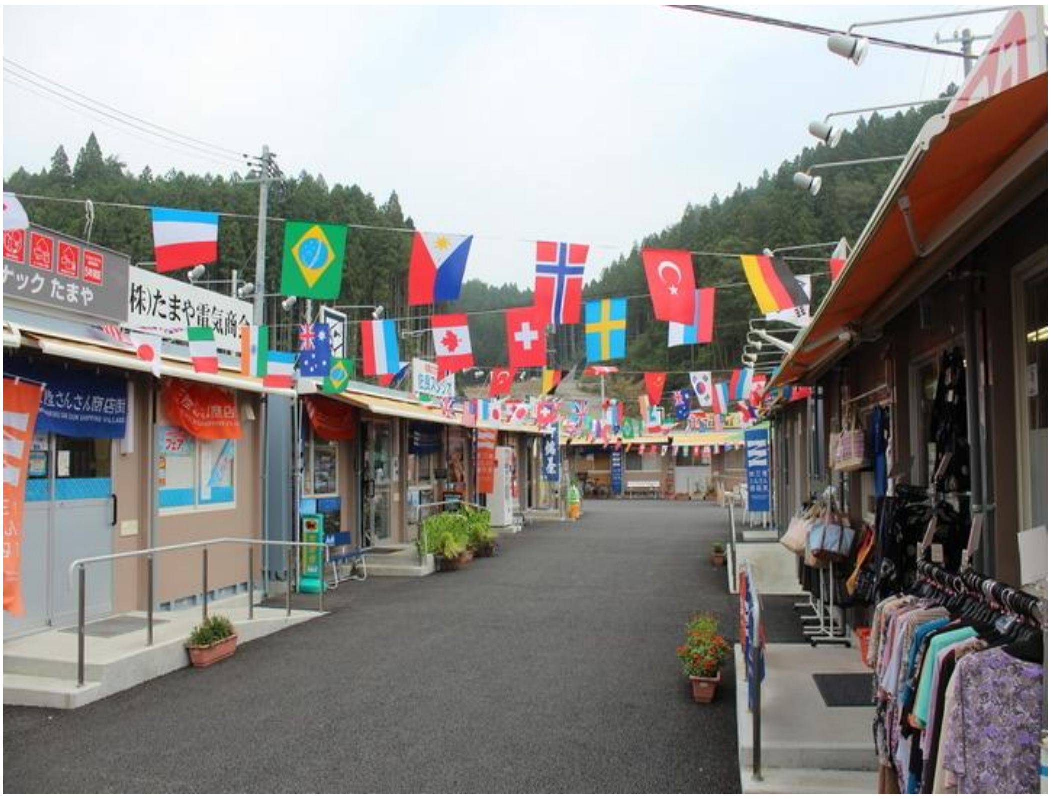


Figure 17: Temporary Sun Sun Shopping Street

The very elements of social capital such as trust, social connection, and networking etc. have become a collective narrative in many disaster reconstruction stories. It helped rebuild the temporary Sun Sun Shopping Street for locals to reconnect and engage with insiders and outsiders.

In short, this section indicates that ‘bonding’ social capital has been utilized and strengthened, in the operation of evacuation shelter lives; bridging social capital has been developed during the process of rebuilding the town’s Fuko-ichi (Reconstruction Market) and temporary Sun Sun Shopping Centre. The strong community ties helped them to reduce the casualties through place-based knowledge and experience, enhanced mutual support to overcome the hardship, and to re-start lives and businesses. Yet, bonding social capital alone is insufficient to rebuild the community effectively and to “build back better” given the severity of the disaster and the priority of government support on infrastructure reconstruction. Throughout this section, one of the most important themes that emerged was the “human connection”, the connection within the community (bonding social capital) as well as with outsiders (bridging social capital) but what are the strategies for retaining such connections and further enhancing social capital?

Chapter Seven: Strategies to enhance social capital.

The existing community ties were temporarily disrupted by the tsunami but the post-disaster hardship encouraged them to work collaboratively and led to the community ties becoming even stronger. Initially, the bonding social capital was effective for re-establishing local businesses (see the case of the re-establishment of the market, Sun Sun shopping Centre etc.), but local consumption remained limited. Coupled with the existing long-term issue of depopulation of rural areas, this posed a real challenge to running businesses in a sustainable way. One crucial aspect for rebuilding the business community was being able to retain the community connections built immediately after the disaster and engaging the community and other parties to work collaboratively to bring back the vitality of the place. The data suggests that bonding and bridging social capital were strengthened through various bottom up approaches to tourism. The following case studies of Iriya Learning Centre, Yes Factory and Blue Tourism illustrate this in more detail.

7.1. Overall strategies and tactics for each case

The tourism was used as the main strategy for enhancing *bridging social capital*, yet each case study had its own tactics to implement the strategies dependant on its unique circumstances. For example, the Iriya Learning Centre is a case that illustrates how young people were attracted to visit the town through the development of learning programmes/tours based on the optimization of local resources. The design of these community-led “learning by experiencing” tours was built on both human interaction and the relationship with the environment with the view to teach young generations about disaster experiences and sustainable reconstruction and to nurture future community leadership roles. The establishment of the Yes Factory not only addresses the practical issue of limited job opportunities in this disaster-affected town but its main product ‘Octopus’ came to represent the spirit of the town as part of a branding strategy for revitalizing the town by making traditional culture, craft-making, local knowledge central to the reconstruction effort. Thus, in the case of the Yes Factory, the tactics for recovery were to place the sustainability of the environment, community and traditional social and cultural values at the centre of the regeneration process. The ‘Octopus’ was used to reflect and disseminate the uniqueness of the town. Finally, Blue tourism was co-created by the local fishermen and visitors/tourists to counteract the hardship of post-disaster development and achieve sustainable disaster recovery and tourist satisfaction simultaneously through interaction between locals and visitors. Its co-creational ethos and concentration on beauty of nature, social and environmental sustainability helped transform some of the negative narratives of loss associated with Dark Tourism into positive accounts of communal renewal and hope.

7.2. The case of Minami-Sanriku Learning Centre (community-led tours and social capital)

7.2.1. The establishment of the Learning Centre

In the chaotic situation that followed the tsunami, the difficulties were not only to manage the logistical challenges of a large number of displaced residents but also to coordinate outpouring support provided by NGOs and volunteers. As the coastal areas Shizugawa and Utatsu were greatly damaged by the tsunami, Iriya, located in the mountain area of Minami-sanriku, served as an important place to receive volunteers and to coordinate their activities. On the one hand, the idea of establishing a Minami-Sanriku Learning Centre was partially triggered by the need to accommodate student-volunteers from Taisho University, link their support to the community’s need while passing on their disaster experiences to the younger generation. On the other hand, the community needed to find alternative ways of surviving and re-organizing their lives.

Under such circumstances the Minami-Sanriku community-based Learning Centre (see figure 18) was established by local members. With the funding support from Taisho University, teaching and learning facilities along with accommodation buildings were set up in 2012 and the Learning centre was further expanded through networking with more Universities and Corporates in order to enhance disaster recovery.

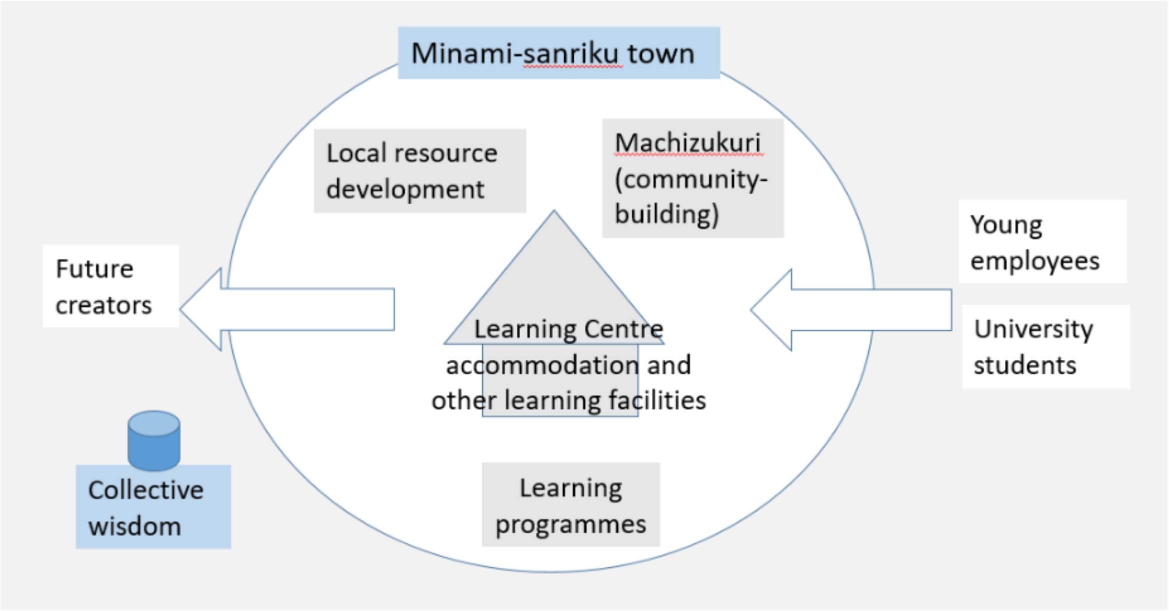

Minami-sanriku town
Local resource development
Machizukuri (community-building)
Future creators
Young employees
University students
Learning Centre accommodation and other learning facilities
Collective wisdom
Learning programmes

Figure 18: Minami-Sanriku Learning Centre

Source of figure: Minami-Sanriku Learning Centre, 2012, reproduced by author based on the figure on Learning Centre website in Japanese.

This picture from Minami-Sanriku learning centre website visually demonstrates the purpose of establishing the Learning Centre. As the founder of the Learning Centre explained to me,

> We hope that more visitors in particular the young employees and university students would visit Minami-sanriku. Young people are future creators of our town. The role of the Learning Centre is not just to provide the accommodation

> and learning facilities, and implement the learning programs but also ensure that local resources are sustainably developed through communication with university students, organizational employees and local people. It also serves as a social space for local people to play their role in the Machizukuri (community-building) and disaster recovery. Therefore, the knowledge co-produced with students, employees and other visitors could contribute to overall recovery (Informal conversational interview)

Initially the learning centre was designed for volunteer groups (mostly students and young employees) to take part in community-led “learning by experiencing” tours while doing some volunteering work, but it was soon expanded to receive a wider population including corporate businesses (CSR practice see figure 21), networks of University-community partnerships, students from the Research Institute of Regional Studies and other volunteers and individuals. It is a case in point to share with them the community’s strategies for enhancing social capital. Potentially these people could be future leaders of the community.

The frequent occurrence of disaster in Minami-Sanriku could be another reason to justify the need to establish the Learning Centre for disaster education. As a disaster-prone area, Minami-Sanriku has experienced some large earthquakes and tsunamis in its recent history and it is predicted that another major quake is likely to occur (The Japanese Cabinet Office Disaster Management Team, 2016). Based on the Disaster Awareness survey, more than 60% of people expect that a major disaster will occur, but less than 40% are making sufficient preparation (Cabinet Office, 2016), so it is important to develop disaster training programs, and pass on disaster knowledge to the younger generation.

A further justification for the establishment of the learning centre was its aim for community disaster recovery such as its role in Machizukuri and local resource sustainable development during the process of community reconstruction. Based on the 2016 learning program catalogue, it presents three training categories including disaster learning, interaction programs with the locals, and sustainability education. All these programs are designed based on local resources. These courses can be run independently or combined with others based on the intended learning outcomes and visitors' needs. The courses enrich one another with an emphasis on the harmonious coexistence of human and nature though each has its own learning focus, as shown in the official website of the learning centre (as of 2015) that the forest, rural area, sea, people should all be interconnected and "we want our visitors to see the human-nature connection". This was in fact in line with the town reconstruction plan for tourism development and its emphasis for sustainable development between mountains, oceans, and human well-being, which was inscribed in leading projects such as increasing permanent population, transient population, branding the town project, diverse community reconstruction project and regional cultural study project (Minami-Sanriku town website, 2016). Both the design of the learning program catalogue and Minami-Sanriku town plan, reveal important elements of the human connection and the connection between human and nature for reconstruction. In addition, this design adopted an integrated learning approach that combines school-based and community-based learning, which has been advocated by many scholars as an effective learning approach (Shaw, Takeuchi and Rouhban, 2009; Becker, 2000). Though the learning effectiveness is not the focus for my discussion, arguably, the effectiveness of the community-led learning tours and positive feedback from students, could be useful in attracting more students to participate in learning, which would in turn enhance the social capital, reach a wider population and contribute to the community sustainability recovery.

In addition, this design was also problem-driven, as explained by one of the initiators of the Learning Centre, who pointed at the picture (figure 18) and gave me a further explanation,

> Depopulation and aging society have been serious issue for quite long, in particular in the rural area; the primary industry is on the decline as many young people left for education in the city and many of them do not like to go back to work in fishery and agriculture industry. We need people to come back, we need more people to visit our town. (Interview, one of the founding members of the Learning Centre)

He continued,

> If you notice the picture in Learning Centre official website….. One of the aims of the Learning Centre is to nurture young community leaders, so we hope the Learning Centre will bring more young people to the town. Our future is in the hand of young people. Machi-zukuri is not a new concept but we lack future community leaders, who could make Machi-zukuri work more effectively.

This concern is also expressed by one of community elders, who gave a speech in a workshop,

> Our next thing will be to train the next generation who can take the job for reconstruction, because I am 55 years old. Abe and I are similar age. We believe it would still take another five or ten years to rebuild this town. Now it is us who came up with all these ideas for reconstruction but in the long term people

> in their 20s and 30s need to take the job. In doing so, I think it is very important to convey the story and the facts of tsunami to the younger generation so that they can prepare for the future disaster in case if anything happened. I fortunately survived from the earthquake, but if we had done a better job of information management and crisis management, we could have been saved more lives. What we need to do now is to establish a base for reconstruction. Many people live in this town but I believe it is our role to prepare the environment where they can return to when they feel it is ready for. (Speech, Chef of the Learning Centre kitchen)

The community leaders have expressed their deep concerns with the existing issue of depopulation, relations between young and old generations, future development of the town, their expectation for the next generation and the objectives of the Leaning Centre. Potentially the learning design could help address their concerns, building up the connection between the generations and passing down the disaster knowledge to the young generation and developing human capital from the enhanced social network.

Optimistically, the Learning Centre was designed in a way that could facilitate the community's bottom-up approach to be integrated into the reconstruction and development of the town in response to criticisms regarding missing links between government services and community's needs (Nakagawa and Shaw, 2004) and the lack of local community's voices in the process of reconstruction. This view was shared by Hein (2002) and Healey (2009) that community building/making should be integrated for future planning activities via further decentralization and strengthening of community activities, social networks and collaboration among stakeholders. The founder of the Learning Centre pointed at the a presentation slide (see figure 19) with the title of “Nanabi de tsunagaru tiiki shinko purojekkuto” (Regional reconstruction projects connected by learning) and proudly explained to me,

> Our project has brought around 20,000 visitors here yearly. Our visitors range from students and employees for study tours, university staff, students from research institute and regional revitalization department, University networks and general tourists. Our learning programs have expanded from disaster learning into agricultural experiences at Onokuri Farm, fish processing and food design at Fish Market Kitchen, bio-diversity learning at Hanamiyama Land, Wine project at Non-Koubo (Agricultural Farm), character product design and development at Yes Craft Factory, forestry sustainability learning and wooden products design etc….Our learning programs connected a lot of local businesses together, which collectively contributed to community recovery.(Interview, one of founding members of Learning Centre)

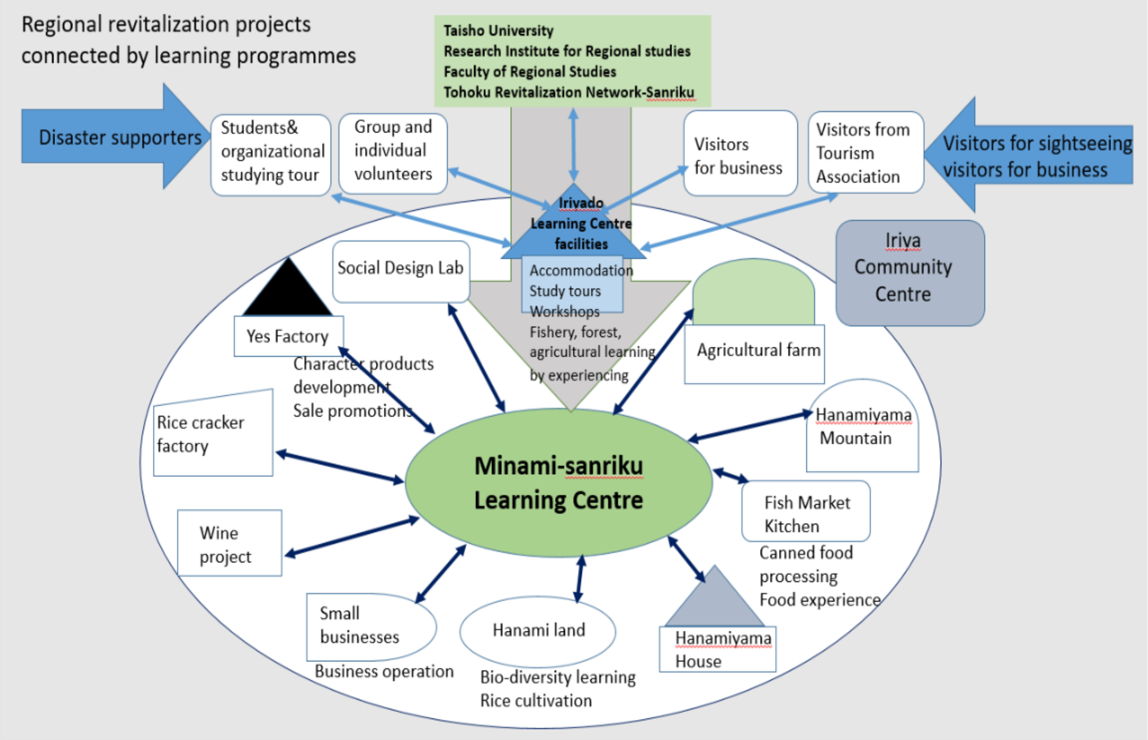

Regional revitalization projects
connected by learning programmes
Taisho University
Research Institute for Regional studies
Faculty of Regional Studies
Tohoku Revitalization Network-Sanriku
Disaster supporters
Students& organizational studying tour
Group and individual volunteers
Visitors for business
Visitors from Tourism Association
Visitors for sightseeing visitors for business
Irivado Learning Centre facilities
Accommodation
Study tours
Workshops
Fishery, forest, agricultural learning by experiencing
Iriya Community Centre
Social Design Lab
Yes Factory
Character products development
Sale promotions
Agricultural farm
Rice cracker factory
Minami-sanriku Learning Centre
Hanamiyama Mountain
Fish Market Kitchen
Canned food processing
Food experience
Wine project
Small businesses
Business operation
Hanami land
Bio-diversity learning
Rice cultivation
Hanamiyama House

Figure 19: Regional revitalization projects connected by learning programmes.

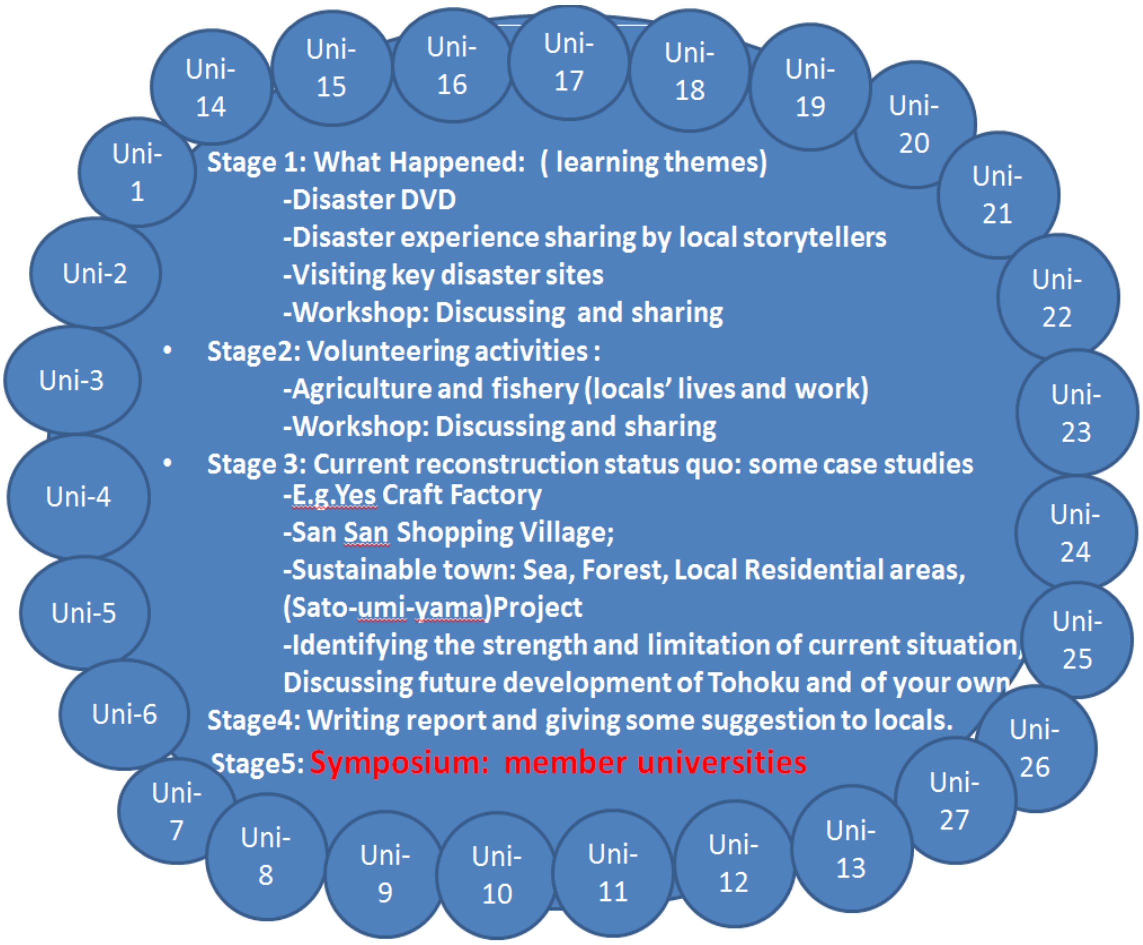
(Source: presentation slides by Abe, 2017 in Japanese at Miyagi prefecture Community Centre Employees' career training, translated by the author.)

Whilst the learning design served the overall purpose of reconstruction, the efforts of enhancing social capital still remained a priority. As the picture above shows, it encourages a wider range of participants including both local members and visitors and optimized use of local resources as well as facilitates community-building (Machizukuri in Japanese) and recovery through knowledge sharing and co-production. Internally it involves many sectors within the community such as fishery, agriculture, marine, small businesses, local restaurants and local guides, to work collaboratively for rebuilding the community. Externally the Learning Centre enhances the awareness of disaster and risk deduction to the wider population by bridging social capital (e.g. disaster supporters, volunteers and tourists) for community recovery. One of the tactics to enhance social capital was to develop partnerships with educational institutions and organizations and utilize place-based resources, knowledge and traditions.

7.2.2. The development of partnership with educational institutions and organizations

A clear example of bridging social capital was the establishment of the University-Community partnership, Tohoku Revitalization Network-Sanriku. Tohoku Revitalization Network-Sanriku was launched to build up networks among universities and communities and facilitate education, disaster recovery and regional development for 10 years starting from 2012 to 2022 (Taisho University website, 2012). About 27 private universities in Japan have joined the network (see figure 20 below). Though they are part of a network, they are flexible to work collaboratively or hold the activities separately (Taisho University website, 2012). Students of these universities

(Tohoku Revitalization Network-Sanriku) are encouraged to join the learning tours not only for Tohoku revitalization but also for students' self-development.


Uni-1
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Uni-21
Uni-22
Uni-23
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Uni-27
Stage 1: What Happened: (learning themes)
-Disaster DVD
-Disaster experience sharing by local storytellers
-Visiting key disaster sites
-Workshop: Discussing and sharing
Stage2: Volunteering activities :
-Agriculture and fishery (locals' lives and work)
-Workshop: Discussing and sharing
Stage 3: Current reconstruction status quo: some case studies
-E.g.Yes Craft Factory
-San San Shopping Village;
-Sustainable town: Sea, Forest, Local Residential areas, (Sato-umi-yama)Project
-Identifying the strength and limitation of current situation, Discussing future development of Tohoku and of your own
Stage4: Writing report and giving some suggestion to locals.
Stage5: Symposium: member universities

Figure 20: Tohoku Revitalization Network-Sanriku: activities of a typical learning tour.

From the Tohoku Revitalization Network-Sanriku initiatives (see figure 20) launched by Taishuo University, we can see that the connection with Minami-Sanriku Learning Centre has been expanded from one university, Taisho University to 27 universities. As the figure shows, a typical learning process for each trip often starts with a brief introduction of the learning theme along with a video demonstration or interpretation from local storytellers before actually visiting the disaster sites. Then it is followed by volunteer activities which provide students an opportunity to experience the real situation. Then students are given some more specific cases to understand the current reconstruction status quo, identifying the strengths and limitations and discussing the future development of the town. At the end of the trip, students are asked to write a report and give suggestions to the locals and a symposium would be held amongst member universities.

As the trip co-ordinator commented,

> Students from Tohoku Revitalization Network-Sanriku participated in the study tours voluntarily as a way of supporting disaster-affected areas. I hope, the value of the collaboration, as an alternative to competition for disaster recovery, which was embraced in the crisis situation manifested in the community-led learning program, could be passed down to students through the university educational trips. Students can also learn some problem-solving skills by actually participating in the field (Trip coordinator).

It is clear that the educational trips have a dual purpose: to contribute and to learn. As an education institution, Taisho University has demonstrated university social responsibility and has set a good model for students to follow. Immediately after the disaster, Taisho University led 147 students and staff to participate in disaster volunteer activities and 446 students in fund raising. Further disaster support was provided by setting up the Tohoku Revitalization Network-Sanriku, in which other universities were encouraged to join the network to facilitate the disaster recovery.

The learning tours and work for reconstruction were democratically organized in a way that learners/visitors were invited to participate in problem-based inquiry to generate reciprocal learning and collective knowledge for recovery. This allowed knowledge transfer as a two-way process: students learned from the community members and vice versa and they all contribute to the process of rebuilding. In this way “we felt part of the ‘build back better’ mission” (University staff). As one of the university students commented “I visited with two purposes: to learn and to contribute… but I was amazed by their achievements and spirit. They almost rebuilt their lives out of the debris, and they reinvented themselves and created more sustainable ways of living”.

This collaborative model of learning is reciprocal, not only enhancing learning for students but also helping to alleviate the impact of depopulation and enhancing the recovery of the community. The community’s concern of long-term local resource management was evidenced in the learning program that put emphasis on learning the traditional ecological knowledge transmitted from generation to generation while drawing on new ideas from the young generation. As commented by a partner farmer,

> “The Learning Centre functions like a medium, it has expanded its influences and networking with a lot of university students for disaster learning and support, and at the same time made the town more vibrant” (Interview, farmer)

By 2014 it had accommodated 5,571 visitors, and received 1,484 people on the learning program (Learning Centre Annual Report, 2014). It has continued to expand accommodating 9,289 visitors and 2,457 attending the learning programmes in the year September 2016 to August 2017 (Meeting documents at Iriya Community Hall, 2017). Potentially, some of these visitors and learners ‘can be future community leaders’ (Interview, staff). Profit is not the main purpose for this establishment, however, it does provide job opportunities for local employees, enabling them to earn their living. For both the community and the University, the collaboration is key to achieve their purposes, as the coordinator comments,

> “We have co-ordinated with the Minami-Sanriku Learning Centre and discussed what we wanted students to learn and what support we could offer. We

> definitely do not want the relations of exchanging services, like a business transaction, one paid the money, and the other offered the service. We value more the community's spirit of cooperation and mutual help in the crisis situation. We want to support the community and we also want students to learn the communal value. " (interview, project coordinator)

7.2.3. Research Institute collaboration with the local community

To further strengthen the community-university relationship, the Research Institute for Regional Studies, Taisho University in Tokyo, was established to collaborate with the local community. The collaboration includes research activities, regional coordination, public relation activities and human capital development with the expectation to nurture students as future community leaders.

Students as potential future community leaders

The Faculty of Regional Development at Taisho University started to recruit students in 2016 with the objective of addressing community issues, nurturing human capital /leadership and revitalizing the town (Minami-Sanriku Now Blog, 2016). As parts of the strategy of nurturing human capital and community leaders, students from the Faculty of Regional Development were arranged to have an internship in both an urban city and Minami-Sanriku town in turn for six weeks per year for four years, so that the perspectives learned from urban cities can contribute to regional revitalization, while local community perspectives might be useful to address some urban issues. Knowledge from the urban and local town including local community's lives, culture, customs, environmental, and industry etc. could be integrated into the design for regional revitalization (Minami-Sanriku Now News, 2016). The internship program in

Minami-Sanriku town crosses 9 different organizations such as Non-profit organizations, public sector, and private sector. The activities range from the revitalization of marketplace (Fukukko-ichi) planning, volunteer activities, product design and development, marketing and other organizational activities. For example, students are involved with the design and planning of the local community festivals and other activities that relate to community recovery.

This model of learning puts students at the centre. From the length of time and the scope for their internship, it aims to build up an emotional connection of the place. For example, the time spent working together and the shared understanding of the local culture create attachment to the place. The work involving nine different organizations/ sectors help create an overall picture of the community and train the students in the coordination skills. From the perspective of interconnecting theory and practice, this provides the students with opportunities to apply the theory in the real life cases. For example, those students who are involved in the revitalization marketplace planning (Fukukko-ichi) participate in volunteer activities, products design, marketing and town branding, via effective engagement with the locals' day to day lives. This builds up good relations with the locals, strengthens their problem-solving skills and their ability to ascertain the needs of the community and to articulate them on behalf of the community, which are the important skills-set of community leadership (Dhillon and Randle, 2005). Potentially, they could be future community leaders who can act as a link between communities and government services. Though the outcome is still unknown, it can be argued it is a different way of nurturing human capital or developing leadership.

Though the community-learning centre was initially established for accommodating volunteers and students who visited Minami-Sanriku for volunteering activities and disaster learning, it soon expanded to receive diverse participants. With the progress of reconstruction, the focus of training has also shifted from disaster learning to incorporate other training programs such as food design, community design, social and environmental learning, which in turn would attract a variety of people to visit.

7.2.4. The shift from disaster learning, to socio cultural learning and environmental sustainability learning.

7.2.4.1. The shift away from disaster learning

Education is a key element for reducing the effect of disasters (Shaw, Takeuchi and Rouhban, 2009). In order to make the disaster education more effective, schools and their formal education programmes became more linked to the community. Incorporating a field trip as part of learning the subject has become more popular as it benefits students by taking learning from the classroom out into the real world (e.g. Wiek and Redman, 2010; Rowe, 2007), thus providing a deeper understanding of theory and practice, and of shared experience. This was evidenced by the educational disaster tourism in Minami-Sanriku discussed in the previous session. Educational disaster tourism is seen to be linked to disaster recovery (Tucker, Shelton and Bae, 2016); its aim is only to achieve a pedagogical outcome, but also to facilitate the goal of community sustainable recovery. This is especially important for remote villages that depend on more traditional livelihoods such as agriculture and fishing (Robinson and Jarvie, 2008) when their lives have been disrupted by unprecedented disasters.

However, educational disaster tourism can be a very controversial issue for both researchers and practitioners. For example, Kingston (2016) questions whether Tohoku’s disaster tourism exploits or educates. Opponents claim that disaster tourism leads to the affected people “being the subject of unwelcome tourists gazing” (Coats and Ferguson, 2013, p32) while advocates argue that economic benefits are significant for those affected communities in particular when all their economic capital has gone with the tsunami, disaster tourism provides an alternative way of living. Therefore, it can be beneficial for the community if it is well managed. As educational disaster tourism in Minami-Sanriku was organized by local members, it was less likely to create conflict and more likely to optimize the usage of local resources and investment to meet the local community need for recovery and development. The expansion of the Learning Centre facilities was a case in point to show how these educational disaster-learning tours could enhance community recovery. The establishment of the Learning Centre and the university-community partnership was actually a result of the connection built through volunteer and disaster learning activities organized by Taisho University. The further expansion of the new accommodation building and training facilities in 2017 can be seen as a sign of the successful development of the Learning Centre. It has provided job opportunities for local people, boosted the community economy and also offered an opportunity for them to share their disaster experience and personal stories directly to visitors.

One of the key factors that enabled the Learning Centre to thrive in Minami-Sanriku was the ability of the community to respond quickly and sensitively to the dynamics of disaster reconstruction in ways that met local needs as well as those of the visitors. Learning programmes were adapted accordingly. For example, some organizations brought their employees there through NPO or other organizations for the purpose of new employees training regarding the social value of collaboration and responsibility or CSR practice (see figure 19). The design of learning included a combination of disaster learning and social learning and had as key messages the importance of human connections and the human-nature co-existence. The role of human connections and kizuna (bond) during the initial disaster response and the process of reconstruction was explained by a farmer as follows:

> The environment has changed a lot since the disasters. The sign of disasters became less obvious. The ruins and rubble have been removed since March, 2014. The volunteer activities also shifted from debris removal to the support of agricultural or fishery farm work. Some organizations simply came here to support us (the farmers or fishermen). No workshop, no tourist guides were needed. What they wanted was to work with us to let their employees understand the real situation and experience the hardship of lives, and build up the solidarity. Some other groups might require a brief tour for disaster education in combination with some volunteer activities. (Interview, Farmer)

The field trips were often guided by locals with expertise of the area, insiders who were very willing to share their first-hand disaster experience to others. Visitors had the chance to walk into local people's real lives and witness the post-disaster skeleton buildings and share their life stories, tsunami experience, ask questions, experience the hardship of their lives. This process would help build up an emotional connection between the locals and the visitors, as a student reflects,

> "This field tour with the farmer reminded me of the happy memory with my grandmother. I used to visit my grandparents and work in the field at weekend when I was fed up with city life and cityscape. … … I really appreciated the opportunity to know the disaster situation and see the progress of reconstruction and listen to local people's first-hand experience" (Interview, Student)

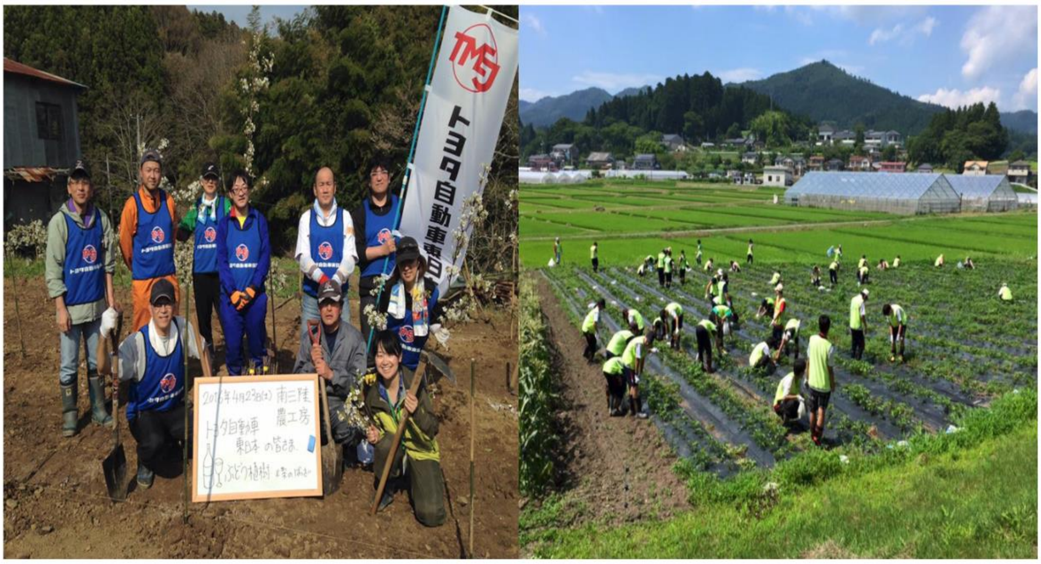
> The Learning Centre played an important role in publicizing the town, and the learning programmes attracted a lot of University students who brought a lot of new ideas to the town; it also provided more chance for local people to communicate with visitors. It was not only for visitors to learn, but also community members found out new things about their own town through learning programmes (Tourism Association employee)

This interaction between locals and visitors appears to enhance the two-way learning and empower the community members with updated knowledge and with the motivation to guide younger people to meet their knowledge inquiry. Conversely visitors' discussions and suggestions for improvement provide wisdom for future improvement for sustainable development. As commented by a local guide,

> "I learned a lot of new concepts and terminology from students and other visitors, such as CSR, social capital, human capital and sustainability. In fact we use different terms with similar meaning. …" (Interview, local storyteller)

A local resident commented,

> "Without volunteers help, we won't be able to get so much farm work done especially as we lack of young people doing agriculture work. You can see that large onion field, it would take me days to remove the unwanted plants and wheats, but students completed the whole onion farm land in a couple of hours. I want to share our traditional coping strategy for disaster to students and how we live our lives here. I am happy that students are interested in. By being able to answer the questions raised by students, I feel my life is more meaningful… " (Interview, farmer and fire fighter)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2016年4月23日(土) 南三陸
農工房
トヨタ自動車
東日本 の皆さま
ぶどう植樹

Figure 21: Employees and students volunteering in the Agriculture Farm

Therefore, pedagogically, for students, community-led learning tours could not only deepen their understanding of the disaster experience, local business practices, and their spirits of rebuilding the town and but also enhance public awareness of disaster and risk reduction. From the community perspective, it not only provides job opportunity for economic recovery, but also strengthens human connection, encourages co-learning, enhances social capital internally and externally for the sustainable development of the town.

7.2.4.2. Social cultural learning (Learning program: meeting locals)

“Compared to textbook and lecture, you can learn a lot more by meeting people” (Minamin-Sanriku Learning Centre website, 2015). This is a quote for advertising the program of Meeting People. In this Meeting People program, students have the opportunities to meet different people including those local people who lost everything after tsunami and learn how they made sense of their loss, and those outsiders who inspired by the locals, left their home city and came to Minami-Sanriku to support the community disaster recovery. The purpose for this program is to convey to the young generation the values that are guiding the community to live their lives after the disaster. Some local residents or employees would be invited to give a talk about their disaster experience or their careers in the town. For example, one of the learning programs entitled Finding Your Future Career was conducted by a group of young people who were volunteers for disaster support in the aftermath of the 2011 tsunami, but found inspiration to work in Minami-Sanriku. Their experience might also have positive influence on the young generation's future career decisions and social values. As one of organizers comments,

> "Their positive influence should be publicized as they have very positive influence on my students and became role model for them. It gave students an opportunity to reflect on their own life. I asked myself: if I were in her case, am I willing to give up my job in Tokyo? Can I bear the loneliness and livelinessless of the town? I really admire their courage."

Some comments from students further demonstrate its impact,

> "I was quite shocked, when I heard that she quit her job and her husband also quit the job regardless of the objection from their parents on both sides. To be honest, I would probably find it hard to make such decision. It really makes me think about the meaning of success. It is really great chance for me to see different life styles and life experiences" (Interview, student)

> "I began to doubt my values. He graduated from such prestigious university. Why did he wanted to live his life here?" (Interview, student)

> "I like this program in particular meeting the locals. It gave me chance to think about those concepts from context book and the local practice… in particular, I

> enjoyed the lecture “on the move”, walking through the green wood while learning about the forest management from local practitioners. To retain such beauty, we all need to make efforts to protect our environment” (Interview, student)
>
> “I was born here; I want to come back to work here. Even outsiders made such great efforts to support reconstruction. There is no excuse for me not to come back to support my own town.” (Interview, student).
>
> “I was quite happy to hear that the local people returned to the traditional way of doing business in a collaborative manner, rather than competition” (Interview, student)

From these comments, we can see that the program for Meeting People has quite a positive influence on the young generation to rethink their lives and social values and think about alternative ways of living. Potentially it could be an inspiration for students / visitors to visit, work, and live in Minami-sanriku. As one of the students said: “I decided to work here after I graduated as I was inspired by their spirit and I admire them. They actually changed the way I am thinking about life.” (Interview, student). My fieldwork host is another example, she used to work in Tokyo and came to Minami-Sanriku as a volunteer, but decided to quit her job in Tokyo and settle down in Minami-Sanriku. She told me that “I moved here as I like the nature here, the relationship is simple and pure, there is less competition, more harmony with nature and human.” (Interview, one of the fieldwork hosts). It is the feeling of connection: connection between people, connection between human and nature that makes Minami-Sanriku a very special place.

7.2.4.3. Environmental learning by showcasing local sustainable practice

Many education institutions have integrated fieldwork into sustainability education design; there is a demand for appropriate sites for sustainability education, but not all places are appropriate for fieldwork sustainability learning programs. Minami-Sanriku, with both great natural beauty and its vulnerability being located in a tsunami-prone area, the achievements made in sustainability, means it has great potential to design and implement sustainable educational programs for sustainable recovery and development.

Minami-Sanriku is a great fieldwork site for sustainability education program thanks to the great natural environment and the joint efforts of its people. Physically, surrounded by mountains and facing the Pacific Ocean, Minami-Sanriku has great marine resources and boasts a 77 % forest cover rate and fertile land but is also a disaster-prone area which was affected by the 1960 Chili Tsunami and the 2011 Earthquake and Tsunami. It is an area still in the process of reconstruction with the aim to be developed into a “bio-mass town”. Minami-Sanriku qualified as "Biomass Industrial City" by the Ministry of Agriculture, Forestry and Fisheries in March, 2014, which has led to the implementation of the bio-mass town plan, in 2015 and the running of the biomass business by Amita Group (Amita Group website, 2015). A comprehensive resource circulation system (see the figure 22), has been designed for the community aiming to increase self-energy circulation and for reducing energy issues such as the nuclear power plant problem of 2011 in Japan. It can be shown as a good example of public-private partnership to improve community resilience (Stewart et al, 2009).

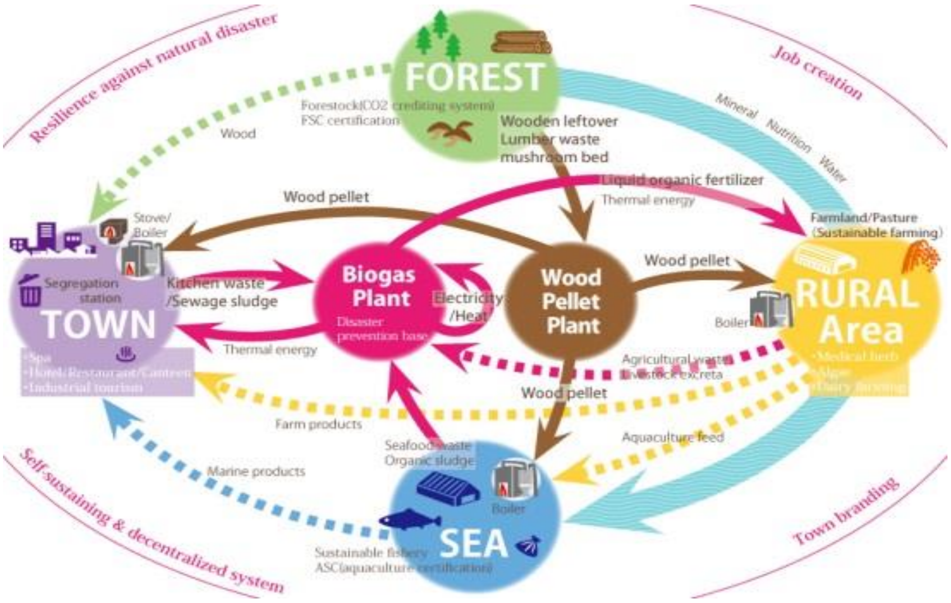
Resilience against natural disaster
FOREST
Forestock(CO2 crediting system)
FSC certification
Wood
Wooden leftover
Lumber waste
mushroom bed
Job creation
Mineral
Nutrition
Water
Liquid organic fertilizer
Thermal energy
Wood pellet
Stove/
Boiler
Farmland/Pasture
(Sustainable farming)
Segregation
station
TOWN
Kitchen waste
/Sewage sludge
Biogas
Plant
Disaster
prevention base
Electricity
/Heat
Wood
Pellet
Plant
Wood pellet
Boiler
RURAL
Area
·Medical herb
·Algae
·Dairy farming
·Spa
·Hotel/Restaurant/Canteen
·Industrial tourism
Thermal energy
Agricultural waste
Livestock excreta
Wood pellet
Farm products
Aquaculture feed
Seafood waste
Organic sludge
Marine products
Boiler
SEA
Sustainable fishery
ASC(aquaculture certification)
Self-sustaining & decentralized system
Town branding

Figure 22: Local resource circulation system

(Source from: Amita Group website, Local Resource Circulation System, http://en.amita-hd.co.jp/blog/2015/biogas-plant-groundbreaking-ceremony.html)

The figure indicates the community’s pride and hope for their future. Under this system, the forest (Forest sector), the sea (fishery sector), the rural area (agriculture sector) and the town (people) are all interconnected to create a circular economy rather than a linear one. All waste will be converted into energy or liquid fertilizer so that Minami-Sanriku will become a waste-free town (McDonough and Braungart’s model of cradle to cradle design, 2010). In addition, the town has been awarded two certificates relevant to environmental sustainability: FSC (Forest Stewardship Council) in 2015 and ASC (Aquaculture Stewardship Council) certification in March 2016. FSC is a global forest certification system for responsible forest management while ASC a certification programme for responsible aquaculture. Both certifications are very competitive and difficult to earn thus providing evidence for the achievements Minami-Sanriku has made.

With the advantage of its physical environment and the efforts and achievements made in terms of environmental sustainability by its people, Minami-Sanriku demonstrates its great potential for developing sustainability learning programs, to attract more visitors, which can further facilitate the disaster recovery process. Apart from the local government' efforts to enhance public awareness of the sustainable vision of the town, the Minami-Sanriku Learning Centre has also made great attempts to showcase local sustainable practice by organizing sustainable learning tours, holding workshops and providing training for local tourist guides. Students get to visit the Bio-mass plants, forest and fishery management practice, local resource circulation system and other local sustainable ways of living etc. (Minami-Sanriku Learning Centre Website). It is not surprising that comments from the students and local people were very positive,

> The longer time I stayed here the more respects I have for the local people. I was not so surprised when Mr. Abe told me about the social innovation of introducing the bio-mass plant and wooden pallet plant to turn the waste to waste-less in a high-tech country like Japan. I was more surprised about how local community work co-operatively to create such an environment that makes social innovation possible when their own lives have not been sorted yet (field notes.)

> The forest trip regarding the award of FSC (Forest Stewardship Council) was really impressive. I like the way he gave the lecture while walking around the forest. The atmosphere was so relaxing. He even taught us about some edible plants and picked some wild fruits for us to taste…. I felt I could ask any questions I wanted… The real field experience made a lot of terminologies and the process much easier to understand… (Student)

> It was really inspiring to see how the town was rebuilt from the debris to a town with the vision of sustainable community. I really want to come here again. I want to see the change. I have witnessed the current image of the town and also seen well-known architecture's design of the future Minami-Sanriku town. It would be great to see the change (Interview, Student)

> I hope more people know our town, more people like our town. I was so happy when people said they liked it here and would visit again. I am already 65 and I hope the next generation could take over and build the community into a place where people want to move in. (Interview, Local people)

The benefits for students and community are reciprocal. For students, the theory of sustainability can be linked to practice in real life cases. It is a place where knowledge from academics and practitioners meets and interacts. It is a more effective way of learning about sustainability and raises the public awareness of disasters. Positive feedback from students will spread and attract more students to visit. For the community, this is a good strategy for branding the town as sustainable town through expanding the connection with education institutions, receiving more support from visitors/tourists, publicizing Minami-sanriku's model of sustainable practices and showcasing the progress made on the reconstruction more widely, which is in line with government's efforts of attempting to create a sustainability vision for the town.

If the model of sustainability of the town is built up, it will attract more people and potentially it can be developed as a base for disaster and sustainability education. As sustainability has become the world challenge the need of education for sustainability is not country-wide but world-wide. Conversely, the support and expectations of the visitors serves to inspire and empower the community to meet sustainable development goals. The design of these community-led “learning by experiencing” tours built on both human interaction and the relationship with the environment with the view to enhance learning about disaster experiences and sustainable reconstruction to young generations and nurture future community leadership roles.

7.3. The case of the Yes Factory

7.3.1. The establishment of the Yes Factory.

Octopus Kun was first designed in 2009 based on one of the local seafood specialities of the Octopus. The artefacts of Octopus Kun were initially created out of personal interests in craft making at a private atelier/ studio and was available to buy by visitors as a good luck charm for exams. The meaning is derived from its pronunciation as the word "octopus" which is similar to the Japanese phrase of Oku-to-pasu 置くとパス, which literally means if you “place it down, you will pass (your examinations)”. However, the completed studio had only been set up for two weeks, when the disaster hit the town, and the atelier with all its collection of octopus samples and tools was washed away by the 2011 tsunami.

The octopus character was recovered in 2012 with funding support from Taisho University. In June 2012, the Minami-Sanriku Fukko-dako- no- kai (Minami-Sanriku Reconstruction Octopus Association), an administrative system of the Yes Factory for town reconstruction began manufacturing and marketing the Octopus-kun character goods. The Yes Factory was opened in July 2012 by utilizing a closed down high school building (see Figure 23) to create space for people to share their traumatic experience while crafting the work.

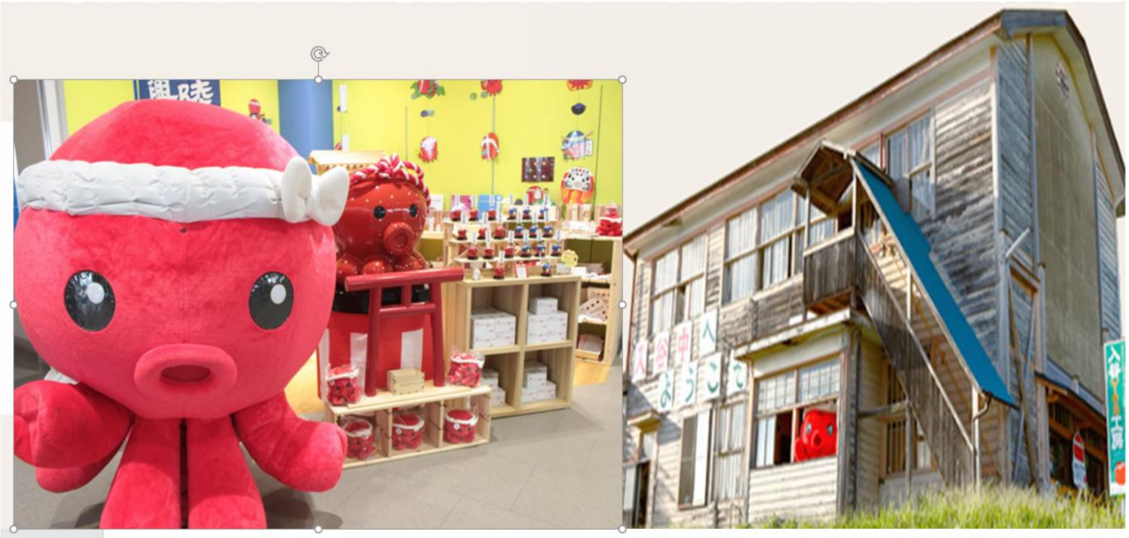

Figure 23: Octopus-kun, Yes Factory.

Although the Yes craft workshop was started as a community space, it soon became a thriving social business. A range of products has been developed: from the Octopus-kun character series to silkworm cocoon series, wooden products, and rice cracker series. A new series of Octopus-kun goods (which resembles a box of macaroons) were developed later to represent different things. Each colour represents different meanings, for example, Carmine, orange, yellow, leaf green, sky blue, violet, pink, white represent victory luck, safety, money, academic grades, connection, popularity, love, purity respectively. More varieties of products are being continuously developed and now sell all over the country. Today, the business of the Yes factory has developed into two major areas, one is to promote the Minami-sanriku-produced FSC wooden products such as wooden crafts, wooden furniture, and other wooden products with novel designs. The other area is to create one of the best fieldwork study sites for learning such as craft-making experiencing, hand-made skill learning, internships, and disaster education sites (Yes Factory website, 2017). The profits generated from the Yes Factory are re-invested for the community recovery and development and donated to earthquake-affected areas such as Fukushima, Iwatei and Miyagi prefecture (Yes Factory website, 2017).

The establishment of the Yes Factory not only addresses the practical issue of limited job opportunity for a disaster-affected town but also the main product Octopus-kun has been personalised to represent the spirit of the town as part of a branding strategy for the town revitalization. The symbolic meaning of the Octopus has evolved and shifted from a lucky charm for exam-taking to a symbol of recovery and community resilience through social interaction during the process of reconstruction.

7.3.2. Financial recovery and job opportunity

As reflected by one of the founders of the Yes Factory, “people still lived in temporary houses and the whole atmosphere was depressing. We needed to do something to distract them from the overwhelming feeling of the disaster. That was the initial thought when I was transferred from government post to work for Community Centre and I saw the situation of people living in the temporary houses” (Abe, 2016). The idea of recovering the Octopus workshop was proposed, which was subsequently supported by Taisho University. The existence of job opportunities helped the locals to feel more distracted from their depressing traumatized experience and gave them hope for the future, as commented by one of the employees,

> “If I do not do anything, I will be worried too much. I come here every day at certain time like a regular job that keeps me busy. It also gives me sense of fullness and can change my mood. If I did not do anything after earthquake, I would be worried about too many things. For example what am I going to do in future, I would be worried about myself, my family and my children. We have lost our house and have no place to live, what shall I do in future?” (Interview).

This overwhelming feeling of loss and destruction was heightened by the uncertainty of the future. The town was still full of debris; job opportunities were very limited; the loss and destruction were tangible and as the only things in sight. There was a perceived need to find an outlet for these emotions and a space to talk to each other. The Yes Factory was established to create such a place, where a powerful signal of collaboration was sent that everybody suffered but theycould restart the reconstruction by working together as commented by a chef,

> "I was thinking that we need to do something to change the situation. Though a lot of disaster relief was sent to support those who lived in temporary house, if we simply depended for our lives on disaster relief and support, we lived backwards not forward. The work of colouring and producing the Octopus character goods, made the locals feel independent. The job could shift their focus from the loss to talking about their work. For example, they might talk how many Tako kun (means Octopus-kun in Japanese) have been produced and ordered?... something to motivate them, to help them to move forward…" (Interview, chef)

This was really helpful financially and psychologically for those who had lost everything due to the tsunami. Around 25 people were recruited to work in the Yes Factory to produce the craft work. The contribution of the Yes Craft Factory utilizing the closed-down school and creating job opportunity for disaster-affected local people was widely covered in the News. This further helped disseminate the Octopus Kun related products, the Minami-Sanriku town and shape the role of the Yes Craft Factory as a social enterprise.

As a social enterprise, the Yes Craft Factory created employment opportunities for locals and reinvested the profits to the local community and felt concern about the well-being of local community, but there is also a tension between sustaining business from thousands of post-disaster commodities and remaining the ethos of social enterprise that aims to achieve social environmental benefits.

In order to sustain the business and survive, it needs marketing and advertising to increase sales and networking. The tactics included coordination with other institutions for the craft-making learning workshops and the decision on the Mascotization of Octopus in which Octopus Mascot was used as a recollection of the traditional concepts of Jijyo (self-help), Kyojyo (mutual help); as an intermedia to communication and for external publicity, as a way of interaction and dialogue between stakeholders to form place identity/ imagined community (place identity formation).

7.3.3. Mascotization of the Octopus

7.3.3.1. Mascot as recollection/ revitalization of the place's traditional social cultural value

Using a mascot as a marketing tool is not uncommon in Japan. In fact there are hundreds of mascots in Japan representing cities, towns, and organizations. Mascots can be utilised as an effective marketing tool for branding, attracting tourists and reshaping a positive image of a place (Kotler, Bowen and Makens, 2009). Some cities and towns have proved that a mascot is an effective strategy to revitalize the town where issues of depopulation and aging society prevail (Birkett, 2012). One of the successful examples is Kumamoto prefecture, the use of the Mascot of Kumamon, which made over 2.5 million Japanese Yen in merchandise sales (Birkett, 2012), but for Minami-sanriku, the context of disaster made the situation more complex and required a more subtle and nuanced approach. There was a concern about the appropriateness of adopting the cuteness of the Octopus as a marketing tool when people were still suffering,

> To mascotize the octopus was not easy decision as immediate after the disaster, people had the hardest time of their lives, using mascot in such a situation was perceived as lacking compassion. Even within the craft factory, there were different opinions. However, it was important to have an impact through more effective dissemination of information. Therefore we decided to take the strategy of the mascotization of the Octopus and draw on its cuteness, make it the Godochi kyara (local character) in order to publicize the Minami-Sanriku town (Interview, one of the founder of Yes factory)

Addressing any possible negative connotations with regards to using a mascot required careful internal and external communication strategies. The slogan in the annual report "We communicate by creation of various items", (See figure 24) surrounded by a range of products with one linking to the other, may serve as a clue to how the products are used as a connection to traditional concepts to effectively communicate internally and externally for recovery.

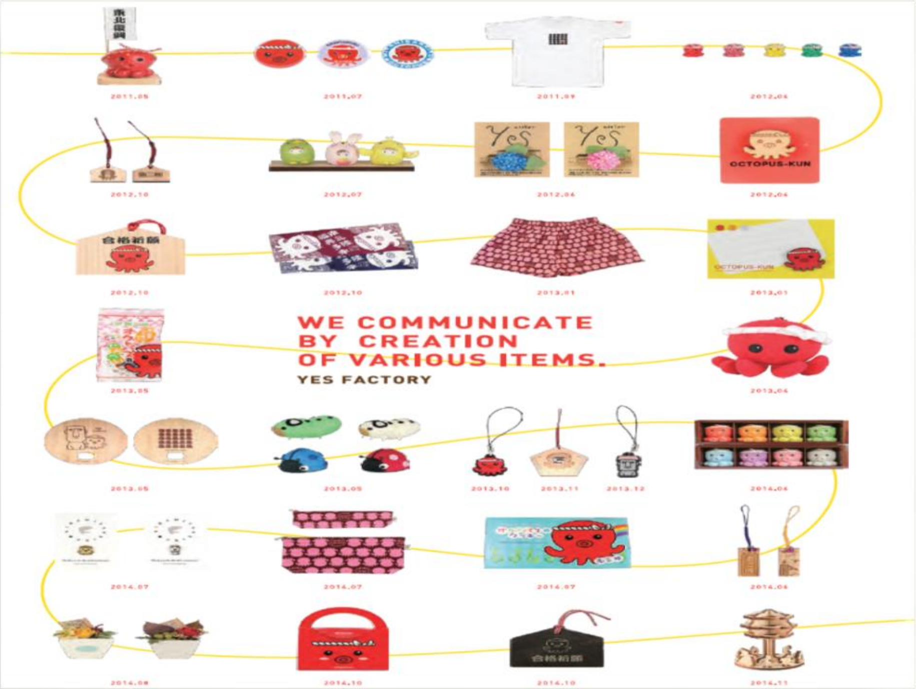

Figure 24: We communicate by creation of various items.

Source of figure: Minami-Sanriku Yes Factory Annual Report (2011-2014).

The picture shows all the products developed at the Yes Factory are closely related to characteristics of the town and this serves to convey the uniqueness of the town. The Octopus Mascot came to reflect and convey these embedded ideas to the outside world, for example,

> “The octopus series were developed based on a local speciality (seafood Octopus). The main product, Octopus Kun, is the lucky charm series for passing exams…The Cocoon series products were developed to revive the traditional art craft in Minami-Sanriku as Minami-Sanriku used to be quite well-known as a silk-producing town but those traditional craft skills were gradually lost. We also organize the craft-learning programme, which could help convey existing

> local craftsmanship practices to the outside world and potentially could increase sales". (Annual Report, 2011-2014).
>
> "Minami-Sanriku boasts 70% forest cover rate. We tried to sustainably utilize our forest resource. Our wooden series products were developed mostly by using the thinning timber. We first started producing the wooden series products, using those timbers cut down due to the salted water of tsunami. The products are hand-made by our local staff. Later we introduced laser processing which made more quality of products. We received the orders and produced original souvenirs and octopus-pattern craftworks. The wooden waste produced during the production process was re-used either as material for students doing creative work or as firewood for local people." (Annual Report 2011-2014).

Octopus-related products were continuously developed such as the Octopus Senbe (a snack made of octopus and rice) to promote local foods as shown in the annual report,

> Octopus Senbe is made of local rice and seafood Octopus …As Octopus is a well-known speciality of Sizugawa, in Minami-sanriku, the snack using the octopus as a theme could convey how appealing the food is in Minami-sanriku….. We made event-limited edition of Senbe with special flavours for different events and different patterns such as star shape, heart-pattern etc. and it became quite popular. The sale of Octopus Seibe ranked second after the Octopus lucky charm for exams (Annual Report, 2011-2014)

The messages conveyed from the reports are multi-fold: first, all the products are Octopus-themed in association with the town characteristics with the purpose of increased publicity. As a marketing tool, the Octopus embodies the essence of the town as told by one of the employees "I want to create craftwork that when people see the product they would immediately recognize this product is from Minami-sanriku." (Employee of Yes Factory). Yurukyara Octopus (a Japanese term that means mascot characters of Octopus) is used to communicate the message embedded in the products to visitors and reconnect to an imagined town with an old tradition of life. For example, it was claimed in the pamphlet that the town used to be a well-known silkworm producer. The traditional ways of craft-making have been lost due to mass production. The Jijyo (self-help, self-reliance) and Kyojo (mutual help, collaboration) were the norm of traditional communal value. The Yes Factory called for a revival of those traditional art-learning, craft-making, traditional value recollection through workshops and learning tours at the Yes Factory. By selling these products and services, they were trying to publicize the tradition, beauty and uniqueness of the town.

Second, it conveys the image of responsible social business and the vision of a sustainable future in which human and nature coexist harmoniously. The traditional practice of Sato-umi-yama (the connection between community and the physical environment) and the community's efforts of harmoniously co-existing with nature were greatly emphasized. This is evidenced in the annual report showing that their business practice has taken the triple bottom line (people, planet, profit) into consideration. The local resources were carefully utilized and the wellbeing of local employees was considered. Craft-making in the Yes Factory actually turned all waste material to craft commodities by making use of the thinning timbers and recycling waste. Their sustainable practices are supported by the award Minami-Sanriku has received, Forest Stewardship Certification (FSC), which means that also the forest was managed in a responsible way. In addition, craft-making also enhanced "self-help" and "mutual-help" through the production process. It encouraged local people to challenge disaster plights and make use of what they have got and work together to restart their lives, rather than just waiting for disaster relief for living.

The Octopus is both a commodity/ physical product that boosts the local economy and a mascot which strengthens the Kizuna (linkage/ connection among people) internally and externally as stated by one of the founders,

> Though profit is not our main aim, we need to face reality that we do need profit to sustain us as it helps with job security for local residents. The profits generated are then re-invested for the benefit of the community. Octopus Mascot as a PR tool can increase the flow of visitors and boost local economy in general, and bring the local people to work together. Meanwhile visitors can bring in new ideas and knowledge to us…. I would say, the benefit is beyond the financial success, we also benefit intellectually (Interview, one of the founder of Yes factory)

This echoes with comments from one of the elder local member,

> The recognition of our traditions and culture is vital to build the connection and attachment to the town. It is our responsibility to pass down our tradition to our young generation but the challenges is how to communicate such social cultural values effectively to young generation as nowadays they have a lot of more excited things to do. I hope the reconstruction process could bring young people to rethink their town.
>
> I have seen Octopus Mascot in many places such as the Reconstruction Market, paddy field, festivals, Iriya Uchibayashi performance, and traditional culture

> gatherings to pray for good harvest…. They tried to involve a lot of young people….

Equally important as economic recovery, Mascot Octopus was used as a recollection of traditional folk culture, values and a way of communicating the culture with different stakeholders. For example, a video was made by the Yes Factory to introduce the Iriya uchibayashi through the personification of the octopus. Iriya uchibayashi is folk culture featuring performances with different musical instruments and a lion dance to celebrate and pray for harvest and family safety in Iriya with a history of more than 200 years. It is held in turn by one of the four local social associations within the area each year. The local association in charge starts to prepare a year in advance, but the rehearsal practice of the musical performance such as drums, flute and lion dance starts two weeks before the actual performance. On the day of the performance, a portable shrine decorated with colourful flowers (See figure 25) is carried through the street by people dressed in colourful costumes along the beautiful rice terraces and picturesque landscapes before the portable shrine is enshrined again.

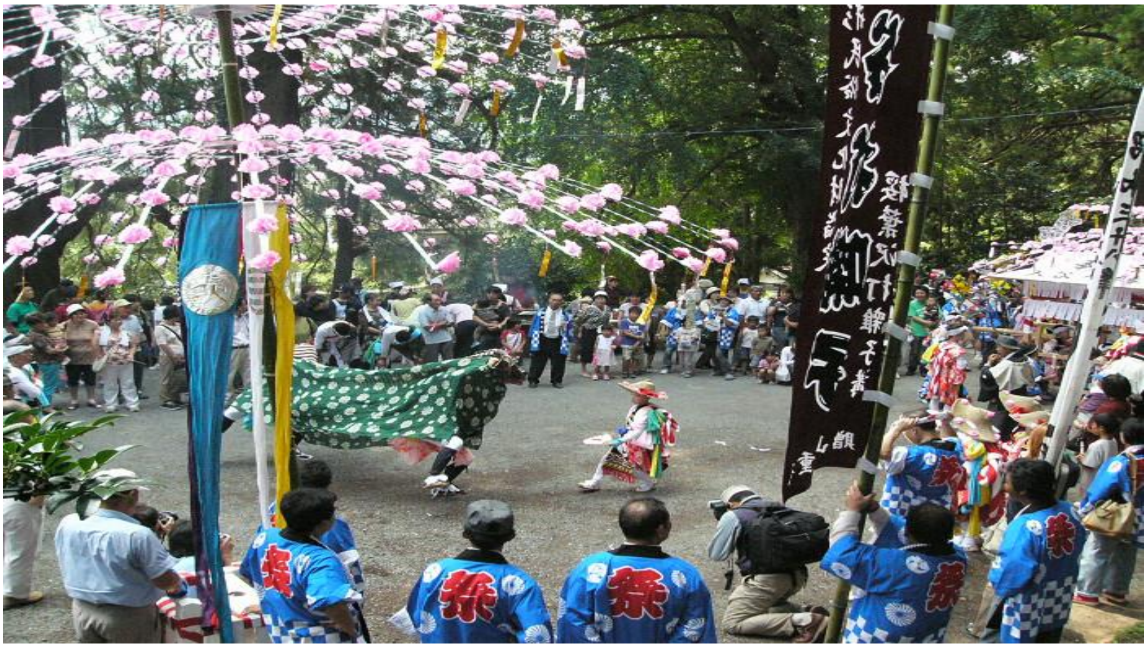

Figure 25: Iriya Uchibayashi Performance

(Source: Minami-Sanriku Virtual Museum)

The uchibayashi performance in Iriya has been designated as “Important Intangible Folk-cultural Heritage” by Miyagi Prefecture, but the high cost and dedication required for the uchibayashi performance, and rural depopulation has made the continuation of the tradition quite challenging. As one of local storytellers showed his concerns,

> One of the important qualities of this tradition is the tsunagari (bond, connection). We have the tradition of doing a lot of volunteer work for holding our cultural events or festivals. The performance itself also requires a lot of collaboration. The mutual help spirit is quite common practice in the village. Immediately after disaster, we (people from Iriya area) actually provided a lot of support for the coastal tsunami-affected areas…. However, the number of children in the area is on the decrease, I think that this festival may face difficulty… I really don’t want to see this tradition lost…”

The community leaders of the Yes Factory shared similar concerns with the local storytellers and made great efforts to “dig” out and recollect the uniqueness of the town, and show their spirits of the community to outsiders through social cultural learning programmes or through the Mascot Octopus. Coordination with other institutions or other sectors is one of the tactics they used to enhance social capital. The learning tours of the Yes Factory are often coordinated with other organizations or small businesses or with other learning programmes at the Learning Centre. Cherishing the innovative ideas or collective wisdoms is another important feature of the Yes Factory. For example, an internship programme for Iriya Uchibayashi was initiated in 2015 by the Leaning Centre to recruit students to participate in folk culture performances and to disseminate the culture. The specification required for interns are shown below:

> First, students who are interested in folk art and performance to participate the Iriya Uchibayashi music performance. Second, students who could help enhance cultural heritage of the town by keeping records of the performance both for the locals and for disseminating to the outside world. Third, students who should be able to publicize the folk culture through twitter, face book and webpages and write a reports about the Iriya Uchibayashi (Minami-Sanriku Learning Centre website, 2015)

The requirements for the interns indicate the great concern of the loss of the tradition and the expectations that the elder community members have for the younger generation. In a sense, young people are invited to participate, re-think their own tradition and take action. Through the recruiting process and performance participation, it is expected that the traditional social cultural value could be passed down to young generation and disseminated.

From the outset, the community's response to the tsunami and the subsequent regeneration of the town was to place the sustainability of the environment, community and traditional social and cultural values at the centre of the regeneration process. The Octopus came to reflect certain key ideas embedded in Japanese philosophy that both foster and underpin notions of sustainability; these include the concepts of Ji-jyo (self-help), Kyo-jo (mutual help; collaboration), Sato-umi-yama (the connection between community and the physical environment), and Kizuna (linkage/bond among people). These internal quality and traditional social values need to be publicized to others.

However, the recollection of traditional values and connection to the past is not just for the publicity or attracting of visitors but is also important for the town's people. It gives them motivation to rebuild back their community as reflected by one of the new members who recently moved to Minami-sanriku,

> "Reconstruction is not just to rebuild the seawall and other infrastructures only, but soft power rebuilding is also important…. soft side such as education, social connection, tourism, life style etc. are equally important to physical reconstruction. Many local people do not realize the beauty of the town yet. As a visitor myself moving here, I do feel it is important for local people to find pride in their town…. I am the example, I moved here because I found the uniqueness of the place" (Interview,)

The effort of revitalizing and branding the town provided an opportunity to reflect and re-discover the uniqueness of the town, the history, the tradition, the nature etc. In doing so, the process of branding the town using the Mascot Octopus has become a process of communicating their values and pride to others. This process is not static, but progressive as the reconstruction progresses, for example, at different stages of the reconstruction, the town have different things to communicate.

7.3.3.2. Mascot Octopus as intermedia for internal communication and external publicity

Octopus Kun is now an unofficial representative mascot/ Yurakyara of Minami-sanriku. By definition, the nature of Yurukyara is its “Yuru-ness” (means looseness), which has potential to accommodate the change in a transient post-disaster town. Like many mascots/ Yurukyara in Japan, Yurukyara Octopus-Kun embodies certain traits of the character such as cuteness, harmony, a symbol of decentralization, justice, security, all of which are subject to interpretation. For example, Octopus is a lucky charm for the exam; Octopus represents security in a road safety campaign; Octopus works as spoken man for the Fire Department to convey the sense of safe and security to local people; Octopus entails a symbol of decentralization for an inclusive disaster reduction campaign including women and children; Octopus displays its cuteness and harmony in festival events etc.

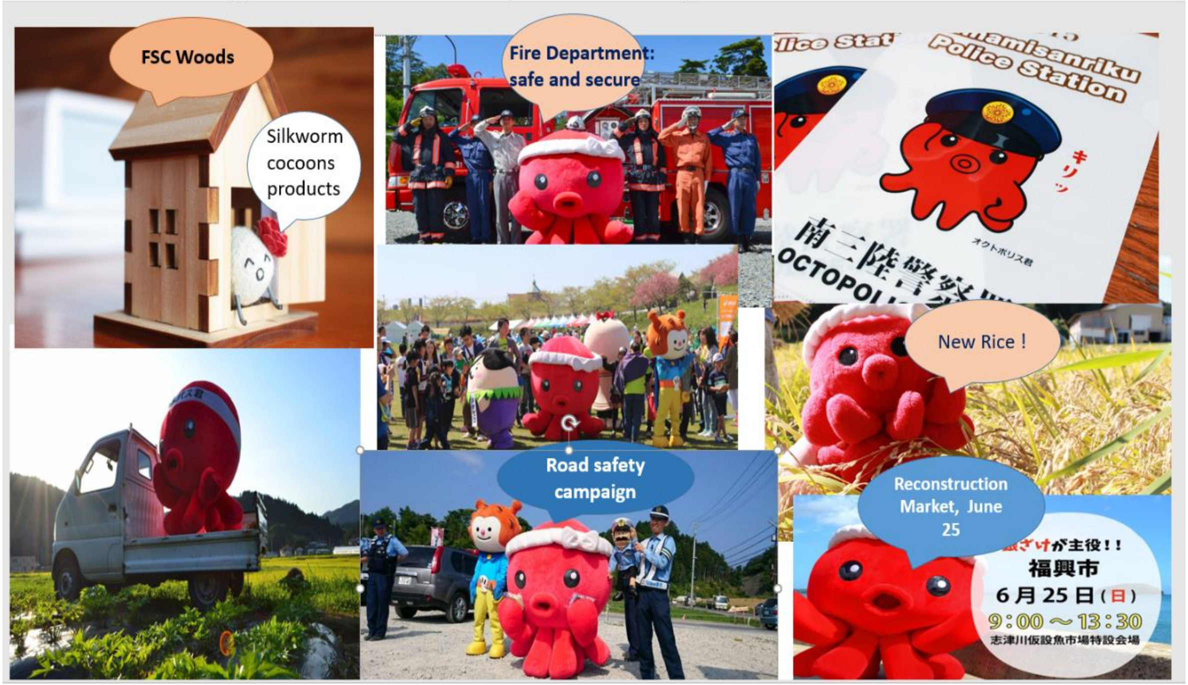
FSC Woods
Silkworm cocoons products
Fire Department: safe and secure
Police Station
Minamisanriku Police Station
キリッ
オクトポリス君
南三陸警察署
OCTOPOLI
New Rice !
Road safety campaign
Reconstruction Market, June 25
が主役！！
福興市
6月25日（日）
9：00～13：30
志津川仮設魚市場特設会場

Figure 26: Tohoku Revitalization, Octopus-Kun Attending Various Events[7], 2013 - 2017.

At various events people wearing Octopus costumes, often perform the Octopus-Kun to interact with spectators. It also often appears in the News and on social media to rally support and for showcasing local sustainable practices and for co-creating a shared place identity with other stakeholders. The effectiveness can be seen from its popularity in the events with many people gathering around and taking photos (see figure 26).

> As a PR tool, Octopus Yurukyara was quite effective. For example, Octopus was ‘on his errands’ at different locations such as tourism marketing, local products exhibitions. It attracted people’s attention, which helped publicize the disaster-affected town and linked the town to the outsiders. The cuteness of octopus really attracted people attention and had powerful effects to gather people together (interview, Yes Factory employees)

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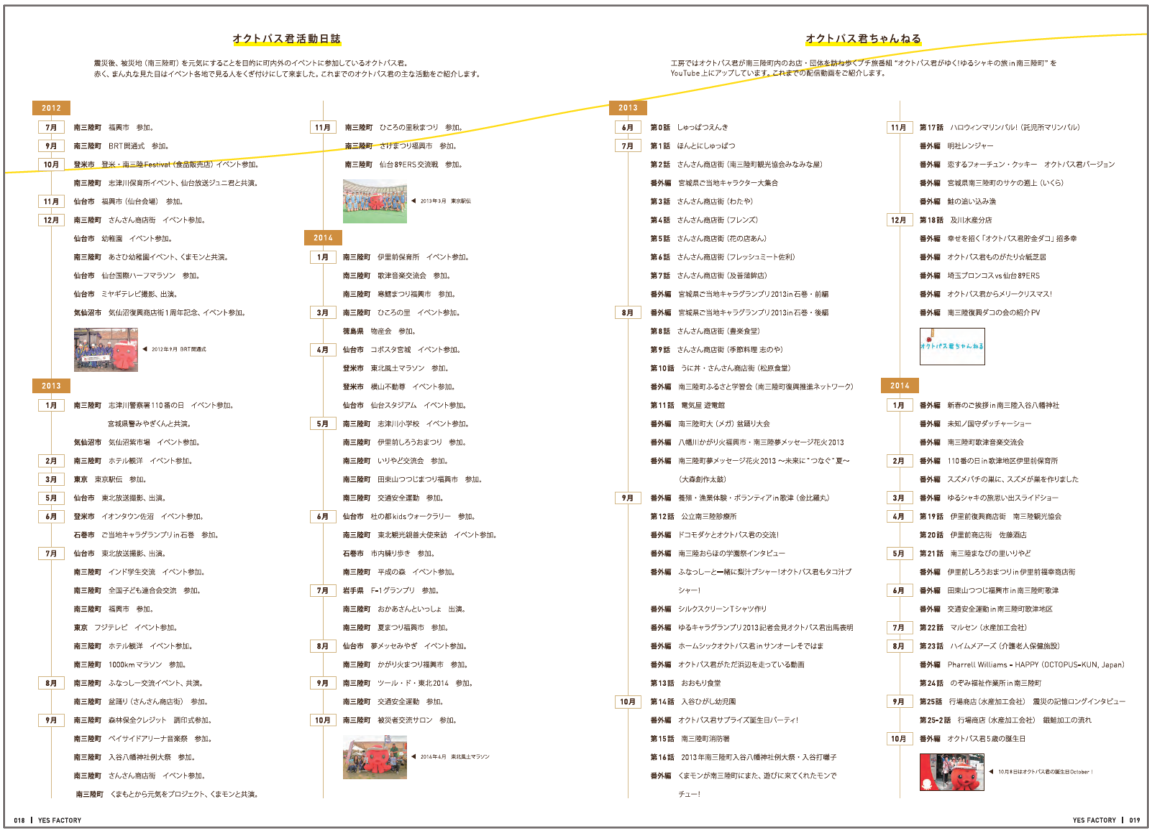
[7] Photos collected from Octopus-Kun facebook and twitter with permission.

> Especially in open spacious areas, it really makes a difference if the Yurukyara (Mascot Octopus-Kun) is there or not. The atmosphere is more relaxed with yurukyara around. It is easier to gather people. People are more willing to stop, so it can help to expand social connections with other people. It looks natural to use Mascot Octopus-kun as a strategy for promotion and to publicize our town as the seafood Octopus is the speciality of our town. It makes it easier to remember our town" (interview, visitor)

The cuteness of the Octopus creates an atmosphere of relaxation and approachability, which may otherwise be difficult to achieve between two people who might feel awkward to talk each other (Birkett, 2012). The visual effect of the Octopus leaves a clear impression about the town which is associated with the speciality of seafood Octopus. The promotion becomes a natural process, not a process of persuading, but a process of communication and dialogue with the visitors. As the Octopus not only appeared in various events but also on TV programmes and videos, its effect was reinforced through the power of news media, as one of employees from Tourism Association commented,

> Octopus yurukyara appeared in the evening TV program to promote our tourism (Minami-Sanriku tourism Association), which made a higher impact compared to using human advertisement. The character left a great impression on people….reached more people (Interview, employee of Tourism Association)

As Octopus-Kun was invited to attend more events and interact with more people (see octopus activity log, figure 27), the role of Octopus Kun was no longer only for product branding for the Yes Factory, but he took up the challenge of bringing back the vitality of the town and for town branding.



オクトパス君活動日誌

震災後、被災地（南三陸町）を元気にすることを目的に町内外のイベントに参加しているオクトパス君。
赤く、まん丸な見た目はイベント各地で見る人をくぎ付けにして来ました。これまでのオクトパス君の主な活動をご紹介します。

2012
7月　**南三陸町**　福興市　参加。
9月　**南三陸町**　BRT開通式　参加。
10月　**登米市**　登米・南三陸Festival（食品販売店）イベント参加。
南三陸町　志津川保育所イベント、仙台放送ジュニ君と共演。
11月　**仙台市**　福興市（仙台会場）　参加。
12月　**南三陸町**　さんさん商店街　イベント参加。
仙台市　幼稚園　イベント参加。
南三陸町　あさひ幼稚園イベント、くまモンと共演。
仙台市　仙台国際ハーフマラソン　参加。
仙台市　ミヤギテレビ撮影、出演。
気仙沼市　気仙沼復興商店街1周年記念、イベント参加。

◀ 2012年9月　BRT開通式

2013
1月　**南三陸町**　志津川警察署110番の日　イベント参加。
宮城県警みやぎくんと共演。
気仙沼市　気仙沼紫市場　イベント参加。
2月　**南三陸町**　ホテル観洋　イベント参加。
3月　**東京**　東京駅伝　参加。
5月　**仙台市**　東北放送撮影、出演。
6月　**登米市**　イオンタウン佐沼　イベント参加。
石巻市　ご当地キャラグランプリin石巻　参加。
7月　**仙台市**　東北放送撮影、出演。
南三陸町　インド学生交流　イベント参加。
南三陸町　全国子ども連合会交流　参加。
南三陸町　福興市　参加。
東京　フジテレビ　イベント参加。
南三陸町　ホテル観洋　イベント参加。
南三陸町　1000kmマラソン　参加。
8月　**南三陸町**　ふなっしー交流イベント、共演。
南三陸町　盆踊り（さんさん商店街）　参加。
9月　**南三陸町**　森林保全クレジット　調印式参加。
南三陸町　ベイサイドアリーナ音楽祭　参加。
南三陸町　入谷八幡神社例大祭　参加。
南三陸町　さんさん商店街　イベント参加。
南三陸町　くまもとから元気をプロジェクト、くまモンと共演。
11月　**南三陸町**　ひころの里秋まつり　参加。
南三陸町　さけまつり福興市　参加。
南三陸町　仙台89ERS交流戦　参加。

◀ 2013年3月　東京駅伝

2014
1月　**南三陸町**　伊里前保育所　イベント参加。
南三陸町　歌津音楽交流会　参加。
南三陸町　寒鱈まつり福興市　参加。
3月　**南三陸町**　ひころの里　イベント参加。
徳島県　物産会　参加。
4月　**仙台市**　コボスタ宮城　イベント参加。
登米市　東北風土マラソン　参加。
登米市　横山不動尊　イベント参加。
仙台市　仙台スタジアム　イベント参加。
5月　**南三陸町**　志津川小学校　イベント参加。
南三陸町　伊里前しろうおまつり　参加。
南三陸町　いりやど交流会　参加。
南三陸町　田束山つつじまつり福興市　参加。
南三陸町　交通安全運動　参加。
6月　**仙台市**　杜の都kidsウォークラリー　参加。
南三陸町　東北観光親善大使来訪　イベント参加。
石巻市　市内練り歩き　参加。
南三陸町　平成の森　イベント参加。
7月　**岩手県**　F-1グランプリ　参加。
南三陸町　おかあさんといっしょ　出演。
南三陸町　夏まつり福興市　参加。
8月　**仙台市**　夢メッセみやぎ　イベント参加。
南三陸町　かがり火まつり福興市　参加。
9月　**南三陸町**　ツール・ド・東北2014　参加。
南三陸町　交通安全運動　参加。
10月　**南三陸町**　被災者交流サロン　参加。

◀ 2014年4月　東北風土マラソン

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オクトパス君ちゃんねる

工房ではオクトパス君が南三陸町内のお店・団体を訪ね歩くプチ旅番組 "オクトパス君がゆく!ゆるシャキの旅in南三陸町" を
YouTube上にアップしています。これまでの配信動画をご紹介します。

2013
6月　**第0話**　しゅっぱつえんき
7月　**第1話**　ほんとにしゅっぱつ
第2話　さんさん商店街（南三陸町観光協会みなみな屋）
番外編　宮城県ご当地キャラクター大集合
第3話　さんさん商店街（わたや）
第4話　さんさん商店街（フレンズ）
第5話　さんさん商店街（花の店あん）
第6話　さんさん商店街（フレッシュミート佐利）
第7話　さんさん商店街（及善蒲鉾店）
番外編　宮城県ご当地キャラグランプリ2013in石巻・前編
8月　**番外編**　宮城県ご当地キャラグランプリ2013in石巻・後編
第8話　さんさん商店街（豊楽食堂）
第9話　さんさん商店街（季節料理 志のや）
第10話　うに丼・さんさん商店街（松原食堂）
番外編　南三陸町ふるさと学習会（南三陸町復興推進ネットワーク）
第11話　電気屋 遊電館
番外編　南三陸町大（メガ）盆踊り大会
番外編　八幡川かがり火福興市・南三陸夢メッセージ花火2013
番外編　南三陸町夢メッセージ花火2013 ～未来に"つなぐ"夏～（大森創作太鼓）
9月　**番外編**　養殖・漁業体験・ボランティアin歌津（金比羅丸）
第12話　公立南三陸診療所
番外編　ドコモダケとオクトパス君の交流!
番外編　南三陸おらほの学園祭インタビュー
番外編　ふなっしーと一緒に梨汁ブシャー!オクトパス君もタコ汁ブシャー!
番外編　シルクスクリーンTシャツ作り
番外編　ゆるキャラグランプリ2013記者会見オクトパス君出馬表明
番外編　ホームシックオクトパス君inサンオーレそではま
番外編　オクトパス君がただ浜辺を走っている動画
第13話　おおもり食堂
10月　**第14話**　入谷ひがし幼児園
番外編　オクトパス君サプライズ誕生日パーティ!
第15話　南三陸町消防署
第16話　2013年南三陸町入谷八幡神社例大祭・入谷打囃子
番外編　くまモンが南三陸町にまた、遊びに来てくれたモンでチュー!
11月　**第17話**　ハロウィンマリンパル!（託児所マリンパル）
番外編　明社レンジャー
番外編　恋するフォーチュン・クッキー　オクトパス君バージョン
番外編　宮城県南三陸町のサケの遡上（いくら）
番外編　鮭の追い込み漁
12月　**第18話**　及川水産分店
番外編　幸せを招く「オクトパス君貯金ダコ」招多幸
番外編　オクトパス君ものがたり☆紙芝居
番外編　埼玉ブロンコスvs仙台89ERS
番外編　オクトパス君からメリークリスマス!
番外編　南三陸復興ダコの会の紹介PV

2014
1月　**番外編**　新春のご挨拶in南三陸入谷八幡神社
番外編　未知ノ国守ダッチャーショー
番外編　南三陸町歌津音楽交流会
2月　**番外編**　110番の日in歌津地区伊里前保育所
番外編　スズメバチの巣に、スズメが巣を作りました
3月　**番外編**　ゆるシャキの旅思い出スライドショー
4月　**第19話**　伊里前復興商店街　南三陸観光協会
第20話　伊里前商店街　佐藤酒店
5月　**第21話**　南三陸まなびの里いりやど
番外編　伊里前しろうおまつりin伊里前福幸商店街
6月　**番外編**　田束山つつじ福興市in南三陸町歌津
番外編　交通安全運動in南三陸町歌津地区
7月　**第22話**　マルセン（水産加工会社）
8月　**第23話**　ハイムメアーズ（介護老人保健施設）
番外編　Pharrell Williams - HAPPY (OCTOPUS-KUN, Japan)
第24話　のぞみ福祉作業所in南三陸町
9月　**第25話**　行場商店（水産加工会社）　震災の記憶ロングインタビュー
第25-2話　行場商店（水産加工会社）　銀鮭加工の流れ
10月　**番外編**　オクトパス君5歳の誕生日

◀ 10月8日はオクトパス君の誕生日October！

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Figure 27: Octopus-kun activity log.

He became busier. We can see him "on his duty" at the monthly-held Fukko-ichi (Reconstruction Market) walking around to show different aspects of beauty of the town, as one of volunteers pointed out,

> I know seafood at Minami-Sanriku is really delicious, but Minami-Sanriku has a lot more to offer. The other aspects of beauty of the town are still not known to many people. It probably needs to be publicized a bit more (Interview).

Some more comments from some casual interviews at the Fukko-ichi (Reconstruction Market) and Tokura Fisherman Market suggest similar ideas,

> I feel the shame that I have not done any volunteer work after 2011 disaster. I did not know about the local sustainable practice until I met the Octopus Kun at Products Exhibition in Sendai. Then just out of curiosity I did some on-line

> research ….Wow… I was surprised by the spirit of Minami-sanriku.…and moved by the stories of collaboration after disaster… then I decided to register for Minami-Sanriku volunteer program…. (Interview)

> My son went to Minimi-sanriku several times with his classmates. He came back with some Octopus souvenir for family and some pamphlets. He told me it was great experience and suggested that I and my husband to go. I was not convinced as I was too busy. The second time I saw Octopus Kun in Sendai when I passed by. Somehow I felt a connection or I would say…very different feeling… maybe because of my son… I bought a lot of seafood products there. This time I came to Fukko-ichi (Reconstruction Market) with my son. I really admired the spirit of local people… I am also proud of my son... (Interview)

The visitors might not visit Minimisanriku only because of Octopus Kun, but I think, the spirit it conveys directly or indirectly has been passed onto visitors and has a great impact on them. The Octopus activity log shows that he had attended a lot of events and collaborated with many different organizations. It has been used as part of a narrative of co-operation and a strategy for town branding to enhance social capital and revitalize the town.

From the establishment of the Yes Factory to the Mascotization of Octopus-Kun, the tactics for recovery were to place the sustainability of the environment, community and traditional social and cultural values at the centre of the regeneration process. Octopus was used to reflect and disseminate the uniqueness of the town. In addition, the Octopus has been used as part of a narrative of co-operation that has helped reduce the power distance in the highly hierarchical Japanese community and create a more inclusive environment. It became a totem around which the community and businesses organised the marketing of the town. It also became a medium for communicating community-based practices for “building back better”, showcasing the distinctive qualities of the town and its ambition to rebrand the town towards a resilient sustainable community through the reconstruction process. Octopus-Kun has its roots in the fishing tradition of the town and it is to the fishing industry and related community initiatives that I turn my attention in the next section.

7.4. The case of the Blue Tourism Initiative[8]

Unlike the Yes Factory and the Learning Centre which were initiated with quite clear objectives, the initiative of Blue Tourism was inspired by visitors and developed through the interaction between fishermen and visitors. To understand fishermen’s lives, I was a volunteer in a few fishing farms. I was able to feel the fishermen’s passion for the sea and their pride in their profession, the joy of harvest and the optimistic spirit for the future, meanwhile I also felt their pain and hardship of everyday life which provided the motivation to set up Blue Tourism.

7.4.1. The Blue Tourism initiative

Blue Tourism is a community-led transformative tourism initiative launched in the coastal area of Minami-sanriku, Japan in the aftermath of the 2011 tsunami. The philosophy and practices that underpin this initiative offer a blueprint for tourism development in other areas impacted by natural and political disasters. Traditionally, in the tourism lifecycle of disaster hit areas, tourism development is often seen as an unplanned consequence of a disaster and conceived in terms of Dark Tourism with all the negative connotations this brings. Unlike Dark Tourism, Blue Tourism is not a label coined by academics. Rather, this name is the brainchild of a group of Japanese fishermen and residents of Minami-sanriku. Taking inspiration from the colour of the crystalline waters surrounding this coastal destination, the label Blue Tourism captures the ambition of the community to counteract through tourism the environmental, social and economic hardship it faced after the 2011 disaster. The philosophy and practices underlying this community-led initiative add valuable insights to community-based tourism while at the same time challenge some of the established conceptions of Dark Tourism in post-disaster areas.

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[8] This section has been accepted for publication in the Journal of Sustainable Tourism.

The connection between disaster tourism and Dark Tourism remains a Gordian Knot in the literature. While some researchers claim that disaster tourism can be conflated with Dark Tourism (Tucker, Shelton, & Bae, 2017), others question the appropriateness of labelling disaster tourism as Dark Tourism in the first place (Bowman & Pezzull, 2010; Rojek, 1997; Wright & sharply, 2016). Biran et al (2011) suggest the tourist motives are varied, similar to those for visiting non-dark sites, and are mainly driven by educational or emotional interests. Key motivations were summarized by Kang et al. (2012) in their research on the Jeju Peace Park, Korea, to include personal learning and obligation; social reasons; curiosity and as part of general education programs. The curiosity to see the outcome of natural disaster is also one of the motivations to visit disaster sites (Yan et al., 2016; Rittichainuwa, 2006).

In a nutshell, the literature also suggests a wide array of motivations to visit disaster-related sites while disaster tourism is not necessarily being experienced as ‘dark’. “By labelling certain tourist sites ‘dark’, an implicit claim is made that there is something disturbing, troubling, suspicious, weird, morbid or perverse about them…” (Bowman & Pezzullo, 2010, p.190). Within the context of Japan, Suzuki (2016, p.358) argues that “Dark Tourism is not the only option” to label post-disaster tourism, proposing the alternative term of ‘reconstruction tourism’, which supports an earlier suggestion by Omori (2012). It is clear that Dark Tourism does not account for the affective relationship to the place of those visitors who repeatedly visit the site in order to support local community recovery nor does it capture the dynamics of the site and the ways in which it is changing to meet the needs and desires of the local communities as well as those of the visitors.

7.4.2. Building resilience through Community-based Tourism (CBT)

Understanding the relation between dark tourism and post-disaster recovery could help establish the criticality of community-based tourism initiatives as a way of building disaster resilience, which enable the transformation of narratives of loss and destruction associated with dark tourism to more sustainable ways of living via creative tourism community initiatives.

While most studies focus on visitors' motivation to visit the sites, we have fewer insights into how the local community reacts to their visits (e.g Kim and Butter, 2015; Wright and Sharpley, 2016; Stylidis et al, 2014; Coat and Ferguson, 2013). Yet, such insights are essential to reduce any potential conflict between tourists and local communities.

Despite such negative perceptions, some aspects of Dark Tourism can be useful for disaster recovery, if well managed. We argue if post-disaster tourism services are initiated and managed by the local community, this tension could be minimized or even removed. Blue Tourism, a social innovation discussed (in section 7.4) is a case in point being one of the many community-led initiatives taking place in the Tohoku area in Japan (Lin, Kelemen and Kiyomiya, 2017). Research by Goulding, Kelemen and Kiyomiya (2018) on community-based responses to the 2011 disasters in Minami-Sanriku provides useful insights into the social and cultural dynamics of disaster resilience, while Kato (2018) argues that disaster resilience is closely related to how communities interact with the physical place over a long period of time and to the traditional ecological knowledge transmitted from generation to generation through personal stories, folklore, monuments and arts. Understanding how traditional place-based practices and community knowledge influence tourism development in post-disaster areas is crucial to building disaster resilience and sustainable tourism. For example, Blue Tourism incorporated from the beginning various aspects of leisure and education. By focusing on these more positive aspects it was possible to set a tone that encouraged interaction, transformation and co-creation of services with the visitors. It encouraged a mixture of commercialization and commemoration, creating a liminal space at the intersection between deaths and living while simultaneously enabling local communities to explore alternative income streams. For the people of Minami-Sanriku, this was of particular importance as their traditional industries of agriculture and fishing had been largely destroyed by the 2011 disaster. In this sense, Blue Tourism draws on Dark Tourism's abilities to combine dark emotion and leisure activities but its approach to post-disaster tourism transcends the opportunities offered by Dark Tourism.

7.4.3. Community responses to post-disaster tourism in Minami-Sanriku: Rejecting the Dark Tourism label

Tourists have always been attracted to Minami-Sanriku's cultural and environmental resources. After the tsunami, the type and nature of tourism temporarily shifted from a positive orientated cultural and environmental tourism to a more negatively oriented form of Dark Tourism. The Blue Tourism initiative reflected the desire of the local community for the region not to be defined solely by the disaster, but to be able to use the tsunami as a means to re-engage visitors with the beauty of the local culture and environment, in other words, to use the disaster as a positive force to shape the future. As such, although initially rooted in Dark Tourism, Blue Tourism quickly became a form of post-disaster tourism led by the community with the aim to build disaster resilience via a form of sustainable tourism. While it was underpinned by optimism from its inception, the offering still included within its itinerary traditional Dark Tourism components such as tsunami-ravaged schools, collapsed hospitals and flattened seawalls. These Dark Tourism components were seen as useful for achieving a heightened effect for disaster education and for intensifying visitors’ emotional experience. A poignant example is the former Disaster Prevention Centre (see figure 28), where many employees lost their lives while attempting to coordinate the rescue operation during the tsunami. This building has become an important memorial icon that features on most tours of the site. Yet, it triggers ambivalent emotions regarding whether it should be demolished or kept as a memorial to the dead.

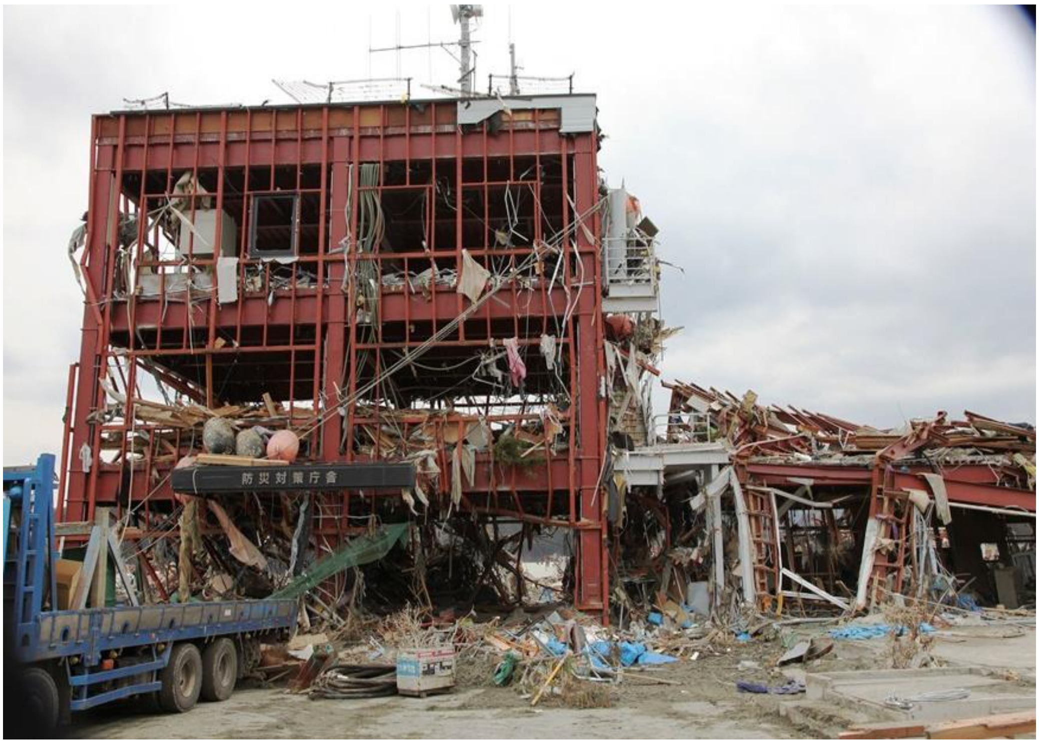


Figure 28: The former Disaster Prevention Centre

(Source from: http://www.bo-sai.co.jp/minami-sanrikusinsai.html , Yamamura, 2011).

One of the interviewee pointed at the picture of the building (see figure 22) and commented:

> My son was there on the rooftop of the building. He was lucky to survive, but my parents were not that lucky, they both died in the Shizugawa hospital, which is not far from this building. It is sad to see the building but it is an important monument to remind us of the disaster and we should never forget it. (Interview, Local survival, Housewife)

Other local people said:

> The story of the young employee Miki Endo (遠藤未希), who sacrificed her life by remaining at her post and broadcasting tsunami warnings over the loudspeaker system, has been written into the school text books. It is necessary to retain this site for educational purposes to highlight their sacrifice, the sense of responsibility of our civil servants who lost their lives here for us. However, in the long run, we cannot immerse ourselves in this disaster image; we need to move on and educate our young generation how to live with our nature sustainably (Interview, local elder resident, shop owner).

> I became a volunteer story-teller as I do not want people to forget our tragedy. Our town mayor is also one of the survivors from this building. I understand the sufferings and painful memory of those who lost their family members here. It might not be in harmony with the reconstruction of the new town, but this is an important site fir sharing the disaster experience and building an emotional connection with the younger generation. I want to pass down the lessons learned from this tragedy to young people but also show them how people work to rebuild their lives after the disaster and the progress we made, such as the forest

> management certification from the Forest Stewardship Council (FSC) and the Certification from Aquaculture Stewardship Council (ASC) and our Biomass Plant (Interview, Volunteer Story-teller).

The community's response toward this dark site is ambivalent; some argued that it should remain as a place of significance, for passing down disaster experiences and creating a succession of memories and records for future generations while others argued that it would be painful for the victims' families to see it and incompatible with the reconstruction of the new town. Although Minami-Sanriku clearly possesses all of the necessary components for it to be defined as a Dark Tourism destination, it was felt by residents that they did not want their town to be solely associated with death and disaster as commented by a local resident:

> I spend my entire life here. I am lucky to live in a town with both beautiful mountains and sea. I feel uncomfortable to see this skeleton building; it is like a scar. We used to have quite a lot of Ryokan (Japanese inns) in the town and people came here on holiday. The town was severely destroyed by the tsunami but the nature has its own power to recover along with human recovery efforts. I want our beautiful town back and I want people back to see the beauty of the town, not just to sympathize with the destruction. I want them to come here to taste our seafood (e.g. hotate, hoya, unidon, tako) and experience the richness of nature, culture and history (Interview, Local Farmer).

Resistance to the label of Dark Tourism among the Minami-Sanriku community members is also found in a presentation entitled "Memory from 3.11" given by a hotel owner at the Tohoku Tourism Advisor Meeting on January 22, 2016, which maps out "a strategy for exploring the tourism image in Minami-Sanriku, but NOT as Dark

Tourism" (Japan Reconstruction Agency, 2016). Although inclusive of Dark Tourism sites, Blue Tourism is a post-disaster form of tourism that empowers the community to build a sustainable form of tourism which builds around ideas of service co-creation and the importance of on-site experiences and interactions between tourists and locals.

7.4.4. The Blue Tourism Initiative as a provider of transformative services via co-creation

Blue Tourism differs greatly from many other disaster orientated tourism initiatives in that the interactions between visitors and locals play a central role in co-creating the tourism experience. The motivations for establishing the Blue Tourism initiative was triggered by remarks made by the volunteers who came to clean beach debris and do fishery work in 2012. The visitors talked about a deep affection and appreciation of the beauty of nature and fishery experience after being offered a boat tour by a local fisherman as a thank you token for the help they had provided to him and the local community. According to the fisherman who was the brainchild of Blue Tourism:

> That was the turning point when I saw the volunteers were extremely pleased with my guided boat tour on the sea. It occurred to me that it would be a great idea if I could provide boat tours as I have less fishery business after the devastating tsunami. More and more visitors told me that they were extremely pleased with the boat tour and suggested that I should expand my fishery work to tourism as I have got some flexible time as a fisherman and am capable of guiding the marine tour. (Interview1, Fisherman)

He explained that even the decision for calling the initiative Blue Tourism was made in consultation with the volunteers/visitors. They also played a central role in how the offer was shaped and managed. As interviewee 1 continued:

> I was not sure what I should include in the program. When I first started, it was more like an experimental project, a bit of "learning by experiencing". I was not sure what would be expected by the visitors. I took everything for granted such as the sea experience, the boat trip, and I did not know what would make the tour more joyful. I gradually I understood more and more via my observation and interaction with the visitors during the boat tours, fishery service, and volunteering activities. During the tour they showed me what they liked or disliked. Their joyful reaction to the sea experience and their positive feedback encouraged me to continue to explore and improve (Interview, Fisherman)

As such, Blue Tourism activities were developed by incorporating both fishermen's and visitors' on-site experiences and what the site had to offer. The ethos behind Blue Tourism ensured that the visitors were engaged in a high degree of non-dark experiences at site. The site as a tourism-scape allowed the visitors and service providers to interact and co-create a space for learning, experiencing, understanding and transformation from negative feelings to positive ones (See figure 29). The site experiences were constantly shaped by the interaction between service providers and services receivers.

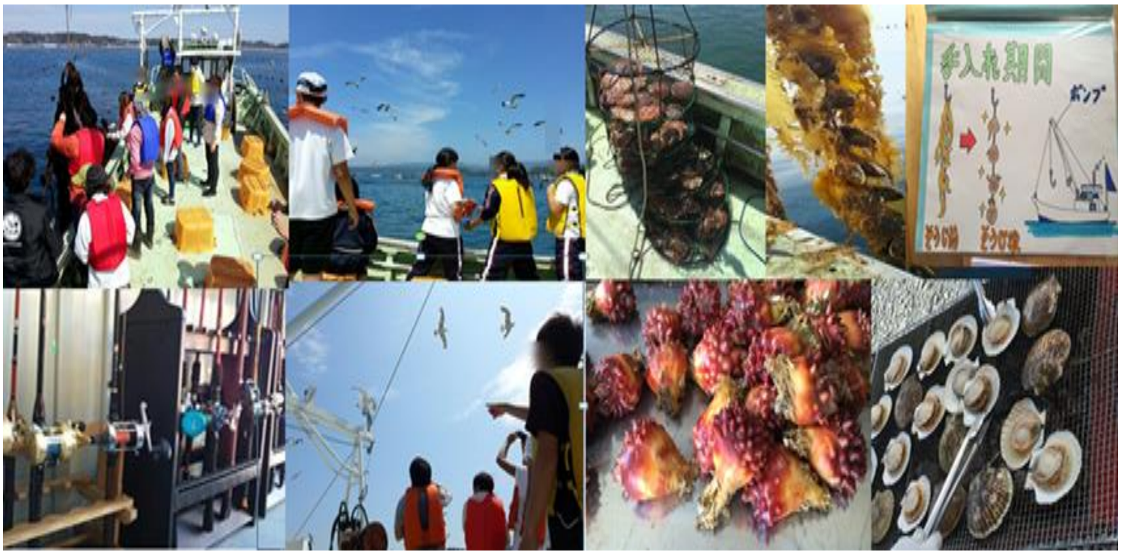


Figure 29: The Blue Tourism.

7.4.4.1. Visitors' on-site experience

One of the major themes that emerged from the research project is that within Blue Tourism the effective co-creation of experiences was the direct result of the blurring of boundaries between the categorization of visitors, whereby participants may begin as tourists, but then go on to become volunteers or even become permanent residents. Additionally, there is no clear demographic profile or typology of tourists, with participants/visitors being drawn from a diversified social background including students, employees, retired couples, fishing fans etc (mostly based in Japan). Their initial motivations may have been underpinned by the desire to visit a Dark Tourism site for purposes of "…learning, family bonding, meaningfulness, and comfort from achieving internal obligation" (Kang et al., 2012, p.262). However, our research demonstrates that Blue Tourism created a positive interaction between the visitors/tourists and the local community as service providers. Consequently, visitors become interactive participants within the project, sharing experiences, stories and taking positive supportive actions; in short one could witness a transformative healing process which helped to build disaster resilience via a bottom-up, sustainable form of tourism. One of the major factors influencing the successes of Blue Tourism was the environmental characteristics of Minami-Sanriku in combination with access to the fishermen's daily work. These factors were critical to both visitors' experience and the development of emotional ties with the local community. As one family who were visiting from Tokyo commented:

> The fishing experience is fantastic. The blue sea makes me feel so relaxed and I forget the trouble of my work. I also want my son to learn the power and beauty of nature. I really appreciate the fisherman's story which is so inspiring and the seafood is so delicious. I did not expect to gain so much...a really meaningful day out (Interview, Visitor from Tokyo)

Arguably, the physical characteristics of the environment promote cathartic tourist experiences and responses, and supports Jepson and Sharpley's (2015) view that nature and countryside can be recognized as sources of spiritual or emotional fulfilment and connection or even "spiritual renewal" (Harrison, 1991, p.21). Consequently, the physical environmental characteristics of Minami-Sanriku as a coastal destination provide the backdrop that supports the healing and regeneration of communities more effectively than one which is not imbued with such natural and aesthetic resources.

The interaction between visitors and the environment were also enhanced by Blue Tourism service providers who mediated educational and learning opportunities for visitors. Although Dark Tourism sites are frequently visited for learning purposes (e.g. Biran et al., 2011), Blue Tourism incorporates a learning experience that does not solely focus on the disaster, but also on environmental and sustainable debates and initiatives. The research clearly demonstrated how learning was enhanced through the interactions and mediation offered and managed by Blue Tourism staff. Their focus on sustainability and the environmental education is reflected in comments provided by one of the Blue Tourism education guides:

> …by encountering nature, experiencing the beauty of nature and listening to the fisherman's stories, my students will have a better understanding as to why they should protect the environment which will increase their sense of responsibility and motivation for learning about marine knowledge. (Interview, Education Guide)

This sentiment is also reflected by students from cities such as Tokyo and Osaka who commented that:

> I learnt much more from the actual site than that from any book regarding the disaster learning and marine knowledge. (Interview, University Student)

> I was deeply inspired by the power of the human spirit, though I came for experiencing the power of nature… (Interview, University Student)

> I am studying the subject of environment and sustainability. This was a really good learning experience and the real-life case here really made me think about the issue of sustainability and co-existence of human and nature (Interview, University Student)

> What surprised me are the concepts of simplicity of life and freshness of the seafood. We used the shell as a plate to eat the seafood at the fishermen's farm. The seafood we tasted was just out of the sea. The concepts of freshness, beauty and simplicity should be put into the study of food design. (Interview, Food Design and Nutrition Student)

For student groups, there are often intended learning outcome set by their organizers, but their on-site involvement provides a more enhanced and complex learning experience. The experience is heightened through their on-site interaction with both the environment and Blue Tourism representatives. These interactions enable the students to analyze the nature of the disaster and see beyond the morbid fascination that underpins many Dark Tourism experiences, by witnessing how tourism can become a transformative service.

Other local educational trips for primary school children also point to the benefits of this type of tour as reflected by the head of the PTA (Parents and Teachers Association):

> As many children' parents are fishermen, it is good for the kids to understand their parents' profession and enhance their affection for their town. The boat trip enhances their learning on marine knowledge, fish categories, beach debris cleaning, rubbish classification and environmental protection (Interview, Head of the PTA).

Apart from cognitive learning, the emotional impact of interactions mediated by the Blue Tourism initiative is found to be critical in transforming the visitors' experiences and perceptions of the site from negative to positive. Many of the visitors' perceptions and initial interpretations of Minami-Sanriku had been formed prior to their visit, being very much supported by Kang et al. (2012) assertions that experience is influenced by many factors such as interpretation, site authenticity and media coverage.

These were subsequently transformed as a direct result of the interactions between visitors and local people. For many visitors the warmth of the local people, the hardship of their life and their optimistic spirit generated emotional links. This is clearly evidenced in several interviews and is eloquently reflected in the comments of one visitor, who stated that:

> Though I had no connection with the local victims I felt a closer connection with them after I visited the place, talked with them and experienced their lives. I felt a sense of duty to help, so I kept coming back here whenever I could and became a regular volunteer here. (Interview, Visitor from Tokyo)

These emotional experiences led to repeated visits and to transformational experiences for both visitors and the local community. From an analysis of the visitors' book, these repeat visits were motivated by empathy, the recognition of the hardship of life post-tsunami and an admiration of the spirit of the survivors all of which materialized into support through volunteering and active participation in the Blue Tourism initiative. The transformational nature of Blue Tourism is not limited to the local community, but is a life affirming and sometimes metaphysical tourist experience reflected in the comments of one visitor who states that:

> I came here to commemorate the victims and I wanted to help, but ended up benefiting myself from these encounters with the locals. Their spirits and attitude to life greatly inspired me and changed my own attitude to life. (Interview, Visitor)

Such meaningful and positive sentiments also dominate the comments section of the visitors' book that was held in the fish farm. These positive comments in conjunction with the responses provided in interviews, suggest that Blue Tourism produces transformational responses that are predominantly positive and almost at odds with the morbid connotations of Dark Tourism. Although tourists' motivations for visiting Dark Tourism sites may be to engage in non-dark experiences (see Biran et al, 2011; Biran et al, 2014; Smith & Croy, 2005) they often lack the opportunity for tourists to co-create transformational experiences, as it is not always possible to interact with those directly affected by the disaster. Although it is clear that Blue Tourism has had many positive impacts upon tourists/visitors, the biggest impact of the project has been on the lives and lived experiences of the local community, specifically, the fishermen.

7.4.4.2. Fishermen's on-site experiences

One of the most significant aspects of the research was charting how the fishermen's experiences of the tsunami have been transformed via the interaction at sites with visitors. This transformation was possible because the Blue Tourism project was not dominated by dark site attributes, but by a philosophy of change and transformation rooted in place based practices and traditional knowledge. This alternative approach was motivated by the fishermen's recognition that government's reconstruction would be a long and slow process and that the immersion in the darkness of disaster and death would not make life any better, and therefore, there was a need to move on and take things in their own hands. This sentiment was reflected in the comments of a local fisherman whose fishery was destroyed in the tsunami:

> Someone had to make a start to pull thing together and bring life back on track and volunteers accelerated the start and inspired me to explore more and to want to provide better services. (Interview, Fisherman)

The fishermen's eagerness to make a change together with the volunteers' involvement served as push and pull factors to shift from the experience of a declining traditional fishery to Blue Tourism, as a signifier of change. As the interviews revealed, there is a need to move forward and find a more sustainable way of living. The local fishermen as insiders are well positioned to make the best of their own life situation and decide what can be offered to visitors in consultation with the latter. This process of co-creation has a transformative power that affects the economic, social and cultural structure of the site. The ability to diversify to a tourism and fishery based economy opened many entrepreneurial opportunities for the fishermen, as one senior fisherman stated:

> We offer the services of the wakame seaweed harvest, scallop-catching tour, oyster tour, fishing trip, followed by the activities of tasting the sea food, and buying the sea food. These activities were soon developed as a package of services based on visitors' needs. Though our original purpose was to convey the greatness of nature and food while earning some living, the influence became far greater than that… (Interview, Senior Fisherman)

Financially, the ability to diversify into tourism provided a much-needed alternative form of income in a time when the sustainability of traditional income sources was fragile. Fishermen were in urgent need to find an outlet for their seafood products and the Blue Tourism helped generate income not only from the tours and but also from the consumption of sea foods. As another fisherman stated:

> Due to the nuclear contamination issue, people are worried about the seafood safety issues even though the tests show our seafood is safe. Korea refused to import our seafood. Blue Tourism increased the sale of the seafood and the number of visitors (Interview, Fisherman)

Thus, the services offered by the fishermen have been perceived as positive tourism encounters, leading to a growth in the demand for their services. This increased demand for such services stimulated supply. The fishermen's coping strategy was to cooperate with other members of the community to achieve mutual benefits as described by a restaurant owner, a hostel owner and fisherman:

> We created a seasonal menu based on the seasonal seafood from fishermen that could convey to the visitors the best taste of our seafood and the greatness of the sea. We have a shared vision that this is more than individual economic benefit: it is also good for the recovery of the community as a whole (Interview, Restaurant Owner)
>
> There are sets of products combining the seafood produced by the fishermen and my cake business both on-line and in the shop in my hostel, which gives the visitors a variety of choices for souvenirs. We also provide a package service combining the fishing tour, accommodation and food in my hostel based on the tourists needs (Interview, Hostel Owner).

The above examples illustrate how Blue Tourism has created an esprit de corps in which the disaster has strengthened local ties and created new financial opportunities. Consequently, the line between the commemoration and commercialization has been blurred and the transition from sadness to the positive acceptance of reality has spurred the efforts for recovery. Visitors might come for commemorating the victims and secondarily consume the products as a way of supporting the community recovery. While the ethics of “consuming Dark Tourism” (Stone and Sharpley, 2008, p.590) are seen controversial by some, Blue Tourism ensures that commemoration and commercialization co-exist side by side and synergize each other. Significantly, however, from a social perspective, Blue Tourism is more than just a means to provide a financial and economic impact; rather its real value lies in its transformational impact on the wellbeing of human beings (both visitors and fishermen). The fishermen’s transformative experience through the interaction with visitors in Blue Tourism initiative is reflected on by one fisherman in both narrative and visual ways (see figure 30):

> I returned to the town from Sendai and became a fisherman after disaster. I gradually started to love my work especially after I met a lot of visitors and joined the Blue Tourism project in which I can use my skills of drawing the pictures such as scallop, oysters and wakame to illustrate the process of aquaculture to visitors during the tour and they love my pictures, which is a big part of the beauty of my work. I became more optimistic about marine jobs and the recovery of my town (Interview, Young Fisherman).

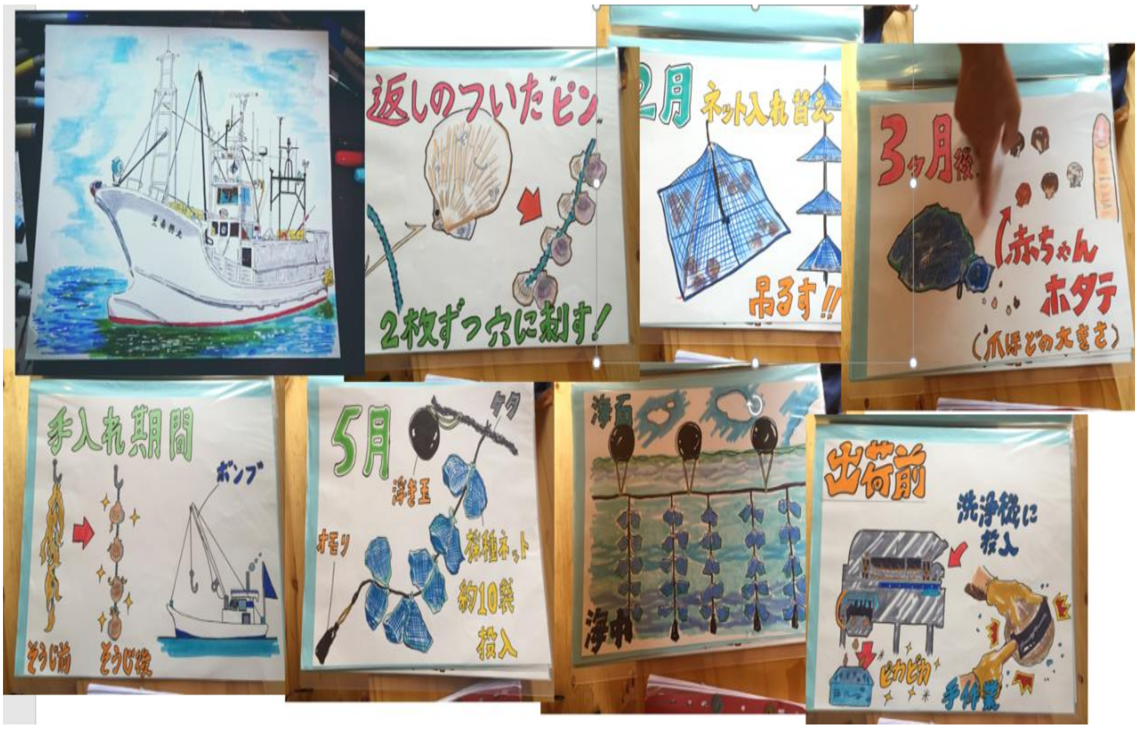

返しのついたピン
2枚ずつ穴に刺す！
2月
ネット入れ替え
吊るす!!
3ヶ月後
赤ちゃん
ホタテ
(爪ほどの大きさ)
手入れ期間
ポンプ
そうじ前
そうじ後
5月
ケタ
浮き玉
オモリ
採種ネット
約10袋
投入
海面
海中
出荷前
洗浄機に
投入
ピカピカ
手作業

Figure 30: Pictures drawn by a young fisherman.

These drawings reflect the fisherman’s attachment to the sea, his boat, and his pride in the profession. It is clear from the data that Blue Tourism has transformed the fishermen’s experiences and the image of their own community. The post-disaster image of the fishing town used to be very depressing, being dominated by scarcity of population and lack of vitality, all of which form the basis for the development of Dark Tourism. However, by focusing on positive site attributes such as the beauty of nature, cultural interactions between hosts and guests and the provision of local foods, it was possible to create more positive perceptions of place (Seaton, 1999; Stone, 2006) and enhance the destination’s sustainable recovery (Sofield, Guia & Specht, 2017). This process was described by a team member of the Blue Tourism initiative in the following terms:

> Most visitors are students, they are young and enthusiastic. They bring the town vitality, help us reconstruct the economy, but also bring us (fishermen) together. Sometimes the tour can be large: for example, 100 students came at the same time but our fishing boat can only accommodate 10 people at a time, so we needed to cooperate with each other to find the best way to please the visitors; some groups departed for the sea tour while other groups learnt the marine knowledge at shore, then they swapped… (Interview, Fisherman).

This project has regenerated connections with the traditional civic society of fisherman and reinforced traditional community ties and a sense of belonging to the place. Building on place based practices of fishing and cooking and on traditional knowledge about the sea, the community enhanced its own resilience (Kato, 2018) while at the same time pursuing a bottom up form of sustainable tourism. All of this has helped the fishermen reduce their experience of the darkness of the site, giving hope for a full recovery of the town. Their efforts have been acknowledged by Japan Tourism Agency (2015). Blue Tourism was granted the Tohoku Area Tourism Award for Outstanding Efforts for Supporting Youth Travel in 2015, as outlined below:

> The reasons for granting the award is because Blue Tourism was initiated by a group of fishermen who made great efforts to revive their town and engage with the young generation, to stop Japanese youth turn their back on fishing products, to utilize the local marine and other natural resources sustainably to develop seasonal tours and encourage youth travel to Minami-Sanriku. (Award Report from Japan Tourism Agency, 2015)

Blue Tourism has provided fishermen with an opportunity to explore through interactions with visitors their own identity and connections with the sea and the community. For some, being a fisherman was not an option, but an obligation whereby, the eldest son is expected to continue the family line and family profession. As the value of being a fisherman is reinforced via interactions with the visitors, the profession is becoming more attractive. A younger fisherman whose ambition was to be a doctor said:

> I had no plans at all to be a fisherman. I wanted to work in medicine as being a doctor was seen as very desirable. I returned to my hometown due to my physical condition. My house was washed away and I constantly helped my parents with some fishery work but only slightly got used to it. After engaging with a lot of other fishermen, I started to find enjoyment in the work. In addition, I met many volunteers who came here to help and in particular were involved in the Blue Tourism project. I was often told that ‘the sea is beautiful, the food is delicious and fishermen are cool’ so I started to love and be proud of my profession thanks to the visitors. (Interview, Fisherman)

The comments from other fishermen also show that their identity as fishermen was re-shaped via the interaction of service:

> I grew up here, I did not see fishing as a great job, and instead, I admired those IT men. They were cool… But then I saw the visitors' screaming out excitedly when experiencing the rough sea and various types of seaweeds. It is through the visitors' eyes that I now see the wonders of the sea and the meaning of my work as a fisherman has changed. Their satisfaction and smiling faces made me want to develop my fishing skills to show them in more depth the beauty of my hometown (Interview, Young Fisherman)

The joyfulness felt by many of the visitors, and their communication of these feelings to locals demonstrates that post disaster sites can be experienced differently from merely being associated with death-related activities. Alternative discourses focusing on themes such as marine knowledge and sustainability gave fishermen the opportunity to share their experiences about their own profession in a positive manner, whilst also providing a platform to demonstrate their wide range of knowledge and skills. This transformative process led to a newfound pride in their profession.

The ensuing interactions with visitors enabled fishermen to reaffirm their sense of responsibility to the sea and the town. The visitors' perceptions of the environment and their responses to it strengthened fishermen's ambition to maintain the beauty of the sea and reasserted the need for sustainable development. The result was an enhanced sense of responsibility to educate younger generations by passing marine knowledge and culture down to them. This is demonstrated in the comments provided by one of members of Fishermen Japan, an organization that was established after the tsunami:

> I did not know the value of the sea before disaster; we learned the value of the sea from the visitors. Now I want to show everybody that being a fisherman is cool. (Interview, Member of Fisherman Japan)

The Blue Tourism initiative made it possible for fishermen to pass on their knowledge and respect for the environment to wider audiences. Their current image is a far cry from the traditional image of the Minami-Sanriku fisherman: their involvement with Blue Tourism helped create a shared identity of the fishery community and enhanced disaster resilience in Minami-Sanriku.

In short, the themes of death, destruction and commemoration are interwoven parts of the Dark Tourism experience. While the Blue Tourism initiative includes visits to dark sites, this community-led initiative builds on place-based traditional practices and local community knowledge to co-create a sustainable form of tourism that seems at odds with it being defined or categorized as merely another example of Dark Tourism development in a post-disaster area. The impact of Blue Tourism on both visitors and the local community makes it clear that post disaster sites can be experienced and enacted differently and provides a clear example of community resilience (see figure 31).

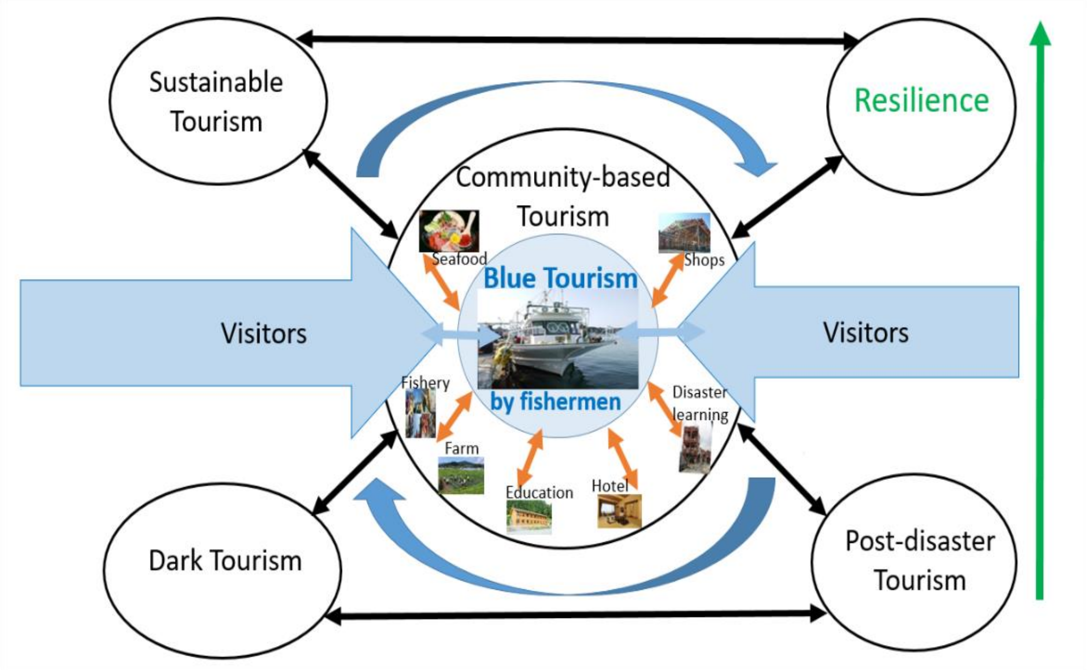

Sustainable Tourism
Resilience
Community-based Tourism
Seafood
Shops
Blue Tourism
Visitors
Visitors
by fishermen
Fishery
Disaster learning
Farm
Education
Hotel
Dark Tourism
Post-disaster Tourism

Figure 31: Co-creation process

The interaction between actors at the site is an important element in transforming post-disaster visitors' experiences into positive and enduring relations with the place and its community by focusing on the beauty of nature, disaster learning and environmental sustainability. Such approaches positively enhance the wellbeing of both visitors and service providers, and lead to a gradual transformation from dark emotions associated with loss of human life and property to positive engagement with community reconstruction. During the intervening years since the 2011 Tsunami, the impact of the disaster has gradually faded from the memory of the visitors and, it could be argued, so has the interest and motivation for visiting the site as a Dark Tourism destination.

The launch of Blue Tourism with its focus on community, environment and education has created a long-term sustainable form of tourism that transcends the definition of Minami-Sanriku as merely a disaster site. Blue Tourism has brought vitality to the town, and its bottom-up community approach is less likely to create ethical issues for the locals as it is initiated by the local fishermen in cooperation with other community members. In this capacity, it can be seen as a good example of co-creativity/co-creation. Blue Tourism has enabled the creation of an image for the town that is progressive and sustainable, and in which both visitors and locals interact and "develop co-creative transformative service experiences" (Magee & Gilmore, 2015, p.915), which in turn has positive effects on the improved physical, mental, social wellbeing of the community members and visitors. For visitors, the on-site involvement with fishermen provides a more enhanced and complex learning experience and emotional fulfilment than Dark Tourism could ever offer. For the fishermen, Blue Tourism generates an alternative way of income and brings hope for future development, while the interaction with visitors enables them to express and reshape their social and cultural identity in a positive manner. Thus, community-led tourism initiatives such as Blue

Tourism highlight the limitations of Dark Tourism approaches to post disaster sites, providing a valuable alternative for the development of a more sustainable form of tourism and of community resilience in post-disaster sites. Another example of a social innovation in tourism is exemplified by Hotel Kanyo. The next chapter illustrates how community leadership emerges on a crisis situation by focusing on the role of the Okami (as community leader) in strengthening bonding, bridging and linking social capital and facilitating social innovations across the board.

Chapter Eight: Stories of Okami's leadership: enhancing social capital and disaster recovery

8.1. Introduction

In the previous section I have discussed the community-based tourism *Blue Tourism initiative* which offers an alternative livelihood for fishermen however, the capacity of fishermen for town tourism development as a whole, is limited. Given the place-based characteristics of coastal tourism development (Meyer-Arendt and Lew, 2016), it is important for a town like Minami-Sanriku where the main livelihood depends on fishing and tourism, to optimize its coastal resources and local features to enable tourism recovery and development. The hospitality sector has played important role in this recovery, in particular the role of the Okami-san (female proprietor).

8.2. The changing role of Okami from a traditional cultural carrier to the driving force of post-disaster recovery

Prior to the 2011 disasters, Minami-Sanriku, with its beautiful coastline, spectacular cliffs and small islands, was a popular tourist resort, attracting around one- million tourists a year. There were many family run, traditional Japanese-style lodgings (known as ryokan) in the town before the disaster. These ryokan are generally small lodgings and have a tatami room where guests are served, with unique artistic ceramic displays, food service and interior decoration. Around 20 of these lodgings have been recovered and re-opened after the tsunami (Minami-Sanriku Tourism Association website, 2016). These redeveloped lodges, have their own unique features to attract different types of tourists, with some being newly developed with a combination of both western and Japanese-style to accommodate visitors for the educational trips.

Okami is the title given to a female proprietor of a Japanese inn or the wife of the owner of a hotels ryokan, onsen/hot spring, etc. San is similar to “Mr”, “Ms.”, and “Mrs". Okami-san is considered an important role in the ryokan having responsibility for providing high quality hospitality and attending all external and internal affairs, very much like a general manager in a hotel. These ryokan have often been handed down from generation to generation or are run by three generations together, namely the Oo-okami (grand Okami), the Okami and Waka-okami (young Okami) so that the responsibility and traditions as Okami are passed from the elder generation to the younger generations (Japan Ryokan and Hotel Association website, 2018). These traditional images of Okami-san are very often shown in Japanese tourism marketing materials, with the Okami-san dressed in a kimono, preparing traditional tea, based on traditional tea rituals, or traditional cuisines in a typical ryokan. However, there is no clear boundary between a ryokan and a hotel (Guichard-Anguis, 2008) as many ryokans have had to adapt their traditional style to meet modern needs and to survive the competition from modern business hotels.

Hotel Kanyo is located by the seaside on Shizugawa Bay in Minami-Sanriku. It is the largest hotel in Minami-Sanriku with 244 rooms with a capacity of 1,300 guests. The Kanyo at Minami-Sanriku features a combination of western style and Japanese-style rooms with straw-mat flooring to sleep on, open-air public baths, a restaurant and café facing the bay through panoramic windows, and fresh seafood cuisine, which shows the relaxing atmosphere of the traditional Ryokan, eating, sleeping and hot-spring bathing. Other modern amenities include conference facilities, gift shops, a ballroom, meeting rooms for up to 1,000 people, making it the largest hotel in Minami-Sanriku town with a hybrid style to cater for different needs. However, the 2011 tsunami caused damage to the hotel, with flood-waters, reaching up to the second floor, meaning that the hotel had to remain closed for a number of months afterwards.

Yet, the hotel fulfilled a new role as a disaster evacuation shelter immediately after the disaster. This was facilitated by the Okami using existing infrastructure, local knowledge, culture and her own networks. The post disaster situation helped to legitimise the changing role of Okami away from the stereotypical image of traditional cultural carrier to becoming a powerful driving force for disaster recovery. The role of the Okami in post-disaster recovery and the hotel can be exemplified through the female owner's role in managing the evacuation shelter, her collaborative efforts for revitalizing local business, food PR, her contribution to the initiative of Disaster Storytelling Bus Tour to name a few involvement which demonstrate her contribution in different phases of disaster management cycle from initial disaster response, recovery, disaster preparation and mitigation.

8.2.1. Initial response to disaster: The Hotel as evacuation shelter

Whilst the tsunami almost swept the whole town centre away, the destruction of the Hotel Kanyo was less severe as it is located on higher ground. The main roads were destroyed and the bridge collapsed. The hotel was isolated and had to rely on the radio to get some information. During this time, the Okami, who was typically seen as the traditional culture carrier (Guichard-Anguis, 2008) took on a different role by bonding the local community and staff together, offering a place of shelter by making use of the existing infrastructure of the hotel.

> On that day, the shaking of earthquake was long and it was snowing. Immediately after disaster, many people came here for shelters. I began to

> realize that the situation was getting more severe. I immediately guided them to evacuate.
>
> It was first time that I had to ask our staff to evacuate since I worked in this hotel. After all it was in such a difficult situation already but just in case situation was getting worse. The actual evacuation place was the parking lot outside across the road where we have the nursery facilities on the first floor and women staff accommodation on the second floor located on the higher ground, a safer compact space. In fact, the guests in our hotel were not that panicky as they were soon guided to the place where they could not see the sea, but local people were really worried, running to this area. They mentioned that, 'people were washed away while running, and we heard someone screaming out, but we could not do anything and had to quickly evacuate here ….' It was chaotic….. If I were to panic, the situation would have become worse. Therefore I had to declare at the very beginning that we would do our best if any further emergency occurred, please understand and cooperate. If I had not declared earlier, I thought I would have had to do so forcefully later under harsher circumstances. (Interview, Okami)

On the day, around 350 people were evacuated, including the hotel employees, guests, and local people from the nearby vicinity. The Okami's skills were very useful in the crisis situation as she was able to bring the chaotic situation under control when everybody was in a panic. The social norm, cooperation or work ethic could have been ignored when the situation was a life-death situation, but Okami was able to anticipate potential problems and address the situation accordingly. Her status as Okami also made it easier for her to give commands to her staff. As she continued,

> Only a small number of staff and myself stayed... I stayed to observe the situation, so that I can see the change of the sea level situation. Though I could have left this place and evacuated to the nursery facilities which is detached from the seaside, I clearly stated to my staff that I would stay and do my best. Later some of our young staff started to weep as they saw the situation around themselves. I understand! After all, most of our staff are young women. That was the beginning of our hotel as an evacuation centre. (Interview)

Though the hotel was not a designated public evacuation site, it functioned as an evacuation shelter and later in May, it was designated as a secondary evacuation shelter to receive 600 people who had lost their homes. This is another example of Kyojo (mutual help) and community leadership that helped to get through the difficulties when government support were unable to reach them immediately after the disaster. As reflected by the Okami-san,

> We were completely isolated from other places as the bridges were washed away and the roads were paralyzed covering with rubble and tsunami debris. We gathered together, and encouraged each other. The feeling of 'you are not suffering alone' were deeply conveyed, spread and made us feel stronger. Later, the electricity and water were interrupted. As it was a cold snowy day and the mountain is not that far from our nursery facilities and staff accommodation, staff went to the mountain to get some wood and burn the wood for heating. We had to consider such primitive way of living when we were isolated by the devastating disaster.

> Though as a leader, I did not know exactly what I should do next under such circumstances of unprecedented disaster, I knew I should stay strong. I soon set up the countermeasure headquarter and started to take action.

The narrative of Okami indicates that she was not so sure what to do next but did not show any sign of unassertiveness. The timely decision-making for evacuation and leadership are critical to calm survivors down and to save lives as the Okami-san observed the sea level and quickly made her decision to direct her staff and guests to the higher parts of the hotel. The immediate challenges facing them included feeding large number of people, sheltering at the hotel, obtaining fresh water and tending to those with medical needs. To avoid the chaos, meetings were held to establish rules and to discuss any issues which needed to be addressed as the social norm or work ethic could be broken in the situation of life and death. As Okami-san reflected,

> Under such an emergency situation, we could have put ourselves as top priority, but it would have been difficult to stop if things went that way. First, under normal circumstances, we are a service sector, top priority is often given to our customers in our everyday operation practice: This is the part of career education, but I can image under emergency circumstance, this might not always work. To avoid such a situation, I have told my staff to prepare mentally that priority should be given to our guests and local people. At an early stage we needed to make sure we all worked collaboratively towards the same direction. Otherwise it would be difficult to manage. I expected that my employees would still retain their work ethic: priority should be given to our

> guests and local people. This is basic. It was great that everybody was highly aware of their roles and have taken action. The onigiri (rice balls) was not enough to distribute to all people, but we shared.

Okami shows her capability to mobilize public cooperation ensuring norms and work ethic embedded in the leisure culture remain prevalent after the tsunami. Planning was crucial for the first few days when government support could not reach the area. The catering staff in hospitality sector have the tendency to prepare more food than needed in the normal situation, but this time the person who was responsible for kitchen, needed to plan the amount of food for each meal very carefully as they were in a situation where they had no place to do any shopping and the disaster supply could not be distributed here immediately.

The food planning was difficult, as the number of people was difficult to estimate. She continues,

> In total on that day it was around 350 (including around 120 employees). From then on, the number of people continued to increase. The next day, it was around 500- 600 people. It was difficult to know the exact number. As the hotel is located along the road, people were in and out frequently. Due to the inability to buy food, local people around also came to our hotel for food. Some people stayed in their own car but had not enough gasoline for keeping warm or they had gasoline to keep warm but only came here for food. Therefore it was really difficult to know the exact number of people.

> We needed to see clearly how long we could withstand such a situation with the current supply we had. I told the food and catering staff to “plan the food for a week”. This was not easy task. Basically we cannot go home tomorrow. By saying planning the food for a week, I meant to be mentally prepared to be in a situation like this for the whole week. Given our limited supply of food, we needed to face the difficult situation and carefully plan the food for breakfast, lunch and dinner and manage our food distribution system for our staff, hotel guests and local evacuees.
>
> Water supply was interrupted for four months, we had to rely on the water supply vans distributing water around the town. It was very hard to get enough water due to the damages of the roads and water supply system. In order to provide the baths facilities for local people to use, we made a request for a more frequent water supply so that the local people were able to use our public baths. In normal business operation day, our bathing facilities required 300 tons of water but in crisis situation we asked for 80 tons of water to be supplied to ensure that 600 evacuees could have a bath here. With limited water, laundry became luxury. We either washed our clothes in the river or carry huge loads of laundry to neighboring town, so we called for laundry volunteer from Sendai and soon these issues were addressed.

Given the strenuous circumstances some people became ill and the hotel did not have specialized medicines or facilities to care for the sick. In the words of the Okami,

> We did not have medicines for diabetes, high blood pressure etc. for those who needed special medication. We only had some regular medicine such as medicine for colds. Around evening time, a policeman with muddy shoes stopped here to inspect the situation. I asked him if there was any possibility of addressing this issue and he suggested to transfer the patients to public shelters where they might have better access to medication. As roads were destroyed, there was no way that we could send them directly to the place. We used our hotel car to send the patients closer to the direction of public shelter while people from public shelter also departed toward our direction. In between there were some places that the cars could not access to and had to walk through the debris.

Volunteers arrived at the hotel 12 days later, on March 23rd and the hotel became the base for many volunteer activities of individual and groups such as health organizations, laundry volunteers, disaster relief allocation volunteers. The Okami-san coordinated the various activities between the volunteers and the community. On May 5th, 2011, the hotel was officially designated as a secondary evacuation shelter for 600 evacuees. A Resident's Association was set up and leaders were selected.

The examples of the quick decision to evacuate, the one-week food planning, collaboration with police to transfer those who needed medication to public shelters and various other coordination activities suggest the criticality of community leadership in a crisis situation, someone who could help bring the chaotic situation into order, enhance the connection and culture of Kyojo among the evacuees to help them get through the horrible feeling of disaster, loss, destruction and despair. Okami-san, acted as brokers to communicate with locals and negotiate with authorities for support.

From a practical perspective, a private entity like a hotel could function as a public facility to provide much needed service such as food, shelter, public baths in crisis situation. The hotel also provided a space for intensified social connection. More importantly, the key figure of the Okami became a key figure for disaster response and recovery who could facilitate practical matters and make meaningful dialogue with government to offer a support system for locals. This was evidenced by the government subsidies and support provided on May 5 when the hotel was designated as secondary evacuation shelter before they moved to temporary housing. It became the base for many volunteering groups and education tours.

The story of Kanyo echoes other ryokan's stories (Japanese-style inn) and shows how the Okami can play a leading role in bridging social capital between local people and external support. The ryokan in question is run by both Okami and Waka-Okami (young Okami). After interviewing the young Okami, I asked the elder Okami, 'what do you think of the role of Okami should be in such a situation?' She said:

> Just as always, we treated our customers as we always do, trying to meet their needs. As volunteers continued to come to support us, my role was to coordinate the activities. For example, if there was anything insufficient and anything they need, I would contact relevant people. I also informed them the time for distributing the food for the evacuees…etc. I acted like a coordinator and the inn served as connection station. Later, we were designated as

> evacuation shelter for 160 people. People were all well-behaviored, very much like a commuter, they went out and came back home every day. I did what I needed to do when they were here. (Interview, Okami 2)

The stories of Okami-san show that she had taken on yet another role as liaison between her community, volunteer groups, and government officials in some cases to solicit support for the disaster-affected community.

> Water system was interrupted so around 20 tonnes of water were carried seven times a day from Tatsuganesan Mountain (田束山) that is around 1.5 hours away from here. Thanks to everybody's collaboration, we were able to have water for bathing and water laundry's day. There was no road leading to the mountain, but we made the road wide enough to let one truck to pass through. My husband and my son, together with other evacuees worked really hard to get the water.
>
> Volunteers were really helpful. I am really grateful for their support. At that time, everybody (evacuees) had no spare clothes to change. Everybody (evacuees) only had what they worn on that day when disaster hit the town and had no spare clothes to change. There was no place to do any shopping either, but soon clothes were provided by volunteers. They constantly came to ask me what we needed and posted information on the internet, then helped collect and distribute the disaster relief. Later, our ryokan was used as secondary emergency shelter for three months before the temporary houses were ready to

> use in August. For quite a long period of time, there were no tourists at all. Our ryokan only accommodated workers for town reconstruction and volunteers.

Potentially, Ryokans can play a role in the entire disaster management cycle including disaster response, disaster preparedness, and disaster recovery. For example, the initial response was made to timely evacuate to the safer places with food and shelter provided, which were demonstrated in both Ryokans. The leading role of Okami-san to ensure the comforts of the guests became a leading role for disaster response and recovery through collaborating with locals and communicating with outsiders for support. Later on, further actions were taken by Okami-san using existing resources and networks to collaborate with local business, for food branding, for initiating disaster storytelling bus tour for disaster mitigation and so on, all of which are a clear indication of the critical role Okami played in crisis situation.

8.2.2. Disaster recovery stage: Okami-san in action, Kyojo/collaboration, social capital

As many local business in Minami-Sanriku were destroyed by disaster, it was difficult to know which store was re-opened and its location for both visitors and locals. The Hotel Kanyo's Okami proposed a Minami-Sanriku Tenten Map that was published in 2013 (See figure 32), which covered the locations of local stores to help build links between visitors who wanted to support the local businesses and those local business who hoped to attract more visitors. The Tenten Map was distributed to temporary houses, Sendai Station, Car-renting Centre, and The Hotel Information Centre in order to attract more visitors for support.

Apart from its normal function of the Tenten Map for directions, the map was also designed in a way that visitors were encouraged to visit multiple stores. On the Minami-Sanriku Tenten Map, there were blank spaces next to the name of each store where the customers could get a stamp at each store they visited. There were different prizes prepared for the visitors who collected 5, 10, 20 and 40 stamps respectively. These stamps could be exchanged for prizes at the hotel lobby. The process of stamp collection was known as Stamp Rally (スタンプラリー). The design of the map was well received by visitors. As one of volunteers comments,

> I felt that the stamps from stores was just like a sign of acknowledgement and appreciation for the support. It also created a connection with shop owners. Unlike normal shopping where we paid and left. We had a chance to have a conversion with the shop owners after shopping and got to know more about the history of the stores. Some shops had a long history that has been passed to several generations and I can understand their feeling of obligation to re-open and continue the family business. (Interview, volunteers)

According to Ryoko Shinbun 2015, the number of people who visited more than 5 stores was up to 220 in 2013 and 250 in 2014. This not only brought the connection between local businesses but also connection between the visitors and community to enhance community recovery. As she commented,

> Priority were given to recover the local businesses, as they were the pillars of the town. Business owners were key for town reconstruction. Owners of fish store, meat store, whatever stores, without them, the community reconstruction and Machitsukuri (community-making) was impossible. A lot of factories and

> companies were destroyed by the disaster, so it was important to re-start these businesses as they created job for local people. If they were relocated in other location after the disaster, there would be a lot of unemployment in this town. In addition, daily lives would become very inconvenient. Local people had no places for shopping for daily necessities, not enough job opportunities, which could hasten the depopulation of the town. The local business could bring energy to the town. The temporary shopping Centre was opened in February, 2012, which was great. There were a lot of visitors coming to support the business in shopping Centre, but some small businesses owners whose shops were not located in the temporary Sun Sun Shopping Centre found it hard to have access to visitors. It would be great if the visitors could also visit those stores (Interview, Okami-san)

Thus, Tenten maps enabled the local businesses to have a better connection with outsiders, in particular it was useful for those shops that were not located in the shopping centre or those who had less social capital to be accessed by tourists and supporters to enhance their continuity. Indirectly it could help reduce the possibility of business moving out of the town which could result in further depopulation. The view of Okami also indicates that Okami has long-term vision of future development. The map was updated once a year to include newly-opened shops or re-located shops as the town was still in the process of reconstruction and was temporary and transitional by nature during the reconstruction process.

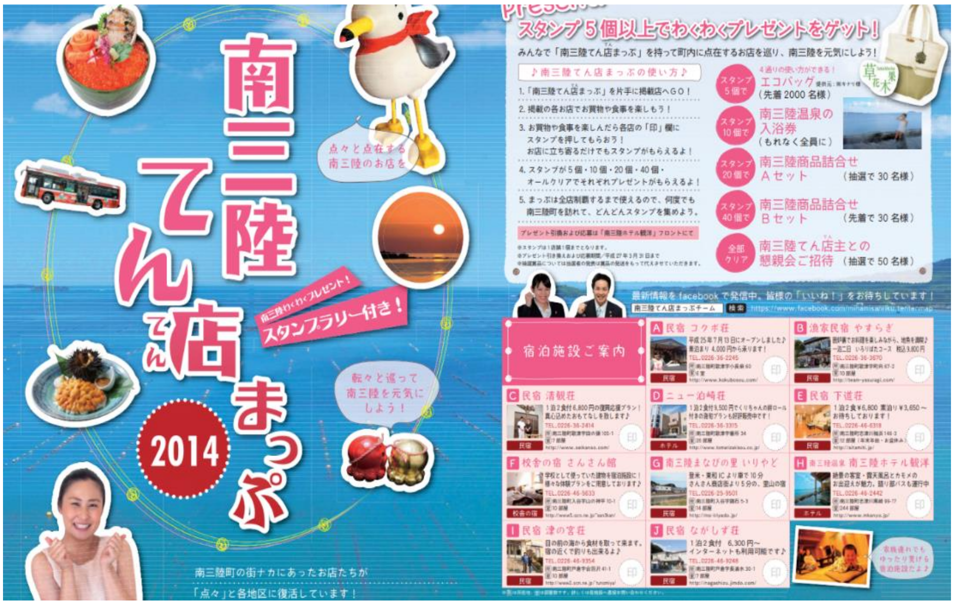

南三陸てん店まっぷ
2014
南三陸わくわくプレゼント！
スタンプラリー付き！
点々と点在する南三陸のお店を
転々と巡って南三陸を元気にしよう！
スタンプ5個以上でわくわくプレゼントをゲット！
宿泊施設ご案内
南三陸町の街ナカにあったお店たちが「点々」と各地区に復活しています！

Figure 32: Tenten Map. (Hotel Kanyo website, 2017)

Minami-Sanriku Tenten Map was granted the Tourism Kingdom Miyagi Omotenashi (Hospitality) Grand Award (Miyagi prefecture website, 2015) as an acknowledgement of the excellent efforts for local revitalization through tourism. The award was also given to Minami-Sanriku Fukko-ichi executive Committee for their efforts of revitalization of local business and enhancement of population inflow of visitors. (Miyagi prefecture website, 2015), the case in which we have discussed in Chapter 6. The reason for such an award were shown on the Miyagi Prefecture website,

> "The Tourism Kingdom Miyagi Omotenashi (Hospitality) Award" was launched by Miyagi prefecture in 2014 to acknowledge the outstanding achievements of individual and groups for tourism promotion and regional economy revitalization. By honoring their achievements, it aims to raise the hospitality quality and encourage tourism industry in Miyagi (Miyagi prefecture website, 2015). https://www.pref.miyagi.jp/site/kankou/hyoushoukettei-h29.html.

The award includes three categories, the Grand Award, Encouragement Award and Special Award. The Grand Award and Encourage Award were given for exceptional excellent effort and distinguished effort that can be a role model for local revitalization through tourism, while a special award was given for effort that is basic but can be easily applied to other places (Miyagi prefecture website, 2015).

Being awarded ‘Omodenashi Grand Award’ offers new criteria of selection of tourism destination for visitors and for inclusion in media marketing. As it is shown via many news media (e.g. Ryoko Shinbun, 2015, Sankei News, 2015) with the headline of “Minami-Sanriku Tenten Map was granted Miyagi Omodenashi Grand Award”. The media coverage of the award for the Tenten map publicized the town, making the place known to more people and hopefully attracting more people to come. For a town that had been largely destroyed by the disaster, it was more important than ever to have more transient population to visit the town and help recovery. This can enhance the bonding social capital within local community, and social capital that bridges the community with outside visitors and other parties.

To further enhance social capital, Okami-san, as “the ryokan’s ultimate authority…domestic and business manager who handles all the everyday economic transaction” (McMorran, 2008, p270) in the hospitality sector, have the potential to mobilize the existing social capital to enhance participation and engagement. The capacity of the Okami to enhance participation and engagement, the very elements of social capital, can be exemplified by their tactics of collective food PR when encountering a food crisis.

The seasonal fresh seafood, beautiful landscapes and onsen/hot springs are some of the highlights for tourists visiting. Minami-Sanriku, as one of major producers of a variety of seafood, such as salmon, sea pineapple, etc, faced difficulty in finding an outlet for the seafood. Prior to the disaster, sea pineapples were consumed primarily in Korea. However, the consequence of the Fukushima Nuclear Contamination made the supply of seafood from Minami-Sanriku difficult as Korea refused to import the sea pineapples (Hoya in Japanese). According to Sanriku Shimpo Newspaper (2016) the restrictions on the import of seafood from Miyagi prefectures resulted in 14,000 tons Hoya produced from Miyagi prefecture being destroyed. One third of them (around 4,700 tons) were from Minami-Sanriku. The response from the Okami was as follows:

> I want to let consumers to know more about our town and our delicious seafood…. There are many different ways of eating hoya (sea pineapple), not only raw, we can make steamed hoya, fried hoya, pasta hoya….Therefore, we increased the variety of sea pineapple menu to 13 types to cater for different customers as this allowed people to have more options of sea pineapple if customers could not eat raw one.
>
> I formed a group PR response by asking eight other ryokan or minsyuku (the equivalent of guest houses or B&Bs) to include at least two dishes of sea pineapple in food and accommodation package. Other Okami-san agreed. This was group PR. Some minsyuku still had to pay loans to the bank. If our local ryokan or minsyuku with their local characteristics could not survive, if our economy could not be boosted, it would be impossible to enhance tourism and town popularity (Interview, Okami)

She took a lead to collaborate with the other eight Japanese Inns to launch a sea pineapple campaign and include more varieties on the menu. For example, sea pineapple goes well with cheese and with beer. All eight Japanese inns co-created a seasonal sea pineapple menu and promoted the sea pineapple menu on the same day to encourage visitors to consume the products. Before promoting the sea pineapple to customers, trial and taster days were held in one of the Inns to receive feedback and the news media were invited to help promote the menu.

Though the restriction of Japanese sea pineapple on the news had a big impact on the local producers' lives, the collective PR and media reports provided an opportunity to marketize Minami-Sanriku as one of the few towns that produced sea pineapple and a call for external support. The menu was well-received by customers who praised it as a "creative menu" (Nikke News, 2016). The large news coverage about the Minami-Sanriku seafood ban and community efforts towards PR, helped publicize the town. As one visitor commented, "I did not know that sea pineapple was largely produced in Minami-Sanriku, I learned this through the News about the food safety and the plights of Minami-Sanriku fishermen." (Interview, visitor)

This reminded me of the conversation I had with a fisherman's family when I was volunteering at their house with a group of volunteers from Tokyo. During the break, the fisherman brought some steamed hoya for us to taste. He told us, "due to Korean import restriction on Sanriku' seafood, the hoya I produce is only for self-consumption or giving to friends in other areas. For some fishermen who had on-line shops or have more social networking with big clients, they are able to sell to other areas of Japan." This seems to suggest that the problem is not that they don't have social networking and trust within community. In fact, there were many volunteer groups from all walks of life who regularly came to do volunteer work here. However, what he lacked was the social networks who could help generate capital. "Social capital, while being constituted by social networks and relationships, is never disconnected from capital"

(DeFilippis, 2001, p783). Certainly there are some social groups who have more powerful networks than others. As discussed earlier in chapter 6, the community has strong bonding social capital but this is not sufficient to generate economic capital. The tactics were to enhance *bridging social capital* by connecting the existing *bonding social capital* and infrastructure within the community to the potential external support beyond the immediate community.

These tactics for the food campaign were not new in Minami-Sanriku. Even before the disaster, Okami-san collaborated with local restaurants to make collective food campaigns and created Kirakira (glittering) Bowl (often consisting of local seasonal seafood) in 2009 for a destination campaign. This similar strategy was applied to post-disaster situation but certainly more effort was needed for a town to be reborn from its debris. Collective efforts were made to attract more visitors through food branding of the Kirakira Bowl. This was awarded the special prize of Food Action Nippon Award 2014 by the Ministry of Agriculture, Forestry and Fisheries. As shown in the report of the Award,

> The efforts were made to collaborate with other restaurants in Minami-Sanriku, to publicize and provide the Minami-Sanriku Kirakira Bowl (often consisting of local seasonal seafood). Joint efforts were made to enhance local seafood appealing and bring back tourists after disaster. Kirakira Bowl was included in the accommodation package. In cooperation with local agricultural cooperatives, the locally produced seafood from Sanriku Coast was largely used in the menu. Great efforts have been made to revitalize the town through food consumption. (Ministry of Agriculture, Forestry and Fisheries, Food Action Nippon, 2014).

The actions taken by Okami-san from the initial response to the disaster, the Tenten Map initiative, and the food branding campaign suggest that Okami-san, a community leader in her own right, has played more than just a culture carrier role but has been a driving force for disaster recovery. Tourist experience of ryokan/ hotel often consists of elements like being served food, bathing/ hot spring, nature environment and the quality of reception and hospitality. The Okami-san is often placed at the core of the ryokan to ensure good experience of tourists. My data suggest that the Okami-san is also placed at the centre of the reconstruction process where the same skills and networks can be put into use. The initiative of a Kataribe Bus Tour (Disaster Storytelling Bus Tour) is a case in point in how this type of community leadership emerged and operated in a crisis situation. Her high profile can be seen from headlines of various news media reports and disaster symposiums, workshops and conference talks many of which highlighted the criticality of community leadership and disaster storytelling.

8.2.3. Disaster mitigation: storytelling (known as Kataribe), enhancing disaster culture heritage through collective leadership

Disaster storytelling known as Kataribe in Japanese is not a new phenomenon. A lot of disaster-associated areas in Japan have a disaster storytelling tradition to keep history alive such as Kobe, Nagasaki, and Hiroshima. “Not letting the memory of the disaster fade away” (震災を風化させない) is the key justification for Disaster Storytelling. It became a powerful way to enhance disaster culture and embed risk and disaster into everyday lives of the community. For many disaster prone areas, ancestors have left the tsunami stone, tablets and Tendengo cultural practice to remind later generations. “The history of Japan’s tsunamihi (Tsunami stone, tsunami monuments) tells us that communities erect monuments to tsunami disasters for at least three distinct reasons:

prayer, education and healing" (Good, 2016, P.46). This echoes with Hotel Okami's effort to keep disaster experience alive for future disaster mitigation through disaster storytelling (Kanyo Kataribe Bus Tour).

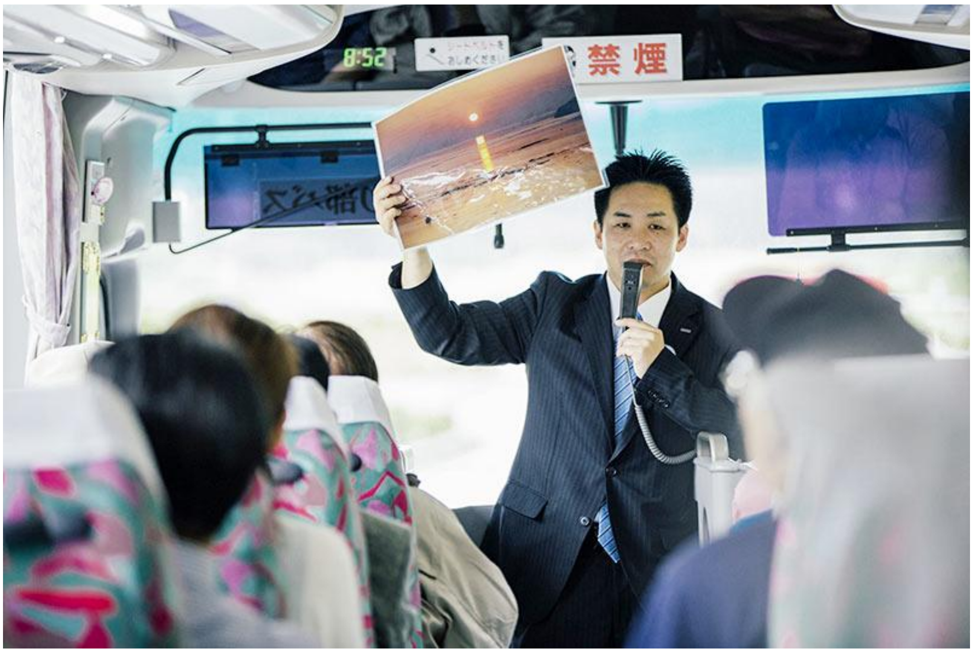


Figure 33: Kataribe Bus (Disaster Storytelling Bus Tour)

Initiated by Okami-san, Kanyo Kataribe Bus tour has been operating since February 2012. Staff from Kanyo serve as storytellers to share their disaster experience through a one hour bus tour taking the hotel guests or tourists to the tsunami-affected sites for the purpose of remembering the disasters and not letting the disaster memory fade away, as described by Okami-san, 'A once-in-a-millennium disaster can be a once-in-a-millennium chance to learn'. The regular routes for the Kataribe Bus Tour normally depart from the hotel, then pass through some of the key disaster remains such as the former Disaster Prevention Centre and Takano Kaikan Hall (Minami-Sanriku Wedding Hall).

Fostering a disaster culture through storytelling and disaster remains.

Disaster remains, as a physical reminder of emotionally-laden past can arouse empathetic resonance of the story. One of the important disaster remains for the Kataribe Bus is the former Disaster Prevention Centre. On most days of my fieldwork, I needed to pass by this building. For some reason, from the far distance when I saw the red skeleton building, I started to slow down the speed of my motorcycle. The story of Mayor, Mr Sato and some of his employees, who survived by clinging to the rooftop antenna, the cold snowing night over the roof, the story about the young lady who sacrificed her young life broadcasting and urging the locals to evacuate, always crawled to my mind. I stopped a few times, parked my motorcycle aside, just to pray and show my respect to the victims. The scene lingers in my mind even when I am writing this work.

The former Disaster Prevention Centre was a government building where 43 employees lost their lives while attempting to coordinate the rescue operation during the tsunami, including a young woman who was broadcasting the evacuation warning until the last minutes of her life. It has become an important memorial icon that features on most tours of the site. The site triggers ambivalent emotions regarding whether this previous Town Disaster Prevention Centre should be demolished for reconstruction or kept as a memorial to the dead. The community's response towards this dark site is ambivalent; some argue that it should remain as a place of significance for passing down disaster experiences and creating a succession of memories and records for future generations while others argue that it would be a pain for those victims' families to see and incompatible with the reconstruction of the new town. Finally, the Miyagi prefecture government became involved and decided to obtain and manage the site until 2031 (Kahoku News, 2015). People clearly understand the spiritual effects of the site for both victims and visitors, in particular for disaster education for later generations. Even myself as an outsider, I have complex feeling about that building, as shown in my field notes,

> “Standing by the side of the people who were listening to the storytellers’ story about the Previous Disaster Prevention Centre, I feel I completely understand their feeling, their ambivalent feeling between the desire to give dead friends or family members meaning by keeping the disaster lesson alive, the desire to move on and forget the sadness of the loss and destruction…” (Field notes, 2016)

Unlike the former disaster prevention centre where national financial support were provided to preserve the building until 2031, the future of the other “must-visit” disaster remains for the Kataribe Bus Tour, Takano Taikan, which is around 300 meters away, is currently maintained by a private company. The Takano Kaikan Hall used to be the Minami-Sanriku Wedding Hall where 327 people were saved by evacuating to the roof top of the building. Just before the earthquake hit the town, the senior art performance held in this building had just ended and people were about to leave the building when the 3.11 disaster hit the town. The staff from this building stopped them and quickly guided them to the roof top of the building. The tsunami reached the 4th floor of the building but they were all saved by the timely evacuation to the rooftop. Other tsunami remains such as Shizugawa Public Hospital where 74 people died, have been demolished and rebuilt, but the company and Okami-san did not make use of public funds to dismantle the building. Instead, they strived hard to preserve this building and made it a tourist destination for disaster storytelling, but the maintenance and management of this building remains quite challenging.

According to Kahoku News (February 24, 2018), a petition was submitted in September 2017 by the owner of the Takano Kaikan Hall to the town to include this hall into the Earthquake Reconstruction Memorial Park to be maintained by the town government. The owner also requested for building a tunnel to connect to the Memorial Park under the elevated highway No.45, passing through the hall, and the improvement of the surrounding facilities such as pedestrian sidewalks and parking lots. Relevant people from the town responded that, because of the town's financial situation, it would not be able to support and maintain the Takano Kaikan Hall; national government only provided financial support for one disaster remains for each town, which was given to the Disaster Prevention Centre. The tunnel could not be built because it would reduce disaster prevention function of the elevated national road (Kahoku News, 2018). Though the petition was unsuccessful, it demonstrates the company's determination to create a space for disaster storytelling. As vice president of the Hotel explained to the News media,

> 'I hope the building can be kept but the capacity of the private corporation is very limited. In order to convey the Tsunami experience, I hope the lesson of the Tsunami can be conveyed to more people, I hope this Takano Kaikan can be integrated into the Disaster Reconstruction Memorial Park and maintained by government.' (Kahoku News, 2018)

> "With the progress of disaster reconstruction, debris and the disaster-affected building were removed. It is more difficult to convey the disaster experience without actual evidence. We tried to use some pictures to show the situation at that time. " (Interview, storyteller)

Kataribe (disaster storytelling) often appeared in the media for its contribution to conveying disaster experience to the future generations and for future disaster risk reduction. Similar to the kataribe in Hiroshima, it is local people who strived hard to keep history and disaster experience from being forgotten (Chieko, 1995), and to pass it down to the next generation. In very general terms tourism development in Minami-Sanriku can be conceptualized as part of what is termed dark tourism, but the fundamental difference is that Kataribe (Storytelling) aims to ensure that the disaster is not forgotten but is put to use for disaster risk reduction. The Kataribe bus tour includes within its itinerary traditional dark tourism components such as tsunami-ravaged schools, skeleton disaster remains, etc. but its emphasis is on remembering the disaster for future disaster reduction and fostering disaster culture heritage. The significance of disaster storytelling lies in not only remembering the disaster for education purposes for future generations, but also for local people to construct their own stories, for fostering connection between community and the outside world. More importantly it also helps to strengthen community disaster cultural heritage.

Disaster education

"Not letting the memory of the disaster fade away" (震災を風化させない), Okami reiterates the purpose of the Kataribe bus tour (disaster storytelling) for passing down the disaster experience to the next generation. The role of the disaster ruins and disaster storytelling for educational purposes has also been claimed by many researchers and practitioners (Hayashi, 2017). The testimony provided by disaster survivors who later became storytellers further emphasizes the significance of disaster storytelling for education. As one of the storytellers shared his own disaster experience,

> As a disaster-prone area, it is important to know the historical disasters in this area, and learn lessons from their ancestors. The tsunami will occur every 30 years or 50 years. Even if you would not have chance to experience in person, if you ask the parents, most of them at least know roughly the magnitude of earthquake and tsunami.
>
> When I saw major withdrawal of the seawater again, I knew it was going to be a big tsunami. I could see the bottom of sea. I saw major withdrawal of the sea on 24 May, 1960. I knew it was a warning that a tsunami would follows soon. In 1960, I got up in the morning, very quiet morning. There was no water in the sea. Why? There was no earthquake, nothing…but a lot of fish jumping in the dried sea. Some fishermen went out to get the fish. Then 41 people died of tsunami…. At that time when I saw the tsunami I was a middle school student, I saw it in exactly the same place. I cannot forget this memory. Chilean earthquake and tsunami was on the other side of the Pacific Ocean, but have such a destructive power on Shizugawa. This time (the 2011 tsunami), I was quite sure that it could be as destructive and speedy as the one in Chile. However, I did not expect that it was severe to such an extent that my house would be completely swept away.

His story clearly indicates that it is important to know the history of disasters of the town and to pass down the experience to the next generation. His past experience of disaster helped him to make a judgement that the tsunami would surely occur after seeing the seawater withdrawal. The memories of the casualties of the 1960 tsunami he experienced provided a comparison against the 2011 tsunami. However, even though he had experienced the 1960 tsunami, which helped him to judge the situation, the destructive power is still difficult to predict correctly, he continued,

> ‘Run run, uphill! ’, The moments we heard someone screamed, ‘the houses were swept away’, then we saw the around 20 meter high wave tsunami sweeping toward mountain side. ‘No…no…. hurry up, drive up to the higher place….’ We went further ten meter to a higher place and survived. I just could not believe this was true, this was reality…. What happened? Then the tsunami stopped. The sea wave was withdrawing…The disappeared house appeared again… then out of my sight again…. I looked around. My family were around, some friends were around… my home…gone forever. Feeling so sad… No language could describe that moment. (Interview, Storyteller)

Apart from the powerful effects of his personal story, his vivid description of the tsunami on the day showed the importance of timely evacuation to the higher place as their ancestors have emphasized through the Tsunami stone tablets, a cultural practice of Tsunami Tendenko (つなみてんでんこ) which stipulates that when the tsunami comes, all you can do is “run, run to the higher ground.” Humans are powerless when facing the destructive power of nature. He raised the questions of whether humans are able to control nature and whether disaster can be prevented:

> I used to think if science and technology were progressive enough we might be able to control nature. After seeing my home sweeping away by the tsunami, I felt we can only live with nature, ***not*** be able to control nature. Even in the university, you might go to talk about disaster prevention but there were so many cases that we could not prevent. Just referring back to one or two years, we had flooding in Hiroshima, newly-wed couples died, various sad news. After that, we had the volcano in Nakano at the time when people climbed the mountain enjoying autumn scenery. Abound 60 people died in the volcano

> eruption. Also there were some other places where the volcano erupted, such as Kagoshima. Due to the Nagasaki Tornado, five fishing boats went missing; last September Ibaraki suffered flooding due to water bank that had broken down. Kumamoto’s earthquake…typhoon in Iwate… endless disasters... just within such a short period of time I could name a long list of disasters occurred. No matter which type of disasters, it could not be fully predicted with our current science, technology, and skills. Even if predicable, we do not hold such technology that could suppress the eruption of the volcano, or stop the occurrence of the typhoon. (Interview, storyteller)

That means that there are some disasters that cannot be prevented. Science and technology does not always work. When unpredictable disaster occurs, what kind of preparation can one put in place? What kind of action? What do we need to take on that day if it occurs? That is an important thing to debate with the next generation. That is what Kataribe (story telling) is for.

> Disaster prevention is like a buzz word, saying it all the time, it looks like we can prevent all the disasters. Even though the reconstruction is progressing I could not see any usefulness for the seawalls being built. The relevant authority in Miyagi said, ‘it is my responsibility to build all seawalls’. The highest one will be 14 meters high. Such a seawall – is it any useful for prevention? Here it is going to build 8.7 meters high seawall. The tsunami we had (2011 tsunami) was 15 meters high…15 meter high tsunami, but now we are building seawall of 8.7 meters high. Do you think it is possible to prevent it? They keep saying the term disaster prevention without thinking through, that is something ridiculous. (Interview, storyteller)

The storyteller was quite skeptical about the government's measures for disaster prevention, indicating that there is a missing link between the government's plans to build a seawall and the community's needs. The storyteller's view on the seawall construction suggests that physical reconstruction is not effective enough for disaster prevention if people do not prepare well, mentally, for future tsunamis. The 2011 tsunami has proven that the seawall cannot save the community from everything. Thus, 'it is more important to teach our younger generation tsunami-survival basics, our ancestral traditions, to live with nature' (Interview, storyteller). This echoes with the speech made by a storyteller who shared his experience in a disaster prevention event in Tokyo. He emphasized that, what made the life-or-death difference in the 2011 tsunami was Tsunami Tendenko (つなみてんでんこ). He pointed out that this life-saving strategy was whether people actually implemented the Tendenko practice (IT Media, 2011). Tendenko loosely means that when tsunami occurs, first and foremost is to escape to the higher ground on your own. It is your own responsibility to protect your own life. It is a traditional practice to avoid tsunami casualties by helping yourself and if you cannot help others, do not blame yourself. As a storyteller reflected,

> In fact there were around 30 minutes time between the earthquake and tsunami, which was enough time to evacuate to the higher ground. Some residents were aware that tsunami would follow the earthquake. They knew the cultural practices of "tsunami tendenko", which means that if a tsunami occurs, people should evacuate without taking care of others in order to avoid larger causalities. However, it was difficult to leave your family behind and run yourself. Some

> people went back to try to save the family members or for collecting something important and could never come back (Interview, storyteller)

Similar lessons were also summarized in Minami-Sanriku Disaster Reconstruction Plan 2011 that some people went home to collect something between the disaster warning and actual occurrence of the disaster, which delayed the disaster evacuation, while other people did not evacuate promptly believing that the seawall would save them. Some people did not expect such a large scale tsunami so they didn’t run to a place high enough (Minami-Sanriku website, Disaster Reconstruction Plan, 2011, p.20). For those who were overconfident that science and technology would save their lives, thinking that the high seawall would protect them, ignoring the ancestors’ tradition, they were doomed to repeat the bitter experiences when tsunami hit the town. These poignant stories should convey to the next generation to avoid the same mistakes in future.

The importance of passing down the disaster experience can also be seen from both the Takano Kaikan (Wedding Hall) and Hotel Kanyo cases, which show that local knowledge and right judgement to the situation were critical to saving lives. Local people who were more experienced could make right judgement whether they should evacuate promptly or not. When the large group of senior residence in Takano Kaikan was about to leave, when the earthquake occurred, the experienced staff stopped them and suggested for them to evacuate to the rooftop, instead of the designated tower, as the tsunami would travel faster than the time they needed to reach the place. Otherwise, more lives would have been lost if they had evacuated to the designated evacuation places. In a similar vein, in the hotel, Okami observed the sea level and quickly made the decision to direct her staff and guests to the hotel carpark areas and staff accommodation which is located on higher ground. Both examples indicate that the decision-making during risk/disaster is embedded in their history and disaster culture fostered and passed down from their ancestors. Those who understood the historical occurrence of the disaster and associated cultural practices of the Tsunami Tendenko (つなみてんでんこ), the so called community leaders, made the quick decision to evacuate. Storytelling can be one of the powerful ways to share the lessons learned and to pass them down to young generation. This is also a form of community leadership.

Apart from the importance of passing down the traditional knowledge, the wisdom of the storytellers, their values, experience and philosophical thinking about the relationship between humans and nature were also valuable to pass onto the young generation. This could enhance community resilience through elder-led social encounters (Aldrich, 2017), as an elder storyteller accounts,

> I have experienced various things in my life, sad experience and frightening experiences. I lost my friends, relatives, lost my home. All these experience will be in my memory forever. Now it has been five years since the disaster, it is time to sit down and spend time to really think about the challenges we are facing, the relationship between humans and nature. We human beings have all kind of desires, the desire to be free, the desire to produce, to consume, to make money etc. but at the end, we all go in the same direction. We forget our relationship with nature. From this disaster, we can learn that money and material objects do not necessarily make you happy. We should foster a new value system that co-exists with nature. This disaster gave us a warning, but there are still people who are not aware of the problem. That is the reality.

Community leadership manifests here in how the storytelling process by the elders enhances the public awareness of the human/ nature relationship, inviting future generations to live harmoniously with nature, leading the way to resilience building in crisis situations when the normal system does not function any longer. Though the impact of an aging society is often perceived in negative terms, the elders can also make a great contribution to post-disaster recovery. After experiencing the ups and downs of life, they are aware of what is more important in life, find a different purpose and become more active in engaging with through storytelling. These treasured experiences and wisdom were distilled through times and meditation. As an elder told me,

> For me, what are is richness of the life? What is the difference between rich people and poor ones? The differences, for me, I think, is your life experience, good, bad, happy or sad, this enriches your life. In fact, I was thinking that I probably have met more people in the past 5 and half years than in the past 60 years. We can live our lives to the full, irrespective of whether we are rich or not. It was said that this disaster only occurred once for every six hundred years. In this once-every-600-year disasters I was there, I was part of it; I have witnessed that houses were washed away, friends were lost, and I had to say it was very unfortunate. However, if I were not there and had no such experience I would not have such rich experiences to contribute as a storyteller.

Constructing individual stories, shaping collective memory and fostering connection

Kataribe (disaster storytelling) and disaster ruins can mean different things to different people. Hayashi's (2017) research provides a detailed discussion on the process of preserving/ demolishing the disaster remains of 2011 disasters, the complex feeling of resistance, struggles, conflicts, negotiation which were experienced before the decision was made to preserve or to demolish the disaster. The disaster remains as a silent testimony of the destruction and loss, an emotionally-laden material on which storytellers can construct their individual stories and shape collective memories, triggering different experience for both visitors and community members and fostering social emotional connection.

Each individual might have a different survival experience from the disasters. For those who lost their family and friends, those disaster remains provoke an uncomfortable feeling. As one of local people commented,

> For me, the storytelling is my way of support, my deep respects for victims especially for those who died saving us. It is never easy to be healed for those who lost their family members. I believe there is always a corner in their heart for their beloved…
>
> Sometime the story can be very controversial. For example, there was lawsuit between the current town major and previous one (whose son died in his post as a government emergency worker) around the issue of whether the employees working in the former Disaster Prevention Centre should have been evacuated, with other residents. I do not want to comment and it is hard to judge as a small decision could make a big difference in life death situation. It is more important to do something for reducing future disaster. (Interview, Local resident)

Another resident reflected the situation of that day,

> We could see the seawall which was built after 1960 Chilean Tsunami. The place where I lived (Hatenya 波伝谷) had seawalls. I almost hold my breath to see whether the seawall could protect us. When the tsunami occurred, it was just like we did not have a seawall at all. When it came, there was nothing you could do. The tsunami wave was three times higher than the seawall. Houses along the seaside were mostly wooden houses. Soon they were swallowed by the tsunami. I wanted to let the future generation to remember this disaster, this costly warning. .. Seawalls could not always save us. (Storyteller)

> ‘The same place, the same disaster we faced, why I survived but my colleague could never be with us anymore. Facing the death and power of nature, I feel powerless. ’ (NHK disaster achieve, a survivor, 2014).

The storytelling provides a space for individuals to tell the stories and make their voices heard or to let the listener judge. In a super-polite country, the hard-to-say-no culture can be a form of passivity, but storytelling can be an alternative space for them to air their opinions and display their joint rebuilding efforts, forming a collective disaster memory, which could help to enhance public awareness of disaster and shape disaster culture heritage.

Though storytelling allowed them to construct their own stories, the commonality is for future disaster reduction. In addition, storytelling can also help fulfill their sense of obligation for the young generation and build intergenerational *Kizuna* and *Kizuna* (connection) between local people and visitors. As an elder commented,

> I have two granddaughters. Both were born after disaster. They visit me once or twice each month. Each time I see the face of my grandchildren, I feel the sense of obligation to create a better environment for them…I want to see my grandchildren grow up, to be high school student, university students I want to see them live happily in this world. I do not know how many years I can still work. What I can do for my grandchildren to make a better place to live? So I worked as storyteller to convey what learned from this disaster to everyone.
>
> For me, it is more about appreciation. We received tremendous supports from people around and people from outside. Before disaster, I have not thought about what I could do for my community. After disaster I started to think about what I could do for my community and became more actively engage with people. Through storytelling activities, we connected our town to more people such as university students, organized tours etc. if we all worked together I am sure we would overcome all the challenges. (Interview, a local elder)

The sense of obligation and appreciation is a form social capital that bonds local people together and works for public good. More importantly, through the storytelling, the story of loss, destruction, revival and hope were socially constructed and reconstructed with the progress of the disaster reconstruction and the passage of time.

While emphasizing the storytelling for disaster education, disaster cultural enhancement, fostering connection, there was also concern about the difficulty of conveying the disaster experience. With the progress of reconstruction, many disaster remains were removed such as Shizugawa hospital, Togu Primary School. How can disaster experience be effectively passed down to future generation? The extensive coverage of the Kataribe Bus in the news media, disaster-related conferences helps to publicize the town and to rally connection and support.

Disseminating Kataribe through media, conferences and symposiums

Kataribe (Storytelling) remains of very high profile in the media. It was granted the Japan Tourism Award in 2017 for its contribution to regional exchange activities through Kataribe Bus tours in order not to let the disaster experience fade away. The Minami-Sanriku Kataribe has appeared over 20 times in more than 14 news media during 2018. Therefore, the Kataribe storytelling practice in Minami-Sanriku was disseminated through media, symposiums, and conferences which helped new connections to be forged. For example, the third National Disaster-affected Area Kataribe Symposium held in Minami-Sanriku in 2018 (Youmishimbun, 2018) with the aim of disseminating the disaster experience worldwide attracted around 400 participants, including disaster victims, academia, students and local storytellers etc. A panel discussion session was organized focusing on the issues of disaster heritage and disaster remains. Similarly, the Kataribe Forum 2017 was themed around nurturing young storytellers and developing strategies for effective disaster storytelling. It attracted more than 300 participants and became the headlines for many news media (see figure 34).

2017/2/27 【日本経済新聞】「語り部」世界共通語に
2017/2/27 【読売新聞】 被災の記憶人つなぐ
2017/2/27 【神戸新聞】生き延びるため、伝える
2017/2/27【朝日新聞】「語り部」を世界共通語に
2017/2/27 【日経新聞】 社会面「窓」–第2回全国被災地語り部シンポジウムin西日本–
2017/2/15【公明新聞】 3·11記憶と教訓 どう伝えゆくか～東北被災地語り部フォーラムから"
2017/2/18 【三陸新報】 語り部をイタリアでも
2017/02/11 【観光経済新聞】「震災」を忘れない –東北被災地語り部フォーラム2017–
2017/02/11 【河北新報】悲劇繰り返さない –むすび塾–
2017/1/30 【読売新聞】 震災伝承 世界に発信 –東北被災地語り部フォーラム2017–
2017/1/30【産経新聞】 悲劇は繰り返さない –東北被災地語り部フォーラム2017–
2017/01/30【河北新報】 あの日の思い 1000年後も –東北被災地語り部フォーラム2017–
2017/1/30 【朝日新聞】 津波伝え方を考える –東北被災地語り部フォーラム2017–
2017/1/29 【河北新報】 地域防災の課題 再確認
2017/1/23 【日本経済新聞】 震災時の様子、英語のパンフに
2017/1/11 【読売新聞】 被災者の思い漫画伝える

Figure 34: Kataribe in the media

(Source: Katariba in the Media. https://www.mkanyo.jp/kouhou-hiroba/media-thanks/)

Some other conferences (e.g. *View-Exchanging Meeting with the OKami in Iwate, Miyagi and Fukushima Prefectures in 2015; Okami-san Association National Forum in 2016*) relating to the positioning in society of Okami-san were also held in Minami-Sanriku where Okami-sans from three hardest-hit prefectures were invited to share disaster experience and rebuilding efforts, and have a meaningful dialogue with government officials regarding tourism development strategies for recovery.

In this sense, these various disaster-related conferences, the Kataribe forums and symposia helped strengthen the bonding social capital among the disaster affected areas to work collaboratively while at the same time fostering new connections with other participants to co-produce the disaster knowledge and address the challenges they were facing. Meanwhile, the wide media coverage on the Kataribe symposiums and conferences helped publicize the post-disaster town, enhance public awareness of disaster risk reduction, shape disaster cultural heritage through disseminating local

Kataribe practice and potentially enhance tourism development.

We could conclude that the Okami's story revealed women's active participation in community recovery and their changing role from traditional cultural carrier to becoming a powerful driving force for disaster recovery and tourism development. Okami leadership emerged from the disaster situation. The skills and capabilities of an Okami contributed to every phase of disaster management cycle. For example, in the initial disaster response stage, Okami-san's main role was to ensure the comfort of the guests, which became a leading role for disaster response. Okami-san acted as brokers to communicate with locals, coordinate various activities and negotiate with authorities for support. In the disaster recovery stage, actions were taken by Okami-san to enhance social capital by using existing resources and her networks to collaborate with local business with outside supports (e.g. tenten map). Their shared understanding of the local situation and of social cultural traditions empowered Okami(s) to mobilise their social networking (Okami community) and develop new social capital (bonding and bridging) through innovative strategies (e.g. Tenten Map, collective food branding, and storytelling bus). In addition, the initiative of the Kataribe Bus (Storytelling bus) also contributed to the disaster mitigation phase, which was innovative in the sense that Kataribe incorporated the concept of disaster risk reduction into everyday business operation. This fits with the fundamental purpose of Kataribe bus for future disaster risk reduction. The Kataribe Bus Initiative also enhanced disaster cultural heritage by providing a space for survivors to make sense of their loss and destruction through their own disaster narratives and construct a collective disaster memory, a space to share their concerns of intergenerational *Kizuna*, to pass down their disaster experience, and disseminate Kataribe local practice through the power of media and conferences.

Chapter Nine: Discussion

9.1. Introduction

This chapter attempts to synthesize the findings of this thesis. The discussion chapter links back to the issues discussed in the literature review session and compares them with the knowledge that emerged from my ethnographic data. The chapter critically evaluates what has been found from the empirical data and how the outcome of this research can contribute to conventional disaster intervention, bridge the gap between the disaster recovery theory and practice, and bring bottom-up strategies to the front. It foregrounds the community's bottom-up strategies and tactics to enhance social capital for recovery and the role of community leadership in social capital application. By emphasizing the role of social capital, the research does not devalue the importance of physical recovery and top-down approach, but we calls for the need to integrate physical infrastructure and social recovery, top-down and bottom-up approach in order to "build back better".

A re-statement of my research questions is provided below to synthesize the questions being addressed and the thesis contribution to knowledge. The project addressed three research questions:

Question 1. How do Tsunami survivors from Minami-Sanriku make sense of their losses?

Question 2. What is their approach/strategy to rebuild their lives and communities in the aftermath of the Tsunami? How has social capital been deployed in disaster recovery?

Question 3. To what extent is the process of community based recovery facilitates and is facilitated by emerging practices of community leadership?

9.2. *Kizuna* for community recovery

It is common practice for large scale disasters to have government and other various stakeholders' interventions such as NPOs and NGOs, international rescue teams, civil society etc, which certainly is critical for recovery. Particularly when the disasters were of an "unimagined" scale such as the triple disasters under the study, many municipalities were affected. Government prioritized the supports on physical infrastructure reconstruction and called for *Kizuna* (social connection) for recovery. *Kizuna* has been widely acknowledged as a characteristic of 2011 disasters. The supports from Japan and abroad were remarkable in the aftermath of disaster. However, when the disaster gradually faded away from public attention and headlines of news media, it was the people from the local community who never gave up and endeavoured to rebuild back better.

In the case of Minami-sanriku, around 9500 people were evacuated and started their evacuation shelter lives and many public facilities were destroyed. When a town centre is almost wiped out from the map, people often desire to see a quick physical recovery. It was expected and undoubtedly important to have government and multi-stakeholders support to make a visible change of the post-disaster community. As shown in the context chapter, in order to facilitate the reconstruction, *Basic Guidelines for Reconstruction* were issued in July 2011 by Reconstruction Headquarters in response to the Great East Japan Earthquake (Central government level). The Reconstruction Plans at prefecture level, municipal level soon followed, which clearly stated the responsibilities of governments at different levels highlighting the leading roles of municipality in implementing disaster reconstruction operation and coordinating roles of prefectures between affected municipalities. The focus was however on physical infrastructure and as such the affected community had to take its own initiative to rebuild the less tangible aspects of community life.

The findings suggest that community's bottom-up strategies to enhance social capital actually made a great contribution to build a more sustainable resilient community. The bonding social capital in the small fishery town Minami-Sanriku was relatively strong before disaster, but it was interrupted by the disaster. However the shared hardship after the disaster strengthened the bonding social capital (Matsubayashi, Sawada and Ueda, 2013). The strategies of local communities was to use tourism as a strategy to enhance social capital for disaster recovery, but each have their own tactics to build *Kizuna* for community recovery.

As discussed in the section 4.2.4., although some critics questioned the existence of *Kizuna* (e.g. Azuma, 2011), especially the case of Fukushima Daiichi which is often seen as a case of isolation, rather than *Kizuna*, the concept of *Kizuna*, was embraced in the mainstream media as a collective narrative for disaster recovery. Its vague meaning and positive connotation explains its popularity. As a public familiar term which can easily accommodate different situation or distract attention from problematic issues (Tokita, 2015), *Kizuna* became an ideal platform for government speech. For example, while playing down the nuclear safety issue, the government instead promoted *Kizuna* as being central to the reconstruction rhetoric. With the help of the media, the public image of Japanese heroic disaster activities and spirits of kyojo (mutual-aid) and "gaman" (endurance, spirit of perseverance) were disseminated in the real time to the world to rally internal and external support and strengthen the bonds in the society. *Kizuna* is arguably seen as a "new form of social capital" (Slater, 2012).

Yet *Kizuna* is a concept which existed before disaster but became more prevalent after disaster expanding to mean bond/connection in a broader sense.

Kizuna became ubiquitous in the government rhetoric. The nation was painted as a united whole, bonding and connecting together and devoting itself to disaster reconstruction as if "prioritizing national goals is part of the natural disposition of a Japanese citizen" (Tokita, 2015. p.2). However, my data from the local community shows complex *Kizuna* dynamics present in the recovery process. Similar to the government rhetoric of *Kizuna*, the media also created an image of the Japanese with unitary collective characteristics. For example, the Guardian (on March 15, 2011) reported on how the Japanese remained calm in the disaster situation (Watts, 2011) when petrol and food were in shortage. The Daily Mail (March 15, 2011) also reported that the people remained calm and showed much dignity in the face of the suffering. Two phrases were used to describe the Japanese psyche. One is "shikata ga nai" and the other is "Gaman". The former literally means it cannot be helped. It often refers to people's reaction toward situations that are beyond one's control while the latter is often seen as a virtue of the Japanese to endure the difficult situations. These are certainly admirable traits of the Japanese which helped maintain social order and etiquette, by suppressing emotion and bonding people together to accept unacceptable conditions. However, Gaman might be seen as a form of passivity (Parry, 2017). *Kizuna* should not become a barrier for seeking positive change. When Gaman reached its limit, anger, Parry (2017) argues, can be harnessed as a positive force to communities to articulate their voice, share Honne not tatemae to make a change. For Parry (2017), those who dare to challenge the social norm and cast Gaman aside are heroic. For example, one of the most poignant stories of the disasters in his book was the Ogawa primary school where 74 students and 10 teachers lost their lives. The angry parents took legal action against Okawa primary school authority questioning why the school could not take proper evacuation measures to protect the students. The former mayor of Minami-Sanriku has turned against the current major for not giving the order to the town's emergency staff to evacuate timely resulting in the death of his son (Harlan, 2014). The owner of the Japanese inn was appealing for public funds for preserving the disaster remains (Takano Kaikan Hall) for storytelling. The story teller was sceptical about the government's project on seawall rebuilding for protecting people's lives, arguing it was more important to pass on ancestor' disaster culture and wisdom to future generation. Certainly there were many other different voices. These seemed to challenge the stereotypical homogenous and group-oriented mind-set and traditional value of cooperation.

By showing these non-homogenous behaviours, I am not trying to deny the existence of *Kizuna*. I have seen so many *Kizuna* stories in particular at the grass-root level. However, *Kizuna* should not be used as a discourse for excessive collectivism, to suppress different voices or against different perspectives or as a barrier to share concerns. The quest for *Kizuna* after the disaster can be seen as a reflection of insufficient *Kizuna* such as lack of dialogue between people of different hierarchy, dysfunctions of work-life balance, solitary death of the elders, generational gaps, lifeless rural community etc. As society has drifted away from traditional ways of dialogue to technology-based communication, it is perhaps harder and harder to build the true *Kizuna* and engage in meaningful conversations where people could articulate their most private feelings and treat each other as equals without being overloaded by social hierarchy and various unwritten norms.

As a result, *Kizuna* might have faded but the disaster provided an opportunity for people to rethink their lives, future and concerns, realizing how important *Kizuna* is for managing in tough times. In particular for those local members whose lives were deeply affected by the disasters, they have demonstrated what *Kizuna* means to them. Tokita (2015) discussed the concept of *Kizuna* through two post-3.11 literary works arguing for two type's *Kizuna*, one which emphasize the *Kizuna* between humans and nature and the other which emphasises *Kizuna* between generations. Although literary work is woven with imagination, literature also reflects life and society. My fieldwork reinforces such similar concerns: the local members mentioned *Kizuna* between people (human connection, bond among people), *Kizuna* between humans and nature and *Kizuna* between generations. I would argue that *Kizuna* between people makes the *Kizuna* between human and nature and between generations possible. From the initial disaster response to the disaster recovery, we can easily find out how *Kizuna* as social capital was enacted and operated for disaster recovery, exemplified through various cases such as the case of evacuation shelter lives, the initiative of Minami-Sanriku Reconstruction Market, the temporary Sun Sun Shopping Village, the Yes Factory, the Minami-Sanriku Learning Centre and the Blue Tourism Initiative etc. Throughout all the cases, social connection is the key word reiterated by many local members that helped them rebuild their community.

As Matsubayashi, Sawada and Ueda, (2013) suggested, this increased social connectedness in affected communities can mitigate some of the adverse consequence of nature disasters. It was the strong boning social capital within the community that provided most needed support while the government support was unable to reach them immediately. In the evacuation shelter lives, the strong bonding relationship helped the community to navigate depressing experiences and seek ways of revival. As Aldrich (2010) argued the pace of disaster recovery is linked to the extent of people's social connections. The strong social capital enhanced resilience in places such as Kobe, New

Orleans etc. If people have strong social connections, they might be better able to work together in collective action (Chandra et al, 2011). This was the case with the establishment of Minami-Sanriku temporary Sun Sun Shopping Village initiated and operated by 30 local merchants. It was their collective action to restart their lives, rather than just living in the depressing evacuation shelter depending on disaster relief. While still living in the evacuation shelters and certainly had nothing to sell in the Market, the local members initiated the Fukko-ichi (Reconstruction Market) with the support from their previous business contacts to create the normality of everyday lives and sense of business continuity, which gave the local members the hope for future. This echoes with the claims of Aldrich (2010, p.1) that "Social capital- the engine for recovery - can be deepened through local initiatives". Another case in points is Blue Tourism Initiative in which both visitors and locals interacted, deepened their social connection, and had positive effects on the improved physical, mental, social wellbeing of the community members and visitors.

Another concern which emerged from local narratives was the *Kizuna* between generations. The devastation in this rural fishery town exposed a looming aging crisis as about one third of population in the affected town Minami-Sanriku are more than 65 years old. The current key actors of reconstruction were the generation in their 50s. Given the scale of destruction of the community, the reconstruction would take many years. Therefore, many elders showed their concerns for insufficient *Kizuna* between generations which is essential for future development. For example, young people leave for cities to find better job opportunities and the elderly remain, resulting in an imbalance of demographics, insufficient human capital and lack of future community leadership. The rich folk traditions are fading without enough young generations to continue them. Ancestors' disaster prevention experience are being forgotten. A lot of efforts were made to build *Kizuna* between generations. For example, Minami-Sanriku Learning Centre was established after the disaster in an attempt to pass down disaster experience and traditional social cultural values to young generation, learn more sustainable way of living and nurture future community leadership. The establishment of the Yes Factory not only addressed the issues of limited job opportunity but also to revitalized the place's traditional social cultural values and introduced them to the young generation and visitors. In addition, the main product of Octopus has been anthropomorphized to represent the resilience of the community and embody the essence of the town as part of a town branding strategy to enhance *Kizuna* internally and externally. In a similar vein, the Blue Tourism Initiative by local fishermen also showed concern for *Kizuna* between generations, which was acknowledged by the Japan Tourism Agency (2015) for their great efforts to revive their town and engage with the young generation, to stop Japanese youth turn their back on fishing products, to utilize the local marine and other natural resources sustainably to develop seasonal tours and encourage youth travel to Minami-Sanriku. Other local practices such as Kataribe Bus (Disaster storytelling bus tour) launched by Kanyo hotel owners and operated on a daily basis revealed concerns for future generations and the determination to covey the disaster culture, keep history alive, pass it down to generations. These cases demonstrate the community's efforts to build the *Kizuna* between generations and *Kizuna* between people internally and externally to enhance *bonding* and *bridging* social capital for disaster reconstruction.

Their strategies of rebuilding were underpinned by a community-led approach that placed the nature, community and traditional social cultural values at the centre of the reconstruction process, which could be seen as *Kizuna* between human and nature. Many traditional Japanese concepts such as Ji-jyo (self-help), Kyo-jo (mutual-aid, collaboration), Sato-umi-yama (the connection between community and the physical environment), and *Kizuna* (linkage/bond among people) were embedded in the various community initiatives. The values of Ji-jyo (self-help), Kyo-jo (mutual-aid, collaboration) were exemplified in every stage of the disaster management cycles in particular in the disaster response and recovery stage (chapter 6 and 7). The destruction brought about by the triple disasters serves as a warning that sciences and technology do not always work and the local storytellers have reiterated the points. Therefore it is vital for people to learn how humans could coexist with nature harmoniously. The local initiatives have showed how the community tried to carefully optimize the existing resources and develop the new resources in a sustainable way. For example, the large parts of business of Yes Factory was to produce art crafts using Minami-Sanriku produced FSC wooden materials and re-used the wooden waste for art craft-making. The Minami-Sanriku Learning Centre attempted to include disaster education, social cultural learning and environmental learning into learning programs, reinforcing local sustainable practices by showcasing the biomass plant and local resource circulation system to the visitors while Kataribe (storytelling). Bus tours also emphasized that the power of nature could be destructive if one played down the dangers of disasters and called for not letting the disaster memory fade away, which was further supported by storytellers' questioning the anti-ecological massive seawall building around the coast. This clearly shows their concerns for *Kizuna* between humans and nature. Furthermore, numerous tsunami stones and monuments left by the ancestors, and the newly erected tsunami monuments, disaster remains and memorial parks after 2011 act as a silent testimony of destruction, a *Kizuna* bridge between f the living and the dead.

9.3. Community leadership, *Kizuna* and disaster recovery

In terms of political leadership, the *Kizuna*, the bonds between the state and society do not work well (Hood, 2012), which was echoed with Funabashi and Kitazawa (2012) which criticise the government's poor response to disasters and the questionable quality of Japanese leadership after 3.11 at government level (Samuels, 2012). For example, Hood (2012) questioned the appropriateness of over-relying on the locals for the reconstruction, when some local governments themselves were dysfunctional after disaster and suggested that Japanese government should have done more to improve their disaster responses such as the seawall issue, the response to the Nuclear power plants etc. These critics indicated that there were insufficient dialogue and insufficient *linking social capital* between the bureaucratic bodies and the affected areas.

The insufficient *linking social capital* was also manifested in the emerging issues after the disaster in Minami-Sanriku. A lot of problematic issues were brought to the front during the reconstruction process such as the balance of government responsibilities and local autonomy in disaster reconstruction, infrastructure rebuilding and social recovery, the deteriorating situation of rural aging, employment and depopulation, the relocation of large number of evacuees etc. Some issues were raised more often than others by community members such as the inflexible disaster funding support system, reconstruction priorities, seawall rebuilding, post-disaster town image reconstruction etc. These indicate there needed to be a better co-ordination between central government' supports and community' effort of rebuilding. It is beyond my research scope to discuss the appropriateness of the height of seawalls, but I think, the issue has been raised repeatedly by the local people who lived there, to the extent that it might be worthy of those policy makers to listen and make a further investigation.

From earlier discussion in the session 8.1, we can see that *Kizuna* is a vague term embedded in the social relation and reinforced through the context of disaster. Though the *kizuna* between hierarchy (government) and community was insufficient, my case studies demonstrate, how the *Kizuna* within community was strengthened. Those community members who played critical roles in enhancing existing *bonding* social capital and building new social capital to enhance recovery are referred to as community leaders.

Unlike conventional competency approaches to leadership, the community leaderships in Minami-Sanriku emerged from the disaster situation, and developed collectively in the process of reconstruction. This was in line with the leadership development debates that leadership should be developed more collectively and contextually understood (e.g, Drath and Palus 1994; Zaccaro and Horn 2003; O'Connor and Quinn 2004) and that the context in which the leadership was exercised should be taken into consideration. My research documented how and why community leaders emerged in the disaster context and how they operated to enhance disaster recovery.

First, those community leaders were not necessarily with a title, some were formal leaders with position in the local government other were informal leaders without any position and title (see for example, the storytellers). As a matter of fact, many of them were local farmers, fishermen, and small business owners etc. from fishery town, who did not seem to have any "great man" traits or embrace the ubiquitous competency framework in the leadership domain but these community leaders had a robust understanding of the socio-cultural context in which the disaster reconstruction took place (Lin, Kelemen and Kiyomiya, 2017). Recognising that the community is the main stakeholder in disaster recovery and development is the starting point of community leadership. The shared hardship in the evacuation shelters strengthened the bonds among people. Initiatives were made by the local members who knew the problems and were willing to articulate them in order to make changes through shared wisdom. Thus leadership emerged through the process of change-initiating and change-making in the disaster context. Their robust local social cultural knowledge have empowered them with the great capacity of optimizing the existing resources for recovery while attempting to sustainably develop the new resources for town future development, which greatly facilitated disaster recovery.

Second, unlike the relation of the leader and follower, community leadership practices were facilitated through collaboration between local members and social interaction between locals and outsiders within the context of the urgent need for recovery. The practice of community leadership was more about collective wisdom rather than the individual achievement of a “Great Man”. The ideas were often generated and implemented collaboratively through meaningful dialogues among community members. For example, the Reconstruction Market was initiated through the collective wisdom of the local merchants who realized the problem of depending on the disaster relief in the emergency shelter and attempted to create a sense of normality and give hope to people. The subsequent temporary Sun Sun Shopping Street was established by a group of 30 local merchants after numerous meetings and discussions. Thus, community leadership emerged through everyday lived experience and was the result of collective actions during the process of community reconstruction in which people worked collaboratively for public good (community recovery as a whole) before seeing to their own benefits.

In addition, community leadership was developed through co-learning and active listening. As the local businessmen, businesswomen and storytellers were local members from different sectors such as fishery, agriculture, forestry and small business, they were well aware of their own limitations. Although the disaster situation offers opportunities to learn, it does not automatically open up a space for co-learning, it is the local members' attitude to openness that helped them co-produce disaster knowledge and reconstruction strategies with other community members and visitors. For example, Kanyo Hotel started to share disaster experiences by operating a "storytelling bus" from 2012. They were determined to turn this "once-a-thousand-year disaster to once-a-thousand-year learning opportunity" and make Minami-Sanriku a place where people could learn about disaster risk reduction. Many symposiums and disaster storytelling conferences were held in Minami-Sanriku, opening the debate around issues of disaster remains and disaster culture to the wider audiences for co-learning purposes and to preserve disaster cultural heritages. Similarly, the Minami-Sanriku Learning Centre also encouraged students and young employees to participate and engage with community-rebuilding. The learning process was designed in such a way so that students could learn from community members and vice versa, thus blurring their roles as learners and contributors, removing the barriers between students and community members, and stimulating knowledge transfer as a two-way process. In this way, the *Kizuna* between community members (e.g. in the form of bonding social capital) and *Kizuna* between community and outsiders (in the form of bridging social capital) were strengthened for recovery. Similar impacts also were shown in the case of Blue Tourism where the transformative services was co-created by fishermen and visitors through their on-site interaction, a process which helped shape their role as community leaders. These emerging informal community leaders are important players in transforming the situation, bridging the *Kizuna* and potentially linking top-down and bottom-up sources (linking social capital) to facilitate disaster recovery. In other words, community recovery facilitates and is facilitated by emerging practices of community leadership. This was also demonstrated in the community collective endeavour to reshape and transform the post-disaster town image along the lines of a sustainable town.

9.4. Post-disaster town image

The image of Japan has been greatly affected by the nuclear contamination issues discussed in the chapter 4, which resulted in a sharp drop of international tourists in 2011. Japanese government tried to repair the negative post-disaster image through social media-based PR and ambassador programs attempting to ensure that Japan is a safe country to visit. The Government also stepped in to set up an official volunteer support website (Tasukeai Japan) to coordinate volunteer's movement via Volunteer Coordination Offices. This aimed ensure that the volunteers were linked to state-supported civil society with all logistics pre-arranged, thus smoothing the flow of volunteers into the disaster areas. However, this appeared to discourage independent volunteers and weaken the capacity of civil society. In addition, while volunteering in the field, many volunteers had the intention to visit disaster places. The combination of volunteering and tourism intention (e.g. out of curiosity, interests in dark site) transformed many volunteers into unintentional voluntourists (McMorran, 2017), triggering the debate on the post-disaster destination image building as dark or sustainable? While contributing greatly to community recovery after the 2011 disasters, volunteer support, voluntourism and disaster tourism organized by the civil society and other external organizations can be short-lived or temporary without forging proper connection with local community. In addition, if tourism does not build links with the local community, it is less likely to build *Kizuna* in a meaningful sense and it could even cause conflicts or have negative effects on the town long-term development.

The findings suggest that it is important to understand the community's perceptions about disaster tourism and engage with community members, which is essential to reduce any potential conflict between tourists and local communities. For example, Blue Tourism was initiated by local fishermen in Minami-Sanriku, and can be understood as resistance to the label of Dark Tourism. This reflects their desires not to be defined solely as Dark site, but to use disaster as a positive force to re-engage with people and re-invent the community image and their future. The fishermen's desire to make change became a powerful motivation to drive the recovery. They were able to combine dark emotions and leisure activities but went beyond dark tourism through an offer that emerged through the interaction between visitors and locals and the incorporation of everyday practices within tourism, which focused on the beauty of the nature, the freshness of the seafood, the need for recovery and the community's hopes for the future.

Blue Tourism became a form of resilience which built on local place-based practices and traditional community knowledge to enhance community recovery and help re-shape the post-disaster town image along positive lines. Similarly, the moscotization of Octopus-Kun was another innovative community initiative that used the Octopus as an effective marketing tool for branding, attracting tourists and reshaping the image of the place. However, this process was not without conflict. As the interview data suggested, community leaders showed their concern about the appropriateness of adopting the Octopus as a marketing tool when people still lived in the depressing post-disaster temporary shelters. Careful communication strategies were used to address any potential conflicts and through community leaders' ability to co-ordinate such marketing activities, the situation was transformed. In addition, the products marketed were developed in line with the characteristics of the town, traditional concepts and socio cultural values to reflect the uniqueness of the town to outsiders.

These highlight the importance of community-based initiatives for understanding local community’s perceptions of disaster tourism and suggest ways of reducing negative perceptions via effective communication and tourist management. Local members’ understanding of their own town, their proactive motivation to rebuild, and the enhanced relationship between tourists and the community contributed to more effective disaster recovery processes and helped reshape a positive post-disaster town image, building community resilience.

Chapter Ten: Conclusions and recommendations

10.1. Introduction

This chapter concludes the key findings and discussions of this thesis (section 10.2), against the research objectives, and provides useful insights into the social and cultural dynamics of disaster resilience and lessons learned for future disaster preparation and disaster risk reduction. The contributions of this research (section 10.3) are highlighted from theoretical, practical and methodological aspects. Section 10.4 discusses the limitation of this research. Section 10.5 considers the suggestion for future research that emerges from the study, which is followed by a brief reflection on my research experience.

10.2. Summary of research findings

This ethnographic research explores the role of social capital and community leadership in post-disaster recovery practices in Minami-Sanriku, a town affected by 2011 earthquake and tsunami. The finding suggested that government rhetoric *kizuna* (bond, connection) ideal, though widely accepted, do not capture the dynamic of community practices and address their areas of concerns about *kizuna*. By focusing on community-based recovery, this research unpacked how the *kizuna* was perceived and operated in disaster recovery and how the community recovery facilitated and was facilitated by emerging practice of community leadership. Through closely engagement with local community, I argue that bonding social capital within community has been enhanced through their close-knit community, shared hardship, disaster experience in particular the shared lived experience in disaster emergency shelters, later collective endeavour to rebuild Fukko-ichi (Minami-Sanriku Reconstruction Market). Active leadership emerged from the situation or the “momentum” of urgent need to response and perpetuate the recovery. Their local knowledge, the *Kizuna* forged and the desire to make changes, become a driving force to co-create their coping strategy for recovery. The *kizuna* helped foster the condition for them to implement their collective innovative tourism development strategy to further enhance social capital and actions to address other area concerns of *kizuna* such as *kizuna* between generation, *kizuna* between human and nature.

Kizuna (in the form of bonding and bridging social capital) was clearly shown in the examples of Initiatives aimed at reconstruction which useful in addressing some existing issues such as issue of depopulation (e.g. Blue Tourism, Minami-Sanriku Reconstruction Market), job opportunities (e.g. Yes factory), and disaster risk reduction (e.g. storytelling bus). These initiatives indicated that bonding social capital was relatively strong in a rural town and even became even stronger after disaster though it was temporarily interrupted while bridging social capital was enhanced through tourism development strategies in accordance to their own context of each initiative. However, *linking social capital* was insufficient, which was evidenced through some controversial debates and conflicts such as seawall issue, relocation, land use, inflexible national assistance system etc, requiring more effective dialogue between state and local community.

Kizuna was the key term appearing in many of my interviews that enhance community recovery, but community also showed their concerns of *Kizuna* between generation (e.g. storytelling in order to pass down disaster experience to later generation in Kataribe Bus Initiatives; Learning programs to educate young and nurture future leaders) and *Kizuna* between human and nature (e.g. Minami-Sanriku Learning Centre to combine disaster and social environmental learning). These different concerns indicated that these were multiple social realities which required different understanding and approaches to address. *Kizuna* can help foster the condition for social innovation and create more inclusive environment to address the issue. Though *kizuna* was promoted by the government as rhetoric *kizuna* ideal with the aims of strengthening social solidarity for disaster recovery, which was great, it should not be used as overemphasis of collectivism and conformism to discourage different voices, or take one-fit-all model of recovery for disaster-affected areas. Government supports should be connected to the community different concerns to make recovery more effectively.

Community leaders acted informally but effectively to mobilise members to work collaboratively from within and co-create coping strategies for bridging social capital through tourism development. In other words, community leaders played important role in bonding and bridging social capital but their potentials for linking social capital between hierarchy and community have not brought into full play. For example, the emerging women community leader acted as a broker to communicate with locals and negotiated with authorities for support was discussed in section 8.2. Her role has been changed from being traditional cultural carrier to a driving force of disaster recovery to facilitate the practicality of local recovery practice, and bridge the government support system to community's need. This demonstrated that women can also make great contribution in the process of reconstruction and should be included in the disaster risk reduction practice.

Lessons can be learned from this study that although disaster recovery and reconstruction are very complexed and can be affected by many factors. However, if the affected community takes initiatives, active leadership, fosters conditions for social innovation, effectively utilizes social capital to co-ordinate activities cross and between different levels, with the mind of preparing for future disaster, the affected community will be more likely to “build back better”. The criticality of using post-disaster recovery and reconstruction to “build back better” has also been emphasized in Hyogo Framework and more recently reiterated in Sendai Framework for disaster risk reduction as one of the priorities for action (United Nations Office for Disaster Risk Reduction, Sendai Framework, 2015, p. 21), but in reality, the coordination practices among all stakeholders can be difficult to implement in particular between hierarchy and community as many high positional leaders might not have clear picture of disaster situation to be able to construct and coordinate a complex large-scale response and recovery networks. Therefore, community leaders (formal or informal position) can be valuable assets to bring rigorous contextual nature of crisis situation and strategies in connection to government’s support. In addition, people tend to forget history. Many victims died of tsunami was not because of time limit for evacuation, but ignored the traditional *Tsunami Tendeko* lessons from their ancestors, which suggests the criticality of shaping disaster culture (through the Kataribe Storytelling Initiatives). The research shed new light on how traditional place-based practices and community knowledge influence recovery initiatives in disaster-affected area and post-disaster image rebuilding. Therefore, it is useful for those who are concerned with addressing theory-practice gap to enhance “building back better” by reaching out to engage with community members in recovery practices.

10.3. Contributions of study: theoretical, practical and methodological contribution

10.3.1. Theoretical contribution

My research makes theoretical contributions to the field of disaster recovery in terms of i) Community coping strategies for disaster recovery. ii) The role of Kizuna (bond, connection in Japanese), social capital and in disaster recovery. iii) The role of community leadership in disaster recovery.

Community coping strategy for disaster recovery

This research fills a theoretical gap in the existing literature on disaster recovery given its specific focus on the voices and experiences of the affected community members, as opposed to supporters from the outside (Government, NGOs etc.) who have already received extensive attention in terms of their roles in the reconstruction efforts. This research focuses on the efforts of community recovery through ethnographic techniques which provide a rich description of local setting and community bottom-up strategies for building *kizuna* or retaining *kizuna* for recovery via experiential innovative tourism development initiatives. AS such, it contributes new insights to community recovery literature in English.

In addition, as in the Japanese context, the influence of government is a critical part of disaster recovery in a top-down manner, this research contributes to debates about the role of community in disaster situations by providing an alternative (bottom-up) way of re-thinking and addressing the issue of power-sharing for decision-making. By bringing community bottom-up strategies and their voices to the fore, the research also reveals the limitations of community-led recovery and the leadership's capacity to co-ordinate disaster recovery activities across and between different levels as well as the need to enhance *kizuna* relationship between government and local communities to better integrate the government support with community rebuilding activities.

Kizuna **(bond; connection in Japanese) and Social capital in disaster recovery**

Another contribution of this research is its refinement of the theory of social capital theory in disaster recovery by looking at *kizuna* (bond and connection in Japanese context) in the context of a Japanese disaster setting. Social capital has been seen as a very important resource to enhance community resilience (Aldrich, 2012; Meyer, 2013; Hawkins and Maurer, 2010; Adger, 2003; Nakagawa and Shaw, 2004; Ritchie, 2012; Murphy, 2007) and to reflect community's needs (Olshansky, Johnson and Topping 2006; Healey, 2009; Olcott and Oliver, 2014). However, these studies do not show how each type of social capital (bonding, bridging and linking social capital) influences and interacts with each other in the process of disaster recovery. My research added to social capital study in disaster recovery by showing i) how the community made sense of their loss and how bonding social capital was strengthened through their shared hardship and traumatic disaster experience; ii) How the emerging community leadership in the crisis situation collectively facilitates the creation and redeployment of bonding and bridging capital; iii) how the potential of linking social capital can be brought into full play.

In addition, my research also contributes to rethinking *kizuna* (bond and connection) in a Japanese disaster context. *Kizuna* (bond; connection in Japanese) can be understood as a form of social capital based on the government rhetoric to promote social solidarity for disaster recovery. Building on Tokita (2015)'s work on two post-3.11 literary works, my research empirically demonstrates the dynamics of *kizuna* as perceived by the local community i) *Kizuna* among people, ii) *Kizuna* between generations iii) *Kizuna* between human and nature iv) *Kizuna* between the living and the dead. This contributes a more nuanced understanding of the official *kizuna* as espoused by the Japanese government in its reconstruction rhetoric and *kizuna* in local community which shows the complex dynamics of social reality and their impact on disaster resilience.

Community Leadership

An effective leadership practice is critical to disaster recovery (e.g. Muskat, Nakanishi, Blackman, 2013). Community leaders are key players in transforming the situation and linking people across hierarchies, but this concept is less explored in existing literature. A small amount of research focuses on the role of community leadership in disaster management (Leadbeater, 2013; Nakagawa and Shaw, 2004; Lin, Kelemen, Kiyomiya, 2017), but these studies do not show the relation between community leadership and social capital in disaster recovery.

My research contributes to the understanding of community leadership in disaster recovery by highlighting the emergent and collective character of community leadership rooted in the disaster context as opposed to a competency approach to leadership. Unlike the latter, crisis community leadership emerges from the disaster situation. Informal leaders emerge to help make sense of the disaster through collective analysis and continued inquiry into the problematic situation based on collaboration and collective local knowledge.

Their shared understanding of local knowledge and of social cultural traditions empowered these community leaders to mobilise their social networking and develop new social capital (bonding and bridging) through innovative tourism development strategies. However, it was evident that their capacity to facilitate *linking social capital* by building relationships between government and the community was somehow reduced. By identifying the strengths and limitations of the role of community leadership, the research contributes useful insights to rethinking the power-sharing for decision-making in disaster recovery, creating possible conditions for leadership capacity development.

The research also challenges the pre-conceived image of women' role by making women community leadership visible in the disaster research, which contributes to a more inclusive approach to disaster risk reduction that leads to increased effectiveness of disaster management.

10.3.2. Methodological contribution

The classical American pragmatist tradition in disaster recovery

Pragmatism has been applied to many areas such as policy making (Sanderson, 2009; Tavits, 2007), organizational studies (Elkjaer and Simpson, 2011; Farjoun et al, 2015), city planning (Blanco, 1994) public administration (Shields, 2008; Snider, 2000; Brennan and Keller, 2017). Yet, it has not been widely recognized in the academic literature on disaster and risk management (Ansell and Boin, 2017). This research offers a blueprint for applying a pragmatist approach in disaster recovery. In this thesis, pragmatism is understood as a philosophy, NOT just its practical way of getting things done or addressing research questions, but as a way of thinking that could help deal with disasters. The core ideas of pragmatism philosophy (e.g. notion of the continued inquiry, reciprocity between theory and practice; participatory democracy) could inform a more rigorous approach toward understanding disasters, formulating collective coping strategies, decision-making and action-taking in the context of uncertainty.

In the classical American pragmatist tradition which stresses the consequences of theory, my research will have a significant impact on the community and serve as a useful tool for preparing for future disasters. Hopefully the study will also be useful for other communities affected by similar natural disasters and will inspire other researchers to put community experiences at the heart of studying disaster recovery practices, while practitioners will learn from the practices that have emerged from the community experiences from Minami-Sanriku.

Ethnographic studies on disaster: Disaster knowledge generation as two-way process

Disaster research is often expected to have a meaningful impact on the affected community and for future disaster risk reduction, but disaster-induced uncertainty, changing nature of disaster recovery strategies, emotionally laden work make disaster research more challenging. This research makes a methodological contribution to the field of disaster recovery studies through closely engaging with everyday life experiences, entering a meaningful dialogue with community members and sharing knowledge in the process of generating disaster knowledge using ethnographic approach.   By employing a mosaic of complementary methods of data collection, my research captures in a powerful way the needs and aspirations of the local communities, the ways in which these needs are accounted for in the reconstruction process and the processes by which community leaders emerge to enable the process of rebuilding from within rather than with outside help.

Furthermore, other researchers can also benefit from using these techniques of engagement, active listening, participation as a volunteer and meaningful dialogue as two-way process to develop long term projects that revolve around knowledge co-production in disaster research. As shown in the proposed research areas and direction for future research (the section 10.5), the *Kizuna* (bond; connection) forged through this research with community members could become a long-term relationship and contribute to further longitudinal research on long-term changes after disaster, post-disaster tourism destination branding, disaster culture heritages, and place identity rebuilding.

10.3.3. Practical and policy implications

This research is also significant in terms of practical implications. As a disaster-prone country with a rich experience in dealing with disaster recovery, Japan has been a leading country in the field of disaster risk reduction. The lessons from the Great East Japan Earthquake have been shared with the world from diverse participants in the World Bosai Forum/ Disaster Risk Reduction Conference in Japan in 2017 aiming to create practical solution for disaster risk reduction (World Bosai Forum, 2017). A great deal of impressive disaster prevention measures and disaster expertise were shown to the world through the conference programs including visiting disaster sites to show disaster reconstruction progress. My research provides empirical evidence that community's bottom-up coping strategies can contribute effectively to disaster recovery. The study highlights the practices rooted in community efforts and fills in the knowledge gap between experts and non-experts enhancing local knowledge transfer. Therefore, community's first-hand experience of disaster preparedness and their ground-level reconstruction strategies should be shared with other disaster-prone countries with the view to reduce community vulnerability and enhance disaster resilience globally but requires policy development to integrate such practices.

Japanese policies for disaster recovery have been changed to encourage machitsukuri (community building; community-based planning) since the Kobe Earthquake, and the 2011 Great Earthquake which led to a further emphasis on municipal responsibility for recovery with central government providing only guideline and direction for recovery. Yet, my research shows that community's rebuilding activities have not been well integrated with government support. There needs to be more effective policy development to coordinate better the recovery activities across and between all the levels. The research also suggests that emerging community leaders have the potential to link the government support and community's needs to formulate a more creative recovery strategies (evidenced by the communitive initiatives), but there is a need for policy development to remove the barriers and create a space for creative recovery.

10.4. Limitations of Study

First, while social capital and community leadership can be factors that affect the speed of recovery, it should be noted that there are many other factors that could affect the community recovery given the complexity nature of disaster recovery. I was unable to capture them all within the limited time scale for my PhD research project. Furthermore, as the reconstruction process is imbued with crisis-induced uncertainty and is subject to continuous revision and adaption across the time, the community's strategies need to be adjusted accordingly. Unfortunately, I was unable to document every changing strategy in my thesis.

Second, as ethnographic studies often require a prolonged amount of time in the field to capture in-depth understandings, my three-month ethnographic study seems relatively short and could be seen as a limitation. However, as I argued in the methodological section 5.3.3 the necessary amount of times for ethnography work is affected by many factors. The practice of ethnography has changed over time as a result of changes in the social context: see for example virtual ethnography, net-ethnography (Markhan 1998, 2005; Hine, 2000; Mann and Stewart, 2000), rapid ethnography (Vindrola-Padros and Vindrola-Padros, 2017; Pink and Morgan, 2013). My fieldwork preparation, previous work experience, commitment to fieldwork engagement and the reflexivity practice mitigated the time limitation. However, my previous understanding of Japan can also be seen as a limitation. It took me a while to challenge my taken-for-granted perceptions of what I assumed as typical Japanese culture and behaviours.

Third, the findings suggest that some of the tactics the local community employed to enhance their community recovery were quite unique based on their own specific socio cultural context and local knowledge and this might not be transferable to other contexts. However, Atkinson (2015, p.36) argues that “it is perfectly possible for research to be generalizable without being tied to law-like regularities” (Atkinson, 2015, p.36). The scholars of ethnographic research who had reasonable expertise in their areas will understand that “the ethnographic research is characterised by a corpus of ethnographic monographs and papers that constitute a cumulative and comparative research literature” (Atkinson, 2015, p.37) in which the generic concepts can be developed. In this sense, my research is more than just a description of what happened in one of the disaster-affected towns, for it develops generic issues and concepts, and as such community’s coping strategies can be applied to other disaster settings. For example, if we compare the ethnographic study of other disaster settings, we might be able to find similar practices for disaster recovery in equivalent social settings. Many issues Japan faces today will be issues to be faced by other fast-growing countries in future. For example there are the issues of rapid urbanization and shrinking rural population, aging society: thus, how social capital has been constructed and employed as a coping strategy for recovery can be useful for other equivalent social settings.

In addition, there may be ethical limitations in the data collection. As my research was conducted in a natural setting after disaster, my social role switched between the role as a researcher and as a volunteer. Especially in the early stage, I did not have a clear idea of what I would be studying, so I participated in everything I could in an attempt to have a more holistic view of the setting. I certainly had no control over the number of people (e.g. large number of volunteers in the field) present, nor had I the chance to get fully informed consent from everybody present but I ensured that the key organizers and gate-keepers were always informed. In many situations when the conversation unfolded naturally while volunteering, I wish I could make a recording but failed to do so due to the ethical constraints. The limitation of being unable to make recordings was however mitigated by using multiple forms of data collection. I sometimes felt it was unethical to interrupt people's emotional accounts in order to ask for permission to record the conversation. I regarded their emotional accounts and my response as a meaningful dialogue between two human beings, rather than between the researcher and the researched. Finally, while I interviewed many people from the town, I did not have access to central government officials, which can also be seen as a limitation. To counteract it, I examined numerous government documents and policies and interviewed local government employees to enhance my understanding.

10.5. Future Research

Post disaster reconstruction process is characterised by temporary transitional features which are often subject to changes and refinement. The findings suggest that social capital was utilized as a coping strategy by the community in the collective endeavour to rebuild from within. They abandoned competition models of doing business, and returned to the traditional value of collaboration. As the town is still in the process of rebuilding, we do not know if their lives will return the business model to capitalism. Are they going to carry on in a co-operative way or are they going to revert back to the social norms of competition? Or has the disaster brought about a fundamental change of their overall behaviours? The Okami's story (in chapter 8) illustrated how female leadership emerged from the crisis situation. The traditional Okami image of a women as a cultural carrier was transformed into the woman leader driving disaster recovery.

However, when lives return to normal, will those women return to traditional women social roles? It would be interesting to do a longitudinal study on this. In addition, the connections I forged during the course of my ethnographic research has become an incentive for me to return the field for I really want to see the change.

In addition, I have touched upon gender sensitivity in disaster research, realizing that women leadership role is “absent” in public accounts, in contrast to the heroic male figures flooding the media. It will be useful to dig deeper and showcase the women’ role in community recovery.

My fieldwork, also suggested that Kataribe (storytelling) was not simply a routine narrative of telling a story about the past as a memorial to the dead, but called for action not to let the tragedy happen again. Questions such as: How was disaster culture heritage constructed and shaped by social actors? How is the place remembered and place identity shaped after completing the reconstruction? , could be interesting themes for future research.

10.6. Reflection / closing statement

The fundamental point of disaster recovery research is to learn from past experience for future disaster risk reduction. On refection, what I learned during my three-month ethnographic studies in disaster setting include an attitude of gratitude for being alive and the people-centred, future-focused, collective efforts to rebuild the community toward a sustainable community. These core values will benefit me beyond this PhD project, inspiring my future teaching and learning.

The most important value is the attitude of gratitude. I still remember what one of the local members told me, “I appreciate I am still alive. Things could be worse. We were lucky that the tsunami occurred in the afternoon, not at night. We still had the chance to see the dangers, to run….What if the tsunami occurred in the middle of the night when the whole town were asleep, then we would have been over, all dead in the tsunami." I heard very often "I appreciated the volunteers' support…We need to rebuild our town as a way of appreciation for their support". This positive attitude helped them to support each other, to re-connect and work collectively to rebuild from within. The respondents appreciated whatever they had, and restarted their lives from debris. One third of the population in Minami-Sanriku town is more than 65 years old, but they are still hard at work to re-construct their future. My research on their everyday life experiences became a constant reminder to appreciate whatever I have when I feel discouraged. One thing I regret is I do not have the chance to express my gratitude to Mr. Ogawa, my main gatekeeper, who helped me access many places and people during my fieldwork in Minami-Sanriku. I was always thinking I would visit the town again and there would be another chance to see him. He passed away in June 2017 during my writing-up of this work.

I also see my research process as a journey of personal growth from being scared of the tsunami ghosts to actively engaging with the day-to-day lives of local members and being able to deal with various challenges. The process enhanced not only research skills, but also my listening skills and the ability to bring multiple stakeholders together and diverse voices to a conversation to address existing inequalities in the process of knowledge production. More importantly, it enhanced my ability to understand the lives of others, different ways of living, different attitudes to life challenges. It is only by acknowledging and appreciating the 'Other' that I can find myself.

References

Abulnour, A.H. (2014). The post-disaster temporary dwelling: Fundamentals of provision, design and construction. *Housing and Building National Research Centre Journal*, 10(1).10-24.

Adger, W. N. (2000). Social and ecological resilience: are they related?. *Progress in Human Geography*, 24(3), 347-364.

Adger, W. N. (2003). Social capital, collective action, and adaptation to climate change. *Economic geography*, *79*(4), 387-404.

Adger, W. N., Hughes, T. P., Folke, C., Carpenter, S. R. and Rockstrom, J. (2005). Social-ecological resilience to coastal disasters. *Science, 309*(5737), 1036-1039.

Ainuddin, S.as and Routray, J. K. (2012). Community resilience framework for an earthquake prone area in Baluchistan. *International Journal of Disaster Risk Reduction, 2*, 25-36.

Airriess, C. A., Li, W., Leong, K. J., Chen, A. C., & Keith, V. M. (2008). Church-based social capital, networks and geographical scale: Katrina evacuation, relocation, and recovery in a New Orleans Vietnamese American community. *Geoforum, 39*(3), 1333-1346.

Aldrich, D. (2011). The power of people: Social capital's role in recovery from the 1995 Kobe earthquake. *Natural Hazards, 56*(3), 595-611.

Aldrich, D. P. (2008). The crucial role of civil society in disaster recovery and Japan's preparedness for emergencies. *Japan Aktuell, 3*, 81-96.

Aldrich, D. P. (2011). The externalities of strong social capital: Post-tsunami recovery in southeast India. *Journal of Civil Society*, *7*(1), 81-99.

Aldrich, D. P. (2012). Building resilience: Social capital in post-disaster recovery. *Chicago and London: University of Chicago press*

Aldrich, D. P. (2012). Social, not physical, infrastructure: The critical role of civil society after the 1923 Tokyo earthquake. *Disasters, 36*(3), 398-419.

Aldrich, D. P. (2013). Response to my critics. *Risk, Hazards & Crisis in Public Policy, 4*(1), 32-43.

Aldrich, D. P. (2016). It's who you know: Factors driving recovery from Japan's 11 March 2011 disaster. *Public Administration, 94*(2), 399-413.

Aldrich, D. P. (2017). Trust deficit: Japanese communities and the challenge of rebuilding Tohoku. *Japan Forum, 29*(1), 39-52.

Aldrich, D. P. and Crook, K. (2013). Taking the high ground: FEMA trailer siting after hurricane Katrina. *Public Administration Review*, *73*(4), 613-622.

Aldrich, D. P. and Kyota, E. (2017). Creating community resilience through elder-led physical and social infrastructure. *Disaster Medicine and Public Health Preparedness*, *11*(1), 120-126.

Aldrich, D. P. and Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist, 59*(2), 254-269.

Aldrich, D. P., & Sawada, Y. (2015). The physical and social determinants of mortality in the 3.11 tsunami. *Social Science & Medicine*, *124*, 66-75.

Aldrich, D.P. (2008). Location, location, location: Selecting sites for controversial facilities. *The Singapore Economic Review*, 53(1).145-172.

Aldrich, D.P. (2008). The Crucial Role of Civil Society in Disaster Recovery and Japan's Preparedness for Emergencies. Available through: http://works.bepress.com/daniel_aldrich/6 (Accessed date: 05 July, 2015)

Aldrich, D.P. (2010). Fixing Recovery: Social Capital in Post-Crisis Resilience (May 3, 2010). *Journal of Homeland Security*. Available at SSRN: https://ssrn.com/abstract=1599632

Aldrich, D.P. (2012) Post-crisis Japanese nuclear policy: From top-down directives to bottom-up activism. *Asia Pacific Issues*, 103. https://ssrn.com/abstract=1982646 (Accessed on 20/05/2015)

Aldrich, D.P. (2012). *Building resilience: Social capital in post-disaster recovery*. London: University of Chicago Press.

Aldrich, D.P. and Crook, K. (2008). Strong civil society as a double-edged sword: Siting trailers in post-Katrina New Orleans. *Political Research Quarterly*, 61(3), 379-389.

Alexander, D. E. (2013). Resilience and disaster risk reduction: An etymological journey. *Natural Hazards and Earth System Sciences*, *13*(11), 2707-2716.

Alexander, R. (2006). Tsunami Build Back Better: Mantra Aside, an Aid Gone Wrong Story? *A Livelihood Sector Review*. India: Development Constancy Group.

Alvesson, M. and Skoldberg, K. (2000). *Reflexive Methodology: New Vistas for Qualitative Research.* London: SAGE Publication.

Alvesson, M., Hardy, C. and Harley, B. (2008). Reflecting on reflexivity: Reflexive textual practices in organization and management theory. *Journal of management studies*, *45*(3), pp.480-501.

Ames, C., Koguchi-ames, (2012). In J. Kingston (Ed.), *Natural Disaster and Nuclear Crisis in Japan*. London: Routledge. p.207

Amita Group website, (2015). Local Resource Circulation System, http://en.amita-hd.co.jp/blog/2015/biogas-plant-groundbreaking-ceremony.html ((Accessed 8 September 2016)

Amorim, I. (2009). Resettlement of communities; the case study of Jaguaribara: a resilient community (Northeast of Brazil). *Jàmbá: Journal of Disaster Risk Studies*, *2*(3), 216-234.

Ando, M. (2015). Impact of recent crises and disasters on regional production networks and trade in japan. In *Resilience and Recovery in Asian Disasters* (pp. 107-124). Tokyo: Springer,

Ansell, C., & Boin, A. (2017). Taming deep uncertainty: the potential of pragmatist principles for understanding and improving strategic crisis management. *Administration & Society*, http://journals.sagepub.com/doi/abs/10.1177/0095399717747655 (Accessed 8 September 2016)

Aoki, T., & Ito, K. (2014). What is the role of universities in disaster response, recovery, and rehabilitation? Focusing on our disaster victim identification project. *IEEE Communications Magazine*, *52*(3), 30-37.

Arceneaux, K., & Stein, R. M. (2006). Who is held responsible when disaster strikes? The attribution of responsibility for a natural disaster in an urban election. *Journal of Urban Affairs*, *28*(1), 43-53.

Archer, D., & Boonyabancha, S. (2011). Seeing a disaster as an opportunity – harnessing the energy of disaster survivors for change. *Environment & Urbanization*, *23*(2), 351-364.

Avenell, S., From Kobe to Tohoku: The Potential and the Peril of a Volunteer Infrastructure. In: J., Kingston, ed. (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11.* London: Routledge.

Azuma H. (2011). *The Disaster Broke Us Apart* (Shinsai de Bokutachi wa Barabara ni Natte Shimatta), Shisō chizu beta (Thought Map Beta 2), Japan.

Bachev, H. and Ito, F. (2013). Impacts of Fukushima Nuclear Disaster on Agri-Food Chains in Japan. *IUP Journal of Supply Chain Management*, 10(4), 7-52.

Baert, P., 2005. *Philosophy of the Social Sciences towards Pragmatism*. Cambridge: Polity Press.

Bagnoli, A. (2009). Beyond the standard interview: The use of graphic elicitation and arts-based methods. Qualitative Research, 9(5), 547-570.

Basic Act on Reconstruction in response to the Great East Japan Earthquake, adopted (2011). http://www.reconstruction.go.jp/english/topics/2013/03/6-dec-2012-basic-act-on-reconstruction.html

Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake, (2011). On-line available at: http://www.reconstruction.go.jp/english/pdf/Basic_Guidelines_for_Reconstruction.pdf

BBC News, (24 December, 2011). Japanese public chooses 'kizuna' as kanji of 2011. https://www.bbc.co.uk/news/world-asia-16321999 (Accessed 18 September 2015)

BBC News, (9 March 2016, 2016). Japan's tsunami debris: Five remarkable stories https://www.bbc.co.uk/news/world-asia-35638091 (Accessed 8 September 2016)

Becker, S.M. (2000). Environmental disaster education at the university level: an integrative approach. *Safety Science*, 35(1), 95-104.

Belinda M Reininger, Mohammad H Rahbar, MinJae Lee, Zhongxue Chen, Sartaj R Alam, Jennifer Pope, & Barbara Adams. (2013). Social capital and disaster preparedness among low income Mexican Americans in a disaster prone area. *Social Science & Medicine, 83*, 50-60.

Benson, C., & Clay, E. (2004). *Understanding the economic and financial impacts of natural disasters*. Washington, DC: World Bank Group.

Berkes, F., & Ross, H. (2013). Community resilience: toward an integrated approach. *Society & Natural Resources*, *26*(1), 5-20.

Bhandari, B.R. (2014). Social capital in disaster risk management; a case study of social capital mobilization following the 1934 Kathmandu valley earthquake in Nepal. *Disaster Prevention and Management*, *23*(4), 314-328.

Biran, A., Liu, W., Li, G., & Eichhorn, V. (2014). Consuming post-disaster destinations: The case of Sichuan, China. *Annals of Tourism Research*, 47, 1-17.

Biran, A., Poria, Y., & Oren, G. (2011). Sought experiences at (dark) heritage sites. *Annals of Tourism Research*, 38(3), 820-841.

Birkmann, J., Buckle, P., Jaeger, J., Pelling, M., Setiadi, N., Garschagen, M., Fernando, N. and Kropp, J. (2010). Extreme events and disasters: a window of opportunity for change? Analysis of organizational, institutional and political changes, formal and informal responses after mega-disasters. *Natural Hazards*, 55(3), 637-655.

Blanco, H. (1994). *How to think about social problems: American pragmatism and the idea of planning*. New York: Greenwood Pub Group.

Bohman, J. (2000). Democracy as Inquiry, Inquiry as Democratic: Pragmatism, Social Science, and the cognitive Division of Labor. *American Journal of Political Science*, 43(2), p.594.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American psychologist*, 59(1), 20.

Bosner, L. (2011). Japan's response to a large scale disaster: Can it be improved? *Report to the Maureen and Mike Mansfield Foundation*, *13*

Bourdieu, P. (1985). The forms of capital. In J.G. Richardson, (Ed.), *Handbook of Theory and Research for the Sociology of Education*, (pp. 241-58). New York: Greenwood.

Bowman, M. S., & Pezzullo, P. C. (2010). What's so 'dark'about 'dark tourism'?: Death, tours, and performance. *Tourist Studies*, 9(3), 187-202.

Bradley, J. R. (2014). An improved method for managing catastrophic supply chain disruptions. *Business Horizons*, *57*(4), 483-495.

Brennan, J. F., & Keller, L. F. (2017). Pragmatism, The New Republic, and American Public Administration at Its Founding. *Administration & Society*, *49*(4), 491-529.

Bronfenbrenner, U. (2004). *Making human beings human: Bio ecological perspectives on human development*. California: Sage.

Brownlie, D., Hewer, P., Wagner, B., & Svensson, G. (2008). Management theory and practice: bridging the gap through multidisciplinary lenses. *European Business Review*, *20*(6), 461-470.

Bruegel, I., & Warren, S. (2003). Family resources and community social capital as routes to valued employment in the UK? *Social Policy and Society*, *2*(4), 319-328.

Bruneau, M., Chang, S.E., Eguchi, R.T., Lee, G.C., O'Rourke, T.D., Reinhorn, A.M., Shinozuka, M., Tierney, K., Wallace, W.A. and Von Winterfeldt, D., 2003. A framework to quantitatively assess and enhance the seismic resilience of communities. Earthquake spectra, 19(4), pp.733-752.

Bryman, A. (2016). *Social Research Methods*. 5th ed. Oxford: Oxford University Press.

Cabinet Office, Government of Japan, 2011. White Paper on Disaster Management 2011, Executive Summary. On-line available at: https://reliefweb.int/report/japan/white-paper-disaster-management-2011-executive-summary (Accessed 27 March, 2015)

Cannon, T., & Müller-Mahn, D. (2010). Vulnerability, resilience and development discourses in context of climate change. *Natural Hazards*, *55*(3), 621-635.

Chamlee-Wright, E. (2010). *The cultural and political economy of recovery: Social learning in a post-disaster environment*. London: Routledge.

Chamlee-Wright, E., & Storr, V. H. (2009). Club goods and post-disaster community return. *Rationality and Society*, *21*(4), 429-458.

Chamlee-Wright, E., & Storr, V. H. (2011). Social capital as collective narratives and post-disaster community recovery. *The Sociological Review*, 59(2), 266-282.

Chandra, A., Acosta, J., Howard, S., Uscher-Pines, L., Williams, M., Yeung, D., Garnett, J. and Meredith, L. S. (2011). Building community resilience to disasters: A way forward to enhance national health security. *Rand health quarterly*, 1(1).

Chang, S. E. (2010). Urban disaster recovery: A measurement framework and its application to the 1995 Kobe earthquake. *Disasters, 34*(2), 303-327.

Chang, S. E., McDaniels, T., Fox, J., Dhariwal, R., & Longstaff, H. (2014). Toward Disaster-Resilient cities: Characterizing resilience of infrastructure systems with expert judgments. *Risk Analysis, 34*(3), 416-434.

Chang, Y., Wilkinson, S., Potangaroa, R., & Seville, E. (2010). Resourcing challenges for post-disaster housing reconstruction: A comparative analysis. *Building Research & Information, 38*(3), 247-264.

Cimellaro, G. P., Solari, D., & Bruneau, M. (2014). Physical infrastructure interdependency and regional resilience index after the 2011 Tohoku earthquake in Japan. *Earthquake Engineering & Structural Dynamics, 43*(12), 1763-1784.

Clerke, T. and Hopwood, N. (2014). *Doing ethnography in teams: A case study of asymmetries in collaborative research*. London: Springer

Clinton, W. J. (2006). Lessons learned from tsunami recovery: Key propositions for building back better. *New York: Office of the UN Secretary-General's Special Envoy for Tsunami Recovery,*

Coats, A. and Ferguson, S. (2013). Rubbernecking or rejuvenation: Post earthquake perceptions and the implications for business practice in a dark tourism context. *Journal of Research for Consumers*, *23*(1), 32-65.

Cohen, A. B., Wu, M. S., and Miller, J. (2016). Religion and culture. *Journal of Cross-Cultural Psychology*, *47*(9), 1236-1249.

Coleman, J.S., (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95-S120.

Comerio, M.C. (2014). Disaster recovery and community renewal: Housing approaches. *Cityscape*, 16(2), 51.

Cox, R. S., & Perry, K. M. E. (2011). Like a fish out of water: Reconsidering disaster recovery and the role of place and social capital in community disaster resilience. *American Journal of Community Psychology*, 48(3-4), 395-411.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. London: Sage publications.

Creswell, J. W., and Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. 5th ed. London: Sage publications.

Creswell, J.W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd ed. Thousand Oaks: Sage.

Current Status of Reconstruction and Challenges, Reconstruction Agency: http://www.reconstruction.go.jp/english/topics/Progress_to_date/pdf/201708_Current_Status_of_Reconstruction_and_Challenges.pdf (Accessed January 20, 2018)

Davies, C.A. (2008). *Reflexive ethnography: A guide to researching selves and others*. 2nd ed. New York: Routledge.1-11.

Day, J. M., Melnyk, S. A., Larson, P. D., Davis, E. W. and Whybark, D. C. (2012). Humanitarian and disaster relief supply chains: A matter of life and death. *Journal of Supply Chain Management*, *48*(2), 21-36.

DeFilippis, J., 2001. The myth of social capital in community development. *Housing Policy Debate*, 12(4), 781-806.

Denzin, N., and Lincoln, Y. (1998). *Collecting and Interpreting Qualitative Materials*. London: Sage.

Dewey, J. (1938). *Logic: the Theory of Inquiry.* New York: Henry Holt and Company.

Dhillon, K. and Randle, A. (2005). *Making Community Leadership Real*. New Local Government Network Publication, NLGN Policy Summit, 2004.

Disaster Information Laboratory, (2011). Sanriku Tsunami History. On-line available at: https://dil.bosai.go.jp/disaster/2011eq311/sanrikuhistory.html (Accessed March 20, 2017)

Djalante, R., Holley, C., and Thomalla, F.: Adaptive governance and managing resilience to natural hazards, *International Journal of Disaster Risk Science*, 2, 1–14, 2011.

Drath, W. H., & Palus, C. J. (1994). *Making common sense: Leadership as meaning-making in a community of practice*. Center for Creative Leadership.

Earthquake and Engineering Research Institute, (2011), EERI Special Earthquake Report. https://www.eeri.org/2011/08/social-science-report-on-great-east-japan-earthquake-and-tsunami-now-available/(Accessed on 10/10/2017)

El-Anwar, O., K. El-Rayes, and A. Elnashai (2010) Maximizing the sustainability of integrated housing recovery efforts. *Journal of Construction Engineering and Management*. 136(7). 794–802.

Elkjaer, B., & Simpson, B. (2011). Pragmatism: A lived and living philosophy. What can it offer to contemporary organization theory?. In H. Tsoukas and R., Chia (Eds,) *Philosophy and organization theory* (pp. 55-84). London: Emerald Group Publishing Limited.

Elliott, J.R., Haney, T.J. and Sams-Abiodun, P., 2010. Limits to social capital: Comparing network assistance in two New Orleans neighborhoods devastated by Hurricane Katrina. The Sociological Quarterly, 51(4), pp.624-648.

Erber, G. and Schrooten, M. (2011). Japan at the Crossroads—State Budget Remains the Achilles' heel. *DIW Economic Bulletin*, 2, 16-21.

Evans, J., and Jones, P. (2011). The walking interview: Methodology, mobility and place. *Applied Geography*, *31*(2), 849-858.

Evans, K. (2000). Reclaiming John Dewey: Democracy, Inquiry, Pragmatism, and Public Management. *Administration and Society,* 32, 308-328.

Evans, N. (2002a). Machi-zukuri as a new paradigm in Japanese urban planning: Reality or myth? *Japan Forum, 14*(3), 443-464.

Fan, L., 2013. Disaster as opportunity? Building back better in Aceh, Myanmar and Haiti. Overseas Development Institute: Humanitarian Policy Group. On-line available at: https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8693.pdf (Accessed 05 March, 2017).

Farjoun, M., Ansell, C., & Boin, A. (2015). PERSPECTIVE—Pragmatism in organization studies: Meeting the challenges of a dynamic and complex world. *Organization Science*, *26*(6), 1787-1804.

Ferris, E. and Solís, M., 2013. *Earthquake, Tsunami, Meltdown—The Triple Disaster's Impact on Japan, Impact on the World.* Washington, DC: The Brookings Institution.

Fetterman, D.M. (2010). *Ethnography: step by step.* 3rd ed. London: SAGE Publications Ltd.

Fisker-Nielsen, A.M. (2012). Grass Response to Tohoku Earthquake of 11 March 2011: overcoming the Dichotomy between Victim and Helper. *Anthropology Today*, 28(3), 16-20.

Flachs, A. (2013). Gardening as ethnographic research: Volunteering as a means for community access. *Journal of Ecological Anthropology*, *16*(1), 97-103.

Fleming, M. (2007). Opportunity in chaos. *Daily Variety*, *297*(45), 1.

Foley, M., & Lennon, J.J. (1996a). Editorial: Heart of darkness. *International Journal of Heritage Studies,* 2(4), 195–197.

Foley, M., & Lennon, J.J. (1996b). JFK and dark tourism: A fascination with assassination. *International Journal of Heritage Studies,* 2(4), 198-211.

Fontana, A., & Frey, J. H. (2003). The Interview: from structured questions to negotiated text. In. N. K., Denzin & Y. S, Lincoln. (Eds.), *Collecting and Interpreting Qualitative Materials* (pp.61-106). London: Sage.

Fujioka, R. (2012). The Impact of Natural Disasters on Japanese Retailers. *The Retail Digest.* P.4-10.

Funabashi, Y., and Kitazawa, K. (2012). Fukushima in review: A complex disaster, a disastrous response. *Bulletin of the Atomic Scientists*, *68*(2), 9-21.

Gaillard, J. (2007). Resilience of traditional societies in facing natural hazards. *Disaster Prevention and Management: An International Journal*, *16*(4), 522-544.

Ganapati, N. E. (2013). Downsides of social capital for women during disaster recovery. *Administration & Society*, *45*(1), 72-96.

Garrison, M.B. and Sasser, D.D., 2009. Families and disasters: Making meaning out of adversity. In Lifespan perspectives on natural disasters (pp. 113-130). Springer, New York, NY.

Ghaderi, Z., Mat Som, A. P., & Henderson, J. C. (2015). When disaster strikes: The Thai floods of 2011 and tourism industry response and resilience. *Asia Pacific Journal of Tourism Research*, 20(4), 399-415.

Gillard, R. (2016). Questioning the diffusion of resilience discourses in pursuit of transformational change. *Global Environmental Politics*, 16 (1).13-20.

Goles, T., and Hirschheim, R. (2000). The paradigm is dead, the paradigm is dead… long live the paradigm: the legacy of Burrell and Morgan. *Omega*, *28*(3), 249-268.

Good, M. (2016). Shaping Japan's disaster heritage. In A. Matsuda, and L.E. Mengoni, ed. (2016). *Reconsidering cultural heritage in East Asia*. *(*p.139-161). London; Ubiquity Press.

Goulding, C., Kelemen, M., & Kiyomiya, T. (2018). Community-based response to the Japanese tsunami: A bottom-up approach. *European Journal of Operational Research*. 268 (3), 887-903

Grimm, R., Fox, C., Baines, S., & Albertson, K. (2013). Social innovation, an answer to contemporary societal challenges? Locating the concept in theory and practice. *Innovation: The European Journal of Social Science Research*, *26*(4), 436-455.

Guichard-Anguis, S. (2008). Japanese inns (ryokan) as producers of Japanese identity. In S. Guichard-Anguis and O. Moon (Eds.), *Japanese tourism and travel culture* (pp. 92-118). London: Routledge.

Gunewardena, N. and Schuller, M. eds., (2008). *Capitalizing on catastrophe: Neoliberal strategies in disaster reconstruction.* California: AltaMira Press.

Haddad, M. A. (2010). From undemocratic to democratic civil society: Japan's volunteer fire departments. *The Journal of Asian Studies*, *69*(1), 33-56.

Hall, E. T. (1959). The silent language. New York: Doubleday.

Hammersley, M. and Atkinson, P. (2007). *Ethnography: Principles in practice*. Routledge.

Harrison, C. (1991). *Countryside recreation in a changing society*. London: TMS Partnership.

Hawkins, R.L. and Maurer, K., (2010). Bonding, bridging and linking: how social capital operated in New Orleans following Hurricane Katrina. *British Journal of Social Work*, 40(6).1777-1793.

Hayashi, 2017. Materializing memories of disasters: individual experiences in conflict concerning disaster remains in the affected regions of the Great East Japan Earthquake and Tsunami. *Bulletin of the National Museum of Ethnology*, 41(4), 337-391

Hayashi, M. (2012). A quick method for assessing economic damage caused by natural disasters: An epidemiological approach. *International Advances in Economic Research*, *18*(4), 417-427.

Hayashi, T. (2012). Japan's Post-Disaster economic reconstruction: From kobe to tohoku. *Asian Economic Journal*, *26*(3), 189-210.

Healey, P. (2009). Developing neighbourhood management capacity in kobe, japan: Interactions between civil society and formal planning institutions. *Case Studies Prepared for Planning Sustainable Cities: Global Report on Human Settlements.*, https://unhabitat.org/wp-content/uploads/2010/07/GRHS2009CaseStudyChapter04Kobe.pdf (Accessed on 20/05/2016)

Hein, C. (2002). Toshikeikaku and machizukuri in Japanese urban planning: the reconstruction of inner city neighborhoods in Kōbe. *Japanstudien*, *13*(1), 221-252.

Hero, R. E. (2003). Social capital and racial inequality in America. *Perspectives on Politics*, 1(1), 113-122.

Higuchi, Y., Inui, T., Hosoi, T., Takabe, I., & Kawakami, A. (2012). The impact of the great east japan earthquake on the labor market--need to resolve the employment mismatch in the disaster-stricken areas. *Japan Labor Review*, *9*(4), 4-21.

Hine, C. (2000). Virtual Ethnography. London: Sage.

Hofstede, G. and Hofstede, G. J., 2005. Cultures and Organizations: Software of the Mind. 2nd ed. USA: McGraw-Hill.

Holguin-Veras, J., Taniguchi, E., Jaller, M., Aros-Vera, F., Ferreira, F., & Thompson, R. G. (2014). The tohoku disasters: Chief lessons concerning the post disaster humanitarian logistics response and policy implications. *Transportation Research: Part A: Policy and Practice*, *69*, 86-104.

Holland, R. (1999). Reflexivity. *Human Relations*, 52 (4), 463-484.

Holliday, A. (2007). *Doing and Writing Qualitative Research*, 2nd ed. London: Sage.

Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 4(1), 1-23.

Hongkong Center for Food Safety (2011). Available at: http://www.cfs.gov.hk/english/multimedia/multimedia_pub/multimedia_pub_fsf_57_01.html. (Accessed on 10/07/2017)

Hood, C.P. (2013). Kizuna: Examining the Bonds of Risk, Tragedy, Disaster and Recovery in Japan. *STS Forum on the East Japan Disaster*. On line available at: https://fukushimaforum.wordpress.com/online-forum-2/online-forum/kizuna-examining-the-bonds-of-risk-tragedy-disaster-and-recovery-in-japan/ (Accessed 8 September 2016)

Horwich, G., 2000. Economic lessons of the Kobe earthquake. Economic development and cultural change, 48(3), pp.521-542.

Howaldt, J., & Schwarz, M. (2010). Social innovation. *Concepts, Research Fields, and International Trends.* Dortmund: Sozialforschungstelle Dortmund.

Hurlbert, Jeanne S., Valerie A. Haines and John J. Beggs. 2000. "Core Networks and Tie Activation: What Kind of Routine Networks Allocate Resources in Nonroutine Situations?" American Sociological Review 65(August):598-618.

Humanitarian Policy Group, 2013. *Disaster as Opportunity? Building Back Better in*

Aceh, Myanmar and Haiti. Available at https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8693.pdf (Accessed 7 July, 2018).

Ikeda, S. and Nagasaka, T., 2011. An emergent framework of disaster risk governance towards innovating coping capability for reducing disaster risks in local communities. *International journal of disaster risk science*, *2*(2), pp.1-9.

Ilie, G. (2011). The effects of the natural disaster on Japan's economy and few measures to economic recovery. *Euromentor Journal*, *2*(3), 1.

Ingram, J. C., Franco, G., Rio, C. R., & Khazai, B. (2006). Post-disaster recovery dilemmas: Challenges in balancing short-term and long-term needs for vulnerability reduction. *Environmental Science and Policy*, *9*(7), 607-613.

Ireni-Saban, L. (2013). Challenging disaster administration: Toward community-based disaster resilience. *Administration & Society*, *45*(6), 651-673.

James, H., & Paton, D. (2015). Social capital and the cultural contexts of disaster recovery outcomes in Myanmar and Taiwan. *Global Change, Peace & Security*, *27*(2), 207-228.

Japan Foundation Centre for Global Partnership, (2012). Kizuna Bond Project, available at: http://www.jpf.go.jp/cgp/assets/files/archive/archive_promotion/pdf_en_1.pdf (Accessed 8 September 2015)

Japan International Cooperation Agency (JICA), (2013). The study of reconstruction processes from large scale disasters-JICA's Support for Reconstruction. On-line available at: https://www.jica.go.jp/activities/issues/urban/ku57pq000019fbsv-att/reconstruction_report_en.pdf (Accessed 8 September 2015)

Japan Meteorological Agency, (2011), the 2011 Great East Japan Earthquake Summary. On-line available at: http://www.jma.go.jp/jma/en/2011_Earthquake/2011_Earthquake.html (Accessed march 24, 2017)

Japan Meteorological Agency, (2011). Preliminary Report on Earthquake and Tsunami Disasters, the 2011 off the Pacific coast of Tohoku Earthquake http://www.jma.go.jp/jma//kishou/books/saigaiji/saigaiji_201101/saigaiji_201101.pdf (Access 10 March 2016) (In Japanese)

Japan meteorology agency, (2017). Past earthquake tsunami disaster, on-line available at: http://www.data.jma.go.jp/svd/eqev/data/higai/higai-1995.html(Accessed March 20, 2017)

Japan Reconstruction Agency Website. (2016). Memory from 3.11. Retrieved from https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-19/Tourism_industry/20160122_siryo4.pdf (Accessed 8 September 2016)

Japan Today, (2013 August 10). Will No. 1 reactor at Fukushima become a future tourist spot? https://japantoday.com/category/features/kuchikomi/will-no-1-reactor-at-fukushima-become-a-future-tourist-spot (Accessed 8 September 2015)

Japan Tourism Agency Website, (2015). Tohoku area tourism award for outstanding efforts for supporting youth travel in 2015. Retrieved from http://www.mlit.go.jp/kankocho/topics05_000157.html (Accessed 18 September 2016)

Jepson, D. and Sharpley, R. (2015). More than sense of place? Exploring the emotional dimension of rural tourism experiences. *Journal of Sustainable Tourism*, 23(8-9), 1157-1178.

Ji, B. and Fukamachi, K. (2016). Can civil society revitalise dying rural villages? The case of Kamiseya in Kyoto prefecture. In J. Singer and T. Gannon and F. Noguchi and Y. Mochizuki (eds.) *Educating for Sustainability in Japan: Fostering Resilient Communities after the Triple Disaster* (pp.156-169). London: Routledge.

Johnson, R. B. and Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.

Kang, E.J., Scott, N., Lee, T.J., & Ballantyne, R. (2012). Benefits of visiting a ‘dark tourism’ site: The case of the Jeju April 3rd Peace Park, Korea. *Tourism Management,* 33(2), 257-265.

Kato, K. (2018). Debating sustainability in tourism development: Resilience, traditional knowledge and community: A post-disaster perspective. *Tourism Planning & Development*, 15(1), 55-67.

Kawachi, I., Kim, D., Coutts, A., & Subramanian, S. V. (2004). Commentary: Reconciling the three accounts of social capital. *International Journal of Epidemiology, 33*(4), 682-690.

Kawawaki, Y. (2011). Recovery g Planning Process & Related Case Studies of the Great East Japan Earthquake. On-line available at http://www.bousai.go.jp/kokusai/kyoryoku/session_/pdf/02.pdf (Accessed 30 May, 2017)

Kelemen, M. (2013). Learning from Communities in Crisis. *a Virtual Photo Exhibition*, Stoke-on-Trent.

Kelemen, M. and Rumens, N. (2012). Pragmatism and heterodoxy in organization research: Going beyond the quantitative/qualitative divide. *International Journal of Organizational Analysis*, *20*(1), p.5-12.

Kelemen, M., and Bansal, T. (2002). The Conventions of Management Research and Their Relevance to Management Practice. *British Journal of Management*, 13, p.97-108.

Kennedy, J., Ashmore, J., Babister, E., & Kelman, I. (2008). The meaning of 'Build back better': Evidence from Post-Tsunami aceh and sri lanka. *Journal of Contingencies and Crisis Management, 16*(1), 24-36

Kim, K., & Olshansky, R. B. (2014). The theory and practice of building back better. *Journal of the American Planning Association*, *80*(4), 289-292.

Kim, S., & Butler, G. (2015). Local community perspectives towards dark tourism development: The case of Snowtown, South Australia. *Journal of Tourism and Cultural Change*, 13(1), 78-89.

King, K. G., Bosher, L. S., & Kayaga, S. (2013). Resilience in the humanitarian sphere: stimulating resilience for recovery. IN: R.J. Shaw, (ed). *Delivering water, sanitation and hygiene services in an uncertain environment*: Proceedings of the 36th WEDC International Conference, Nakuru, Kenya, July 2013.

Kingston, J. ed. (2012). *Natural disaster and nuclear crisis in japan: Response and recovery after Japan's 3/11* Routledge.

Kiyomiya, T., Masuda, Y., and Hayashi, S. (2013). Collaborative Assistance (kyo-jo) in Recovering Business under the Crisis Situation. In: *Critical Management Studies Conference 2013*, Manchester, the United Kingdom, 10th-11th July, 2013.

Klein, R. J., Nicholls, R. J., & Thomalla, F. (2003). Resilience to natural hazards: How useful is this concept? *Global Environmental Change Part B: Environmental Hazards, 5*(1), 35-45.

Kumar, S., & Havey, T. (2013). Before and after disaster strikes: A relief supply chain decision support framework. *International Journal of Production Economics*, *145*(2), 613-629.

Kuropka, A., & Jankowiak, A. H. (2016). The impact of natural disasters on economy and production networks in ASEAN. Research Papers of the Wroclaw University of Economics/Prace Naukowe Uniwersytetu Ekonomicznego we Wroclawiu, (447), 111-122.

Kusakabe, E. (2013). Advancing sustainable development at the local level: The case of machizukuri in Japanese cities. *Progress in Planning, 80*, 1-65.

Leadbeater, A. (2013). Community leadership in disaster recovery: A case study. *Australian Journal of Emergency Management, 28*(3), 41-47.

Lee, A.S. and Nickerson, J.V., 2010. Theory as a Case of Design: Lessons for Design from the Philosophy of Science, *Proceeding of the 43rd Hawaii International Conference on System Sciences,* p.1-8.

Lew, A. A. (2014). Scale, change and resilience in community tourism planning. *Tourism Geographies*, 16(1), 14-22.

Lew, A. A., & Cheer, J. M. (Eds.). (2017). *Tourism resilience and adaptation to environmental change: Definitions and frameworks*. New York: Routledge.

Li, Y. (2016). Conditions of Social Innovation: Two Case Studies of Reconstruction Project in Minami-Sanriku. *Komazawa Sociology Studies*, 48, p. 89-121. http://repo.komazawa-u.ac.jp/opac/repository/all/35737/rsk048-05-li.pdf (Accessed 10/01/2017)

Li, Y., (2013). Making up a Multi-Winner Pattern for The Future of Local Societies in Japan: A Case Study of AMITA Group. Komazawa University Repository. http://repo.komazawa-u.ac.jp/opac/repository/all/33272/rsk045-02-liyanyan.pdf. (Accessed 10/12/2016)

Lin, Y., Kelemen, M., & Kiyomiya, T. (2017). The role of community leadership in disaster recovery projects: Tsunami lessons from Japan. *International Journal of Project Management*, 35(5), 913-924.

Lloyd-Jones, T. (2007). Building back better: How action research and professional networking can make a difference to disaster reconstruction and risk reduction. In: Research Symposium 2007, *Reflections on Practice: Capturing Innovation and Creativity*, London.

Loosemore, M., Powell, A., Blaxland, M., Galea, N., Dainty, A. and Chappell, L. (2015), September. Rapid ethnography in construction gender research. In *Procs 31st annual ARCOM conference* (p. 7-9). Lincoln: Association of Researchers in Construction Management.

MacKenzie, C. A., Santos, J. R., & Barker, K. (2012). Measuring changes in international production from a disruption: Case study of the Japanese earthquake and tsunami. *International Journal of Production Economics*, *138*(2), 293-302.

MacKinnon, D. and Derickson, K. D. (2013). From resilience to resourcefulness. *Progress in Human Geography, 37*(2), 253-270.

Madden, R., 2010. *Being ethnographic: A guide to the theory and practice of ethnography*. London: Sage.

Magee, R., & Gilmore, A. (2015). Heritage site management: from dark tourism to transformative service experience? *The Service Industries Journal*, 35(15-16), 898-917.

Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society & Natural Resources, 23*(5), 401-416.

Maly, E. and Shiozaki, Y. (2012). Towards a policy that supports people-centered housing recovery—Learning from housing reconstruction after the Hanshin-Awaji Earthquake in Kobe, Japan. *International Journal of Disaster Risk Science*, 3(1), 56-65.

Mann, C. and Stewart, F. (2000). *Internet communication and qualitative research: a handbook for researching Online,* London: Sage.

Mannakkara, S., & Wilkinson, S. (2013). Build back better: Lessons from Sri Lanka's recovery from the 2004 Indian ocean tsunami. *International Journal of Architectural Research, 7*(3), 108-121.

Mannakkara, S., Wilkinson, S., & Potangaroa, R. (2014). Build back better: Implementation in victorian bushfire reconstruction. *Disasters, 38*(2), 267-290.

Mannakkara, S.and Wilkinson, S. (2012). Building Back Better in Japan-Lessons from the Indian Ocean Tsunami Experience in Sri Lanka. *Conference: International Conference on Disaster Management,* at Kumamoto, Japan.

Manyena, B. (2009). *Disaster resilience in development and humanitarian interventions* (Doctoral dissertation, Northumbria University).

Manyena, B., O'Brien, G., O'Keefe, P. and Rose, J. (2011). Disaster resilience: a bounce back or bounce forward ability?. *Local Environment: The International Journal of Justice and Sustainability,* 16(5).417-424.

Manyena, S. B. (2006). The concept of resilience revisited. *Disasters, 30*(4), 434-450.

Marin, A., Bodin, O., Gelcich, S., & Crona, B. (2015). Social capital in post-disaster recovery trajectories: Insights from a longitudinal study of tsunami-impacted small-scale fisher organizations in Chile. *Global Environmental Change, 35*, 450-462.

Markham, A. (2005). The methods, politics, and ethics of representation in online ethnography, in N.K. Denzin and Y.S. Lincoln (eds) Handbook of Qualitative Research, 3rd edn, Thousand Oaks, C.A: Sage.

Markham, A. N. (1998). *Life online: Researching real experience in virtual space*. London: Rowman Altamira.

Matanle, P. (2011). The Great East Japan Earthquake, Tsunami, And Nuclear Meltdown: Towards the Reconstruction of a Safe, Sustainable, and Compassionate Society in Japan’s Shrinking Regions. *Local Environment: The International Journal of Justice and Sustainability*, 16(9).823-847.

Matanle, P. (2013). Post-disaster recovery in ageing and declining communities: the Great East Japan disaster of 11 March 2011. *Geography*, *98*(2), 68-76.

Matsubayashi, T., Sawada, Y., & Ueda, M. (2013). Natural disasters and suicide: Evidence from Japan. *Social Science & Medicine*, *82*, 126-133.

Matsumura, M. (2011). Japan's earthquake: The politics of recovery. *Survival*, *53*(3), 19-25.

Matsuo, H. (2015). Implications of the Tohoku Earthquake for Toyata’s Coordination Mechanism: Supply Chain Disruption of Automotive Semiconductors. *International Journal of Production Economics*, 161.217-227.

Matsuura, S., & Shaw, R. (2015). Exploring the possibilities of school-based recovery and community building in Toni district, Kamaishi. *Natural Hazards*, *75*(1), 613-633.

McIntosh, P. (2010). The puzzle of metaphor and voice in arts-based social research. *International Journal of Social Research Methodology*, 13(2), 157-169.

McMorran, C. (2017). From volunteers to voluntours: shifting priorities in post-disaster Japan. *Japan Forum*, 29(4), 558-582.

McSweeney, B., 2002. Hofstede’s model of national cultural differences and their consequences: a triumph of faith – a failure of analysis. Human Relations, 55, p.89–118.

Mertens, D.M. (2005). *Research Methods in Education and Psychology: Integrating Diversity with Quantitative and Qualitative Approaches.* 2nd ed. Thousand Oaks: Sage.

Meyer, M. A. (2013). *Social capital and collective efficacy for disaster resilience: Connecting individuals with communities and vulnerability with resilience in hurricane-prone communities in Florida* Available from Dissertations & Theses Europe Full Text: Social Sciences. Retrieved from https://search.proquest.com/docview/1440134361

Meyer-Arendt, K., & Lew, A. A. (Eds.). (2016). Understanding tropical coastal and island tourism development. New York: Routledge.

Minami-Sanriku Disaster Reconstruction Plan, (南三陸町震災復興計画), 2012, http://www.town.minami-Sanriku.miyagi.jp/index.cfm/6,303,c,html/303/fukkoukeikaku120326.pdf P (Accessed 8 September 2015)

Minami-Sanriku town official website, (2016). Recovery situation in Minami-Sanriku http://www.town.minamisanriku.miyagi.jp/index.cfm/6,7752,c,html/7752/20161202-093446.pdf (Accessed 8 September 2017)

Minami-Sanriku town website, (2012). Survey on housing relocation in Minami-sanriku. On-line available at: http://www.town.minamisanriku.miyagi.jp/index.cfm/6,302,c,html/302/2298.pdf (Accessed 8 September 2015)

Minami-Sanriku town website, (2014). History of Minami-Sanriku. http://www.town.minamisanriku.miyagi.jp/index.cfm/10,0,60,html, (Accessed 8 September 2015)

Minami-Sanriku town website, (2017). Minami-Sanriku Reconstruction progress report, on-line available at:

https://www.town.minamisanriku.miyagi.jp/index.cfm/6,0,90,html (Accessed 8 January 2018)

Minami-Sanriku Town website, on-line available at: http://www.town.minamisanriku.miyagi.jp/index.cfm/6,html (Accessed 9 March 2018).

Ministry of Land, Infrastructure, Transport and Tourism, Koriyama National Highway Office, Tohoku Regional Bureau, (2005), Main earthquakes and Tsunami in Tohoku areas. 東北に被害を及ぼした主な地震、津波の被害状況. On-line available at: http://www.thr.mlit.go.jp/koriyama/roadtopics/niigata/03/kako.html (Accessed March 20, 2017)

Ministry of the Environment, (2011) Guidelines (Master Plan) for Disaster Waste Management after the Great East Japan Earthquake https://www.env.go.jp/jishin/attach/haiki_masterplan-en.pdf (Accessed 8 September 2015)

Ministry of the Environment, (2014). Progress on treatment of debris from the Great East Japan Earthquake. https://www.env.go.jp/en/recycle/eq/ptd20140326.pdf (Accessed 8 September 2015)

Morgan, D.L. (2007). Paradigms lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research*, 1(48), 48-75.

Morgan, D.L. (2014). Pragmatism as a Paradigm for Social Research. *Quality Inquiry.* 20(8), p.1045-1053.

Morris-Suzuki, T. (2017). Disaster and utopia: looking back at 3/11. *Japanese Studies*, *37*(2), 171-190.

Morrow, V. (1999). Conceptualising social capital in relation to the well-being of children and young people: a critical review. *The sociological review,* 47(4), pp.744-765.

Mowatt, R.A., & Chancellor, C.H. (2011). Visiting death and life: Dark tourism and slave castles. *Annals of Tourism Research,* 38(4), 1410-1434.

Mulgan, G. (2006). The process of social innovation. Innovations: *Technology, Governance, Globalization,* 1(2), pp.145-162.

Mulgan, G., Tucker, S., Ali, R. and Sanders, B. (2007). *Social innovation: what it is, why it matters and how it can be accelerated.* London: The Young Foundation.

Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). *Social innovation: what it is, why it matters and how it can be accelerated*. Skoll Centre for Social Entrepreneurship.

Mumford, M. D. (2002). Social innovation: Ten cases from benjamin franklin. *Creativity Research Journal*, *14*(2), 253-266.

Munasinghe, M. (2007). The importance of social capital: Comparing the impacts of the 2004 Asian tsunami on Sri Lanka, and hurricane Katrina 2005 on New Orleans. *Ecological Economics*, *64*(1), 9-11.

Murakami, k., and Wood, D.M., (2014). Planning Innovation and Post-disaster Reconstruction: the Case of Tohoku, Japan. *Planning Theory and Practice,* 15(2), p.237-265.

Murphy, B. L. (2007). Locating social capital in resilient community-level emergency management. *Natural Hazards*, *41*(2), 297-315.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). *The open book of social innovation* (p. 2). London: National endowment for science, technology and the art.

Muskat, B., Nakanishi, H., & Blackman, D. (2013). Leadership in the phase of disaster recovery-Evidence from Japan. *Administration & Society*, 45(6) 651–673

Nakagawa, Y., and Shaw,R. (2004). Social Capital: A Missing Link to Disaster Recovery. *International Journal of Mass Emergencies and Disasters*, 22(1).5-34.

Nakamura, A. and Kikuchi, M. (2011). What we know and what we have not yet learned: Triple disasters and the Fukushima nuclear fiasco in Japan. *Public Administration Review*, 71(6).893-899.

Nakanishi, H., Matsuo, K., and Black, J. (2013). Transportation planning methodologies for post-disaster recovery in regional communities: The east japan earthquake and tsunami 2011.*Journal of Transport Geography*, *31*, 181-191.

National Police Agency of Japan (NPA), 2018. On-line available at: https://www.npa.go.jp/news/other/earthquake2011/pdf/higaijokyo_e.pdf. (Accessed 09 April, 2018).

National Police Agency of Japan, (2018), Emergency Disaster Countermeasures Headquarters. On-line available at: https://www.npa.go.jp/news/other/earthquake2011/pdf/higaijokyo_e.pdf (Access 10 March 2016)

NEC official website, (2011). http://jpn.nec.com/community/ja/social/disaster/employee_5e.html. (Accessed 8 September 2016)

Nishide, Y. (2006). Social capital and civil society in Japan: For policy and practical implications. Doctoral dissertation, Osaka School of International Public Policy, Osaka University). On-line available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.454.3866&rep=rep1&type=pdf (Accessed 8 September 2016)

Norris, F., Stevens, S., Pfefferbaum, B., Wyche, K., and Pfefferbaum, R. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology, 41*(1), 127-150.

O'Connor, P. M., & Quinn, L. (2004). Organizational capacity for leadership. *The Center for Creative Leadership handbook of leadership development*, *2*, 417-437.

Ogasawara, T., Matsubayashi, Y., Sakai, S. and Yasuda, T. (2012). Characteristics of the 2011 tohoku earthquake and tsunami and its impact on the northern Iwate coast. *Coastal Engineering Journal, 54*(1).

O'Hare, P., & White, I. (2013). Deconstructing Resilience: Lessons from Planning Practice. *Planning Practice & Research*, (28)3, 275-279.

Okada, H. (2012). An anthropological examination of differences between the Great East Japan Earthquake and the Great Hanshin Earthquake. *Asian Anthropology*, 11(1), 55-63.

Okada, N., Fang, L., & Kilgour, D. (2013). Community-based decision making in Japan. *Group Decision and Negotiation*, *22*(1), 45-52.

Olcott, G. and Oliver, N. (2014). Social Capital, Sense-making and Recovery: Japanese Companies and the 2011 Earthquake. *California Management Review*, 56(2), p.5-23.

Oliver, C., Nesbit, S., and Kelly, N. (2013). Dissolving Dualisms; How Two Positivists Engaged with Non-positivist Qualitative Methodology. *International Journal of Qualitative Methods*, 12, p.180-194.

Olshansky, R. B., Johnson, L. A., & Topping, K. C. (2006). Rebuilding communities following disaster: Lessons from Kobe and Los Angeles. *Built Environment*, *32*(4), 354-374.

Omori, S. (2012). Proposal of ‘reconstruction tourism’ or ‘prayer tourism’: Review on the use of the term ‘dark tourism’. *Tourism Studies,* 24(1), 28-31. In Japanese.

Onwuegbuzie, A.J. and Leech, N.L. (2005), On Becoming a Pragmatic Researcher: the Importance of Combining Quantitative and Qualitative Research Methodologies. *International Journal of Research Methodology,* 8(5), p.375-387.

Onyx, J. and Leonard, R.J., 2011. Complex systems leadership in emergent community projects. Community Development Journal, 46(4), pp.493-510.

Ophiyandri, T., Amaratunga, R.D.G. and Pathirage, C.P. (2010). Community based post disaster housing reconstruction: Indonesian perspective. On-line available at: http://usir.salford.ac.uk/9761/

Oregon Public Broadcasting. (2015). Q&A: A Japanese Mayor on Tsunami Response Lessons For Oregon. Available at:

http://www.opb.org/news/series/unprepared/japanese-mayor-discusses-tsunami-earthquake-reponse-lessons-for-oregon/ (Accessed on 10 December 2015)

O'Reilly, K. (2009). Key concepts in ethnography. London: Sage.

Orts, E. and Spigonardo, J. (2013). Lessons in Leadership from the Fukushima Nuclear Disaster. In: Special Report: Disasters, Leadership and Rebuilding –Tough Lessons from Japan and the U.S. Initiative for Global Environmental Leadership sponsored a panel at the Wharton Global Forum in Tokyo. Available through: http://knowledge.wharton.upenn.edu/special-report/disasters-rebuilding-leadership-tough-lessons-japan-u-s/ (Accessed 5 August 2015)

Osborne, S. P., Chew, C., & McLaughlin, K. (2008). The once and future pioneers? the innovative capacity of voluntary organisations and the provision of public services: A longitudinal approach. *Public Management Review, 10*(1), 51-70.

Palliyaguru, R.S., Amaratunga, R.D.G. and Haigh, R.P. (2008). Economic development perspectives of post-disaster infrastructure reconstruction: Post-tsunami reconstruction in Sri Lanka. http://usir.salford.ac.uk/9806/1/economic_developments.pdf (Accessed 5 August 2015)

Park, Y., Hong, P., & Roh, J. J. (2013). Supply chain lessons from the catastrophic natural disaster in Japan. *Business Horizons*, 56(1), 75-85.

Parry, R.L. 2017. *Ghosts of the tsunami*. London: Vintage.

Phills, J.A., Deiglmeier, K. and Miller, D.T. (2008). Rediscovering social innovation. *Stanford Social Innovation Review*, 6(4), 34-43.

Pink, S. (2013). *Doing Visual Ethnography*. London: SAGE Publication.

Pink, S. and Morgan, J. (2013). Short-term ethnography: Intense routes to knowing. *Symbolic Interaction*, *36*(3), pp.351-361.

Pol, E., & Ville, S. (2009). Social innovation: Buzz word or enduring term? *Journal of Socio-Economics, 38*(6), 878-885.

Poria, Y., Reichel, A., & Biran, A. (2006). Heritage site management: Motivations and expectations. *Annals of Tourism Research,* 33(1), 162–178.

Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24(1), 1-24.

Portes, A. (2014). Downsides of social capital. *Proceedings of the National Academy of Sciences*, 111(52), 18407-18408.

Powell, R., & Iankova, K. (2016). Dark London: Dimensions and characteristics of dark tourism supply in the UK capital. Anatolia, *International Journal of Tourism and Hospitality Research*, 27(3), 339-351.

Prosser, J. (1998). *Image-based research: A sourcebook for qualitative researchers.* London: Falmer Press.

Putnam, L.L. (1996). Commentary: Situating the author and text. *Journal of Management Inquiry*, *5*(4), pp.382-386.

Putnam, R.D. (1995.) Bowling alone: America's declining social capital. *Journal of Democracy* 6, 65-78.

Putnam, R.D. (2001). Bowling alone: The collapse and revival of American community. New York: Simon and Schuster.

Raby, A., Macabuag, J., Pomonis, A., Wilkinson, S., & Rossetto, T. (2015). Implications of the 2011 Great East Japan Tsunami on sea defence design. *International Journal of Disaster Risk Reduction*, 14, 332-346.

Rager, K.B. (2005). Self-care and the qualitative researcher: When collecting data can break your heart. *Educational Researcher*, *34*(4), 23-27.

Reconstruction Agency (2012), Efforts for reconstruction of Tohoku http://www.reconstruction.go.jp/english/ (Accessed 12 September, 2015)

Reconstruction Agency, (2017). Progress to date, The Process and Prospects for Reconstruction, Recovery and Reconstruction from the Great East Japan Earthquake, on-line available at: http://www.reconstruction.go.jp/english/topics/Progress_to_date/pdf/201703_process_and_prospects.pdf

Rennings, K. (2000). Redefining innovation — eco-innovation research and the contribution from ecological economics. *Ecological Economics*, *32*(2), 319-332.

Riley, K. A. (2013). Walking the leadership tightrope: building community cohesiveness and social capital in schools in highly disadvantaged urban communities. *British educational research journal*, *39*(2), 266-286.

Ritchie, L. A. (2012). Individual stress, collective trauma, and social capital in the wake of the Exxon Valdez oil spill. *Sociological Inquiry*, *82*(2), 187-211.

Rittel, H.W. and Webber, M.M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, *4*(2), 155-169.

Rittichainuwat, B.N. (2006). Tsunami recovery: A case study of Thailand’s tourism. Cornell Hotel and Restaurant Administration Quarterly, 47(4), 390-404.

Robinson, L., & Jarvie, J. K. (2008). Post-disaster community tourism recovery: The tsunami and Arugam bay, Sri Lanka. *Disasters*, *32*(4), 631-645.

Rojek, C. (1997) Indexing, dragging and the social construction of tourist sites. In C. Rojek and J. Urry (Eds). Touring cultures: transformations of travel and theory (pp. 52–74). London: Routledge

Romero-Padilla, Y., Navarro-Jurado, E., & Malvárez-García, G. (2016). The potential of international coastal mass tourism destinations to generate creative capital. Journal of Sustainable Tourism, 24(4), 574-593.

Rubin, C.B., Saperstein,M.D. and Barbee, D.G. (1985). Community Recovery from a Major Natural Disaster. Monograph #41. Boulder: University of Colorado, Institute of Behavioral Science.

Rumens, N. and Kelemen, M. (2010). American Pragmatism and Feminism: Fresh Opportunities for Sociological Inquiry. *Contemporary Pragmatism: A Philosophy Journal,* 7(1), 129-148.

Samuels, R.J. (2013). *3.11 Disaster and Change in Japan*. London: Conell University Press.

Sanderson, I. (2009). Intelligent policy making for a complex world: pragmatism, evidence and learning. *Political studies*, *57*(4), 699-719.

Sanjek, R. (1992). Field notes. Albany: Sunny Press.

Savage, J. (2000). Ethnography and health care. *BMJ: British Medical Journal, 321*(7273), 1400-1402.

Sazanami, H. (1998). 21 Seiki Toshizukuri Eno Shiten (a view for the 21st century of urban planning). In: Ritsumeikan Daigaku Shinsai Fukkou Kenkyu Project (Ritsumeikan University Earthquake Reconstruction Research Project, ed), Shinsai Fukkou No Seisaku Kagaku: Hanshi-Awaji Dai Shinsai No Kyokun to Fukkou Eno Tenbo (Policy Science of the Great Hanshin-Awaji Earthquake Reconstruction).Tokyo: Yuhikaku. P.335-352.

Seaton, A. (1999). War and thanatourism: Waterloo 1815–1914. *Annals of Tourism Research*, 26(1), 130–158.

Seyfang, G. and Smith, A. (2007). Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental Politics, 1cohen*(4), 584-603.C

Sharpley, R. (2005). Travels to the edge of darkness: Towards a typology of dark tourism. In C. Ryan, S. Page, & M. Aicken (Eds.), *Taking tourism to the limit: issues, concepts and managerial perspectives* (pp. 215–228). London: Elsevier.

Sharpley, R. (2009). Tourism, religion and spirituality. In M. Robinson & T. Jamal (Eds.), *Sage Handbook of Tourism Studies.* London: Sage Publications.

Shaw, K., & Maythorne, L. (2013). Managing for local resilience: towards a strategic approach. *Public Policy and Administration,* 28(1), 43-65.

Shaw, R., & Goda, K. (2004). From disaster to sustainable civil society: The kobe experience. *Disasters, 28*(1), 16-40.

Shaw, R., Takeuchi, Y. and Rouhban, B. (2009). Education, capacity building and public awareness for disaster reduction. In Landslides–Disaster Risk Reduction (pp. 499-515). Springer Berlin Heidelberg.

Sheets, P.D. and Grayson, D.K. eds., 2013. *Volcanic activity and human ecology*. London: Elsevier.

Shields, P. M. (2008). Rediscovering the taproot: Is classical pragmatism the route to renew public administration?. *Public Administration Review*, *68*(2), 205-221.

Singer, P., (2011). The impact of Japan's triple disaster. *Solid State Technology*, 54(4), 4-5.

Sipos, Y., Battisti, B. and Grimm, K. (2008). Achieving transformative sustainability learning: engaging head, hands and heart. *International Journal of Sustainability in Higher Education*, *9*(1), 68-86.

Slater, D.H, 2012. *Kizuna: New forms of social capital*, Video available at: https://www.youtube.com/watch?v=5Q8wZm8Na_c (Accessed on 16/1212017)

Small, M.L. (2002). Culture, Cohorts, and Social Organization Theory: Understanding Local Participation in a Latino Housing Project 1. *American Journal of Sociology*, 108(1), 1-54.

Smith, N., & Croy, W. G. (2005). Presentation of dark tourism: Te Wairoa, the Buried Village. In C. Ryan, S. Page, & M. Aicken (Eds.), *Taking tourism to the limits: Issues, concepts and managerial perspectives* (pp. 199–213). Amsterdam: Elsevier.

Snider, K. F. (2000). Expertise or experimenting? Pragmatism and American public administration, 1920-1950. *Administration & Society*, 32(3), 329-354.

Sofield, T., Guia, J. and Specht, J. (2017). Organic ‘folkloric’ community driven place-making and tourism. *Tourism Management*, 61, 1-22.

Sorensen, A., & Funck, C. eds. (2009). *Living cities in japan: Citizens' movements, machizukuri and local environments*. London: Taylor & Francis.

Spencer, M.L. (2013). Lessons from Japan: resilience after Tokyo and Fukushima. *Journal of Strategic Security*, 6(2), 70-79.

Star, L.S. (2010). This is not a boundary object: Reflections on the origin of a concept. *Science, Technology, & Human Values*, *35*(5), 601-617.

Stewart, G. T., Kolluru, R., & Smith, M. (2009). Leveraging public-private partnerships to improve community resilience in times of disaster. *International Journal of Physical Distribution & Logistics Management,* 39(5), 343-364.

Stone, P. R. & Sharpley, R. (2008). Consuming dark tourism: A thanatological perspective. *Annals of Tourism Research,* 35(2), 574–595.

Stone, P.R. (2006). A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions. *Tourism: An Interdisciplinary International Journal*, 54(2), 145–160.

Stone, P.R. (2012). Dark tourism and significant other death: Towards a model of mortality mediation. Annals of Tourism Research, 39(3), 1565-1587.

Stylidis, D., Biran, A., Sit, J., & Szivas, E.M. (2014). Residents' support for tourism development: The role of residents' place image and perceived tourism impacts. *Tourism Management*, 45, 260-274.

Sullivan, H. (2007). Interpreting community leadership in English local government. *Policy & Politics*, 35(1), 141-161.

Sullivan, H., Downe, J., Entwistle, T., & Sweeting, D. (2006). The three challenges of community leadership. *Local Government Studies*, *32*(4), 489-508.

Suppasri, A., Koshimura, S., Imai, K., Mas, E., Gokon, H., Muhari, A., & Imamura, F. (2012). Damage characteristic and field survey of the 2011 great east japan tsunami in Miyagi prefecture. *Coastal Engineering Journal*, *54*(1).

Suzuki, K. (2016). Reconstruction Tourism as Rhetoric of the Memory. *Proceedings of Japan Institute of Tourism Annual Conference* (pp.357-360). Japan: Japan Institute of Tourism.

Szreter, S. (2000). Social capital, the economy, and education in historical perspective. In T. Schuller ed. *Social capital: Critical perspectives*, (pp.56-77). Oxford: Oxford University Press

Szreter, S. and Woolcock, M. (2004). Health by association? Social capital, social theory, and the political economy of public health. *International Journal of Epidemiology,* 33(4), 650-667.

Takano, T. (2016). Exploring the values of rural communities through place-based education in Niigata prefecture. *Educating for Sustainability in Japan: Fostering Resilient Communities after the Triple Disaster,* (pp.249-263). London: Routledge.

Takayose, S. (1999). *Hanshin Daishinsai to Seikatsu Fukkou* (the Great Hanshin-Awaiji Earthquake and Life Reconstruction). Tokyo: Keiso shobo.

Takeda, M. (2011). Mental health care and east Japan great earthquake. *Psychiatry and Clinical Neurosciences*, *65*(3), 207-212.

Tarlow, P. E. (2005). Dark tourism: The appealing “dark” side of tourism and more. In M. Novelli (Ed.), *Niche tourism: Contemporary issues, trends and cases.* Amsterdam: Elsevier.

Tavits, M. (2007). Principle vs. pragmatism: Policy shifts and political competition. *American Journal of Political Science*, *51*(1), pp.151-165.

The Cabinet Office Japan, (2011). *Estimate of the cost of damage in the 2011 off the Pacific coast of Tohoku Earthquake Disaster*. On-line available: http://www.bousai.go.jp/ (Accessed 12 June, 2015)

The Daily Mail News online, (15 March 2011). No looting, just keeping calm and carrying on: Ordinary Japanese try to get back to normality. https://www.dailymail.co.uk/news/article-1366532/Japan-tsunami-earthquake-Keeping-calm-carrying-normality.html (Accessed 8 September 2016)

The Guardians, 2015 (17 March, 2015), Japanese tsunami debris will continue to wash up on US shores. https://www.theguardian.com/weather/2015/mar/17/japan-tsunami-earthquake-debris-us-shore. (Accessed 8 September 2016)

The Japan Times (2012). Operation Tomodachi a huge success, but was it a one-off? https://www.japantimes.co.jp/news/2012/03/03/national/operation-tomodachi-a-huge-success-but-was-it-a-one-off/#.W6d1-GhKiUk (Accessed 8 September 2016)

The Japan Times, (2017). Government to subsidize farmers’ costly food safety certification efforts ahead of 2020 Games. https://www.japantimes.co.jp/news/2017/01/07/national/japan-help-farmers-obtain-food-safety-certificates-2020-games/#.WZnrlPiGOUk. ((Accessed on 12 August 2017)

Thurairajah, N., Amaratunga, D. and Haigh, R. (2008). Post disaster reconstruction as an opportunity for development: Women's perspective. University of Huddersfield Repository, http://eprints.hud.ac.uk/22603/ (Accessed on 1August2018)

Tierney, K. (2013). “Only connect!” social capital, resilience, and recovery. *Risk, Hazards and Crisis in Public Policy, 4*(1), 1-5.

Titz, A., Cannon, T. and Krüger, F., 2018. Uncovering ‘community’: Challenging an elusive concept in development and disaster related work. Societies, 8(3), p.71.

Tobin, G. A. (1999). Sustainability and community resilience: The holy grail of hazards planning? *Global Environmental Change B: Environmental Hazards, 1*(1), 13-25.

Tokita, T. (2015). The Post-3/11 Quest for True Kizuna – Shi no Tsubute by Wagō Ryōichi and Kamisama 2011 by Kawakami Hiromi. *The Asian Pacific Journal,* 13(7), 7.

Tse, C. W., Wei, J., & Wang, Y. (2013). *Social capital and disaster recovery: Evidence from sichuan earthquake in 2008*.Center for Global Development. Retrieved from Social Science Premium Collection Retrieved from https://search.proquest.com/docview/1820757911 (Accessed on 2 April 2016)

Tucker, H., Shelton, E. J., & Bae, H. (2017). Post-disaster tourism: Towards a tourism of transition. *Tourist Studies*, 17(3), 306-327.

Uchida, Y., Takahashi, Y. and Kawahara, K. (2014). Changes in hedonic and eudaimonic well-being after a severe nationwide disaster: The case of the Great East Japan Earthquake. *Journal of Happiness Studies, 15*(1), pp.207-221.

Udo, K., Tojo, K., Takeda, Y., Tanaka, H. and Mano, A. (2016). Characteristics of shoreline retreat due to the 2011 Tohoku Earthquake and Tsunami and its recovery after three years. In *Tsunamis and Earthquakes in Coastal Environments* (pp. 113-123). Springer International Publishing.

UK Food Standard Agency, (2016). Available at: https://www.food.gov.uk/business-industry/imports/banned_restricted/japan (Accessed on 2 April 2017)

United Nations Office for Disaster Risk Reduction, (2015). Sendai Framework for Disaster Risk Reduction 2015-2030. p. 21. On-line available at: http://www.unisdr.org/we/inform/publications/43291 (Accessed on 2 April 2016)

Veszteg, R.F., Funaki, Y. and Tanaka, A. (2015). The impact of the Tohoku earthquake and tsunami on social capital in Japan: Trust before and after the disaster. *International Political Science Review*, *36*(2), 119-138.

Vindrola-Padros, C. and Vindrola-Padros, B., (2017). Quick and dirty? A systematic review of the use of rapid ethnographies in healthcare organisation and delivery. *BMJ Quality and Safety*, pp.bmjqs-2017.

Visnovsky, E. (2010). Book Review of Democracy as Culture: Deweyan Pragmatism in a globalized world. *Transactions of the Charles S. Peirce Society,* 46(2), 321-327.

Vo, L-C. and Kelemen, M. (2013). John Dewey. *The Oxford Handbook of Process Philosophy and Organisation Studies*.

Watanabe, S. I. (2016). The Modern Planning History of East Asia: a brief guide from the Japanese perspectives. *International Planning History Society Proceedings*, *17*(1), 13-18.

Watson, T.J. (2013). ‘Pragmatism, Organizations and Getting to Grips with Reality’, Kelemen, M. and Rumens, N. (Eds). *American Pragmatism and Organization: Issues and Controversies,* p.59-72. Surrey: Gower Publishing Limited.

Watts, J., 2011. Japan tsunami: A shortage of petrol and food but many bodies to bury. Guardian News (15 March 2011). https://www.theguardian.com/world/2011/mar/15/japan-tsunami-petrol-food-bodies (Accessed 8 September 2016)

Wicks, A.C., and Freeman, R.E. (1998). Organization Studies and the New Pragmatism: Positivism, Anti-positivism and the Search for Ethics. *Organization Science,* 9(2), p.123-140.

Woodend, L. (2013). A Study into the Practice of Machizukuri (Community Building) in Japan. Available on-line at: https://scholar.google.co.uk/scholar?hl=en&as_sdt=0%2C5&q=A+study+into+the+practice+of+machizukuri+%28community+building%29+in+Japan.++&btnG= (Accessed 8 September 2016)

Woolcock, M. (2000). Social Capital in Theory and Practice: Where Do We Stand? Available at http://poverty.worldbank.org/library/view/12045/. (Accessed 10 November 2016)

Woolcock, M. (2004). Why and how planners should take social capital seriously. *Journal of the American Planning Association*, *70*(2), 183-189.

World Bank Group, (2017), Sharing Japanese Expertise in Emergency Preparedness and Response (EP&R) Systems at National and Local levels. Online available: http://www.worldbank.org/en/news/feature/2017/10/12/sharing-japanese-expertise-in-emergency-preparedness-and-response-systems-at-national-and-local-levels (Accessed 8 September 2017)

World Bosai Forum, 2017. http://www.worldbosaiforum.com/english/ (Accessed 20 December 2017)

Wright, D., & Sharpley, R. (2016). Local community perceptions of disaster tourism: the case of L'Aquila, Italy. *Current Issues in Tourism*, 1-17.

Yamamura, T. (2011). The picture of the former Disaster Prevention Center. http://www.bo-sai.co.jp/minamisanrikusinsai.html (Accessed 8 September 2016)

Yan, B.J., Zhang, J., Zhang, H.L., Lu, S.J., & Guo, Y.R. (2016). Investigating the motivation–experience relationship in a dark tourism space: A case study of the Beichuan earthquake relics, China. *Tourism Management*, 53,108-121.

Yasui, E. (2007). Community Vulnerability and Capacity in Post-Disaster Recovery: the Case of Mano and Mikura Neighbourhoods in the Wake of the 1995 Kobe Earthquake. Ph.D. University of British Columbia.

Yi, H., & Yang, J. (2014). Research trends of post disaster reconstruction: The past and the future. *Habitat International*, *42*, 21-29.

Yin, R.K., 2009. *Case Study Research: Design and Methods.* 4th ed. London: Sage publications.

Yuko, K., Pekkanen, R., and Yutaka, T. (2012). Civil society and the triple disasters: revealed strengths and weaknesses. In J. Kingston, *Natural Disaster and Nuclear Crisis in Japan*. London: Routledge

Zaccaro, S. J., & Horn, Z. N. (2003). Leadership theory and practice: Fostering an effective symbiosis. *The Leadership Quarterly*, *14*(6), 769-806.

Zorn, C. R., & Shamseldin, A. Y. (2015). Post-disaster infrastructure restoration: A comparison of events for future planning. *International Journal of Disaster Risk Reduction*, 13, 158-166.

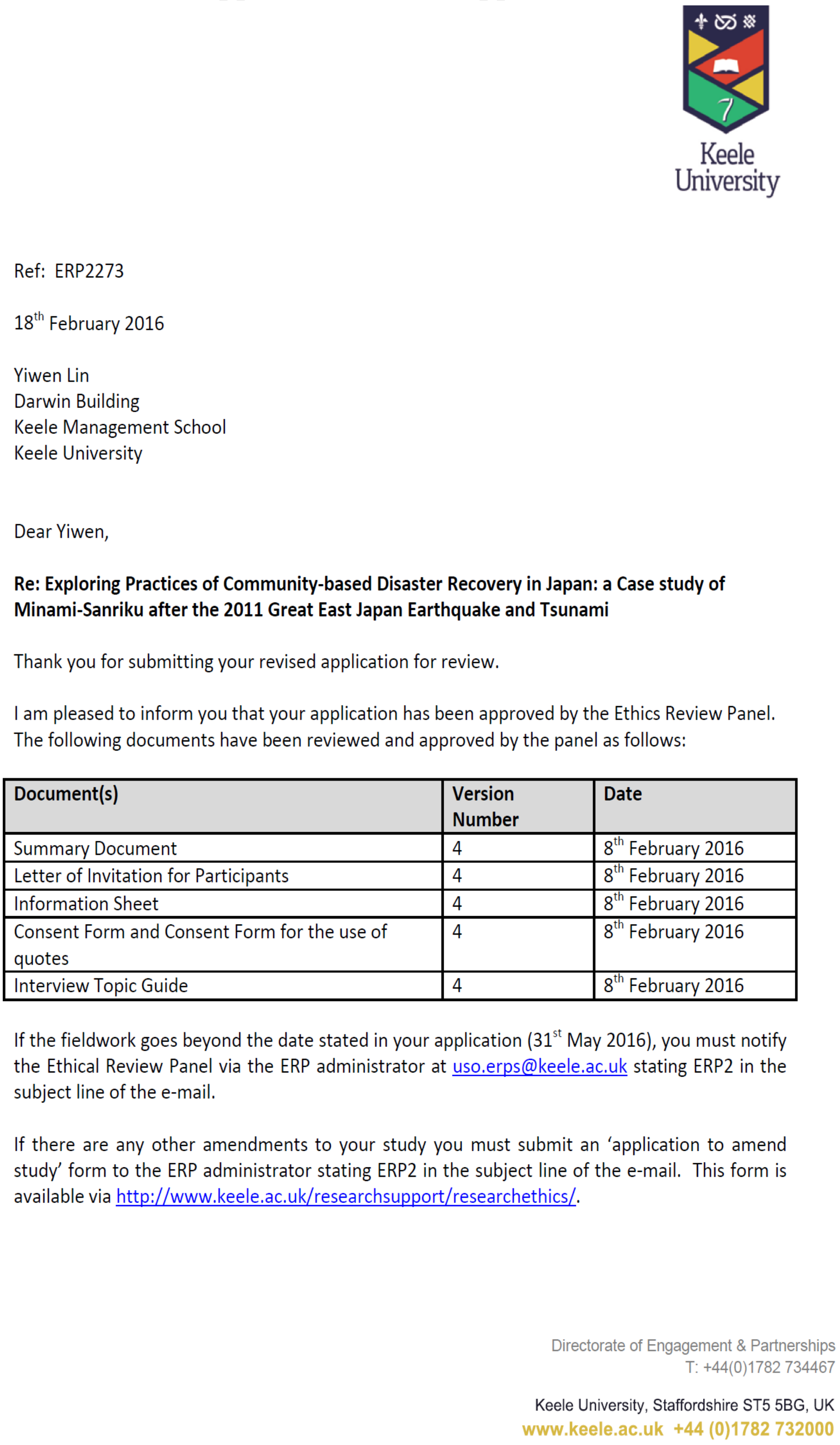
Appendix 1: List of participants

Key Gatekeepers chosen		**Key Categories of Interviewees**
• Founder of Learning Centre		• **Fishermen: 7** Local fishermen and their family members and member of Blue Tourism team.
• President of Fukko-ichi (Reconstruction Market) Executive Committee		• **Local business people: 8** Local shop owners, restaurant owners, fish stores, bakery store, tea house, fish processing shop, chefs etc
• Founder of Yes Factory		• **Hospitality sector: 5** Owners of Japanese inns, chefs, hotel employees.
• Head of Sun Sun Shopping Center		• **Tourism-related stakeholders:12** Local tourist guides, trip organisers, educators, lecturers, university students, local NGO representatives
• Initiators of Blue Tourism • Owner of local agriculture farm		• **Volunteers and Students: 13** Students, corporate employees, tourists, volunteer-tourists, volunteer project coordinators
• Owners of three Japanese inns •		• **Storytellers: 5** Local storytellers, trainer of tourist guide, local farmers.
• Organizer of local festival • Organizer of Fukko-ichi		• **Government employees: 3** Reconstruction officer, employees
• Local fisher store owner • Shop owner • Local restaurant owner		• **Others: 5** Fire fighters, member of community association (Beans club), house wives, member of parent and teacher association, retired fishermen.
• Organizer of student learning trips • Coordinator of Learning trips • NGO Representative		
• Government official		

Appendix 2: List of News Media

News Media	News media
	Yomiuri News
	NHK News
	Ashahi News
	Kahoku Shimpo
	Kyoto News
	Kanko Keizai Shimbun
	Sankei News
	Nike News
	Mainichi Daily News
	The Japan Times
	Voice from Tohoku
	Ryoko Shimbun
	NHK’s Great East Japan Digital Archive
	Tasukeai Japan
	Tohoku University Disaster Archive
Websites	Minami-Sanriku Town website
	Minami-Sanriku Now website
	Minami-Sanriku Tourism Association
	Minami-Sanriku Learning Centre website
	Community initiative website
	Reconstruction Agency
	NGO Website
	Government disaster management department website
	Ministry of Environment
	Ministry of Land, Infrastructure and Tourism
	Cabinet Office Japan
	Japan Meteorological Agency
	Blue Tourism website
	Yes Factory website
	Hotel Kanyo website

Appendix 3: Ethics Approval Letter



Ref: ERP2273

18th February 2016

Yiwen Lin
Darwin Building
Keele Management School
Keele University

Dear Yiwen,

Re: Exploring Practices of Community-based Disaster Recovery in Japan: a Case study of Minami-Sanriku after the 2011 Great East Japan Earthquake and Tsunami

Thank you for submitting your revised application for review.

I am pleased to inform you that your application has been approved by the Ethics Review Panel. The following documents have been reviewed and approved by the panel as follows:

Document(s)	Version Number	Date
Summary Document	4	8th February 2016
Letter of Invitation for Participants	4	8th February 2016
Information Sheet	4	8th February 2016
Consent Form and Consent Form for the use of quotes	4	8th February 2016
Interview Topic Guide	4	8th February 2016

If the fieldwork goes beyond the date stated in your application (31st May 2016), you must notify the Ethical Review Panel via the ERP administrator at uso.erps@keele.ac.uk stating ERP2 in the subject line of the e-mail.

If there are any other amendments to your study you must submit an 'application to amend study' form to the ERP administrator stating ERP2 in the subject line of the e-mail. This form is available via http://www.keele.ac.uk/researchsupport/researchethics/.

Directorate of Engagement & Partnerships
T: +44(0)1782 734467

Keele University, Staffordshire ST5 5BG, UK
www.keele.ac.uk +44 (0)1782 732000

Keele
University

Ref: ERP2273

26th February 2016

Yiwen Lin
Darwin Building
Keele Management School
Keele University

Dear Yiwen,

Re: Exploring Practices of Community-based Disaster Recovery in Japan: a Case study of Minami-Sanriku after the 2011 Great East Japan Earthquake and Tsunami

Thank you for submitting your application to amend study for review.

I am pleased to inform you that your application to amend the start and end date of your field work to the 1st May 2016 until 1st September 2016 has been approved by the Ethics Review Panel.

If the fieldwork goes beyond the 1st **September 2016** you must notify the Ethical Review Panel via the ERP administrator at research.erps@keele.ac.uk stating **ERP2** in the subject line of the e-mail.

If there are any other amendments to your study you must submit an 'application to amend study' form to the ERP administrator stating **ERP2** in the subject line of the e-mail. This form is available via http://www.keele.ac.uk/researchsupport/researchethics/

If you have any queries, please do not hesitate to contact me via the ERP administrator on research.erps@keele.ac.uk stating **ERP2** in the subject line of the e-mail.

Yours sincerely

pp C H Bannerman

Dr Colin Rigby
Chair – Ethical Review Panel

CC RI Manager
Supervisor

Directorate of Engagement & Partnerships
T: +44(0)1782 734467

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Appendix 4: Participant Information Sheet (PIS)

Keele University

INFORMATION SHEET

Study Title:
Exploring practices of community-based disaster recovery in Japan: a case study of Minami-Sanriku after the 2011 Great East Japan earthquake and tsunami.

Invitation

You are being invited to consider taking part in the research study that explores community-based disaster recovery in Japan. This project is being undertaken by Yiwen Lin, Ph.D candidate, at Keele University in the UK.
Before you decide whether or not you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with friends and relatives if you wish. Ask me if there is anything that is unclear or if you would like more information.

Aims of the Research

My research aims to explore how the local disaster-affected communities deal with crisis and their ways of coping and rebuilding from within, including how community leadership emerges and interacts with other organizations in re-developing their communities. I am keen to gain a wide variety of views and experiences on disaster recovery in the wake of 2011 tsunami, hoping research results could be useful for other communities and disaster-prone countries.

Why have I been invited?

You have been asked to participate to this research because of your involvement and your connection with disaster affected communities. Your participation will help me to capture the voices of local communities and their coping strategies in disaster rebuilding efforts.

Do I have to take part?

You are free to decide whether you wish to take part or not. If you do decide to take part you will be asked to sign two consent forms; one for your own records and one for the researcher’s records. You are free to withdraw from this study at any time and without giving reasons as to why you may wish to withdraw. If you decide to withdraw by October 2016, you can just simply tell me or email me y.lin@keele.ac.uk, then your data will be destroyed. After that time, data will only be destroyed if it is practical to do so (For example, if it has not been written up in the analysis of my Ph.D. studies).

What will happen if I take part?

If you do decide to participate in the research, you will be invited to be involved in participant observation and interviews or both methods if you wish. This will help me with a more effective engagement in exploring the practices of community-based disaster recovery at the disaster affected community, Minami-Sanriku. Your level of participation is completely up to you, and as such you can choose which methods of data collection (i.e., participant observation or interviewing) you would like to be involved with. You are free to withdraw from this study at any time and without giving reasons as to why you may wish to withdraw. If you decide to withdraw by October 2016, then your data will be destroyed. After that time, data will only be destroyed if it is practical to do so.

If before, during, or after, taking part in this research you have any concerns then please contact me, y.lin@keele.ac.uk, or Professor Toru Kiyomiya, at Seinan Gakuin University Japan, kiyomiya@seinan-gu.ac.jp, who, if required, will put you in touch with a relevant support agency.

What are the benefits (if any) of taking part?
Participants will have the opportunity to reflect on their experiences of disaster recovery strategy and have their opinions heard which will potentially enhance existing knowledge on the disaster recovery and re-building community in a way that accounts for the needs of that community.

What are the risks (if any) of taking part?
No physical risk will be involved with taking part in the study. Data collected will be anonymised and will not be used in any way that could cause harm to participants.

Confidentiality and anonymity
All the information I collect, including any photographs and video recordings through observations and interviews, will be treated as confidential and the data included in the dissertation will be anonymous. Photographs will only include landscapes and the environment; anyone shown in the photographs and visual recordings will have their image blurred to ensure anonymity. All interviews will be conducted in Japanese and then translated into English by myself.

How will information about me be used?
The data collected from participants will be used to generate theory that accounts for their opinions and experiences about disaster reconstruction and their coping strategy on the ground. The data will then, be included within the researcher' Ph.D. dissertation.

Who will have access to information about me?
Only the researcher, Yiwen Lin, and the researcher' s supervisors, Dr. Teresa Oultram and Prof. Mihaela Kelemen, will have access to the data collected. The data will be stored securely on a password protected computer in a locked office in Seinan Gakuin University, where I will be hosted during my fieldwork in Japan and will also be stored in the same way on my return to Keele. All data will be stored in line with Keele University's Data Protection Policy which can be found at: http://www.keele.ac.uk/media/keeleuniversity/paa/governancedocs/Final%20DPA%20Policy.pdf. The data will be kept securely on a password protected my personal computer after completing my Phd and only myself can have access to the data.

What if there is a problem?

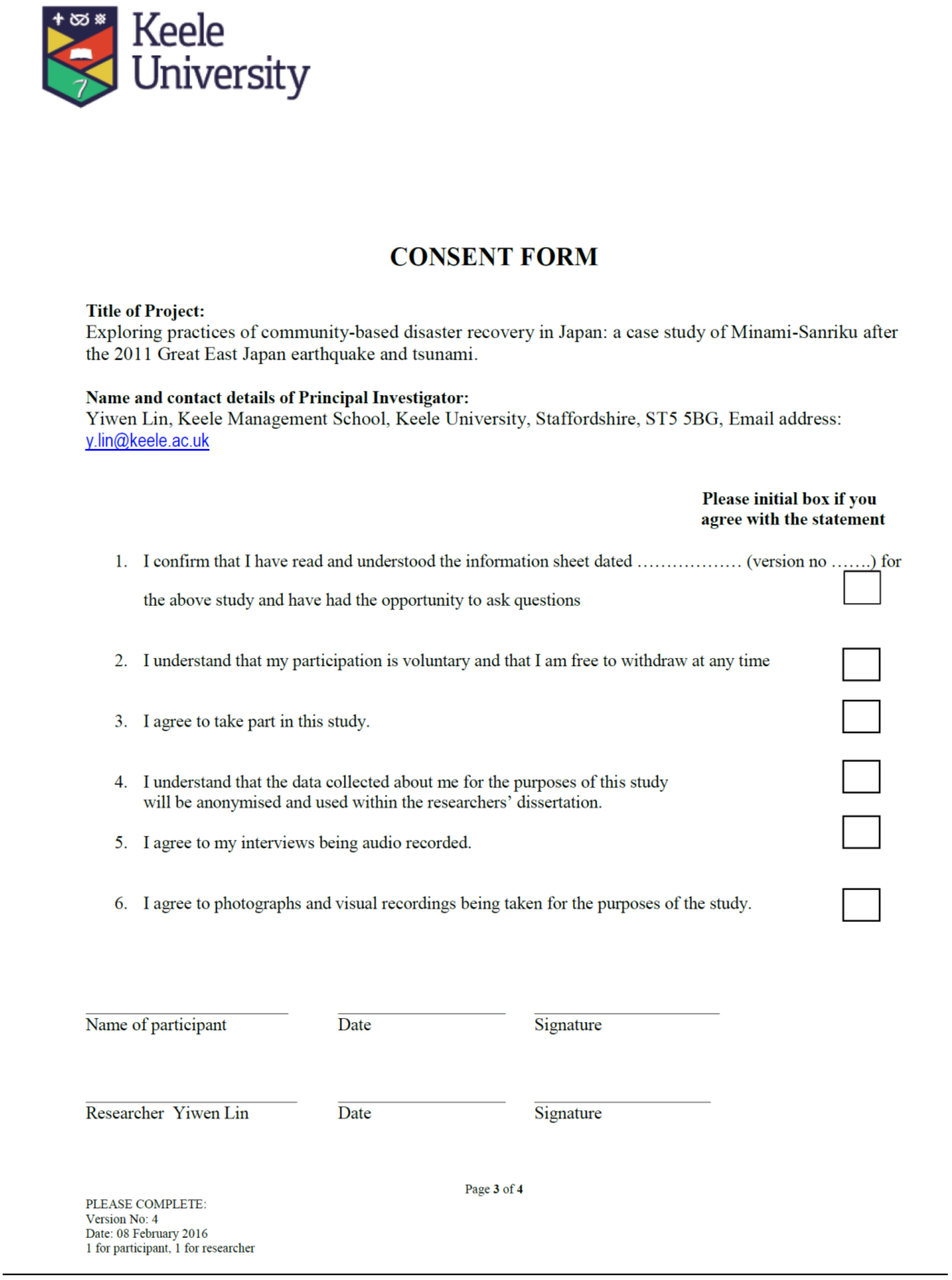
If you have a concern about any aspect of this study, you may wish to speak to me or my supervisors in the first instance and we will do our best to answer your questions. You should contact me, in the first instance via e-mail: y.lin@keele.ac.uk

If you have an issue or query, and you prefer not to speak directly to me or my supervisors, then please contact Mike Hession, Research Manager on 01782 734580.

If you are still unhappy about the research and/or wish to raise a complaint about any aspect of the study during the course of the research, please write to Nicola Leighton who is the University’s contact for complaints regarding research at the following address:-

Nicola Leighton
Research Governance Officer
Directorate of Engagement and Partnerships
IC2 Building
Keele University
ST5 5NH
E-mail: n.leighton@ keele.ac.uk
Tel: 01782 733306

Appendix 5: Participant Consent Form (PCF)



Keele University

CONSENT FORM

Title of Project:
Exploring practices of community-based disaster recovery in Japan: a case study of Minami-Sanriku after the 2011 Great East Japan earthquake and tsunami.

Name and contact details of Principal Investigator:
Yiwen Lin, Keele Management School, Keele University, Staffordshire, ST5 5BG, Email address: y.lin@keele.ac.uk

Please initial box if you agree with the statement

1. I confirm that I have read and understood the information sheet dated ……………… (version no …….) for the above study and have had the opportunity to ask questions ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time ☐
3. I agree to take part in this study. ☐
4. I understand that the data collected about me for the purposes of this study will be anonymised and used within the researchers' dissertation. ☐
5. I agree to my interviews being audio recorded. ☐
6. I agree to photographs and visual recordings being taken for the purposes of the study. ☐

Name of participant Date Signature

Researcher Yiwen Lin Date Signature

Page 3 of 4

PLEASE COMPLETE:
Version No: 4
Date: 08 February 2016
1 for participant, 1 for researcher

CONSENT FORM
(for use of quotes)

Title of Project:
Exploring practices of community-based disaster recovery in Japan: a case study of Minami-Sanriku after the 2011 Great East Japan earthquake and tsunami.

Name and contact details of Principal Investigator:
Yiwen Lin, Keele Management School, Keele University, Staffordshire, ST5 5BG, Email address: y.lin@keele.ac.uk

Please initial box if you agree with the statement

1. I agree for my quotes to be used ☐

2. I do not agree for my quotes to be used ☐

Name of participant ____________ Date ____________ Signature ____________

Researcher Yiwen Lin ____________ Date ____________ Signature ____________

PLEASE COMPLETE:
Version No: 4
Date: 08 February 2016
1 for participant, 1 for researcher