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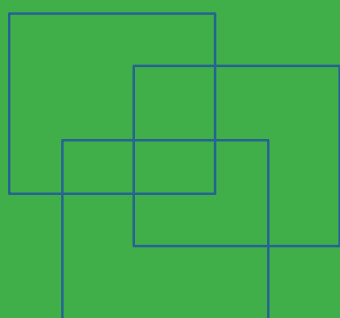
Research on employment and labour measures in the Post-Great East Japan Earthquake recovery process



Japan Earthquake Project

Dissemination of Employment and Labour Measures
for Recovery from the Great East Japan Earthquake
as International Public Resources

ILO Regional Office for Asia and the Pacific



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Research on employment and labour measures in the Post-Great East Japan Earthquake recovery process / Japan Earthquake Project : Dissemination of Employment and Labour Measures for Recovery from the Great East Japan Earthquake as International Public Resources, ILO Regional Office for Asia and the Pacific. - Bangkok: ILO, 2015

ISBN: 9789221298113; 9789221298120 (web pdf)

ILO Regional Office for Asia and the Pacific, Japan Earthquake Project : Dissemination of Employment and Labour Measures for Recovery from the Great East Japan Earthquake as International Public Resources

employment policy / employment security / social protection / economic conditions / social conditions / economic recovery / economic reconstruction / natural disaster / Japan

13.01.3

ILO Cataloguing in Publication Data

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Foreword

When the Great East Japan Earthquake, of magnitude 9.0, hit northeast Japan on 11 March 2011, the shocks and subsequent tsunamis left more than 15,800 dead. But natural disasters also have a devastating impact on the lives of those who survive them. As well as their environments and homes, their livelihoods are frequently damaged. Yet, restoring livelihoods and employment is usually the most challenging task in post-disaster efforts. For many disaster survivors, this is not just about finding employment, but finding decent work.

Decent work is an indispensable tool in post-disaster recovery, not only for helping people to restore their incomes but also to help survivors regain hope for the future. This means creating work that is productive and comes with freedom, equity, security and human dignity.

The earthquake recovery efforts in Japan illustrate how decent work can be placed at the centre of the recovery process. Since the disaster a number of employment and labour measures have been taken by both the public and private sectors. In April 2011, the Government of Japan launched a job-creation scheme under its “Japan as One” Work Project. This was followed by a number of other initiatives, to protect existing jobs, create new jobs through public works, and apply existing social protection schemes to disaster-affected people. The private sector also undertook a range of activities to extend support to the disaster-affected areas. Japan’s experience was an opportunity to collect and document practical examples of employment- and labour-related activities that can be used in natural disaster recovery.

This report aims to document lessons and good practices from the recovery efforts in Japan and share them with the international community. The resilience of the people affected by disasters provides great inspiration to those of us who have not suffered in the same way. These people deserve decent work. The ILO is fully committed to supporting them in rebuilding their lives and communities by placing decent work at the centre of recovery and reconstruction efforts. It is hoped that the findings of this report will better inform future natural disaster recovery efforts in the Asia and Pacific region and beyond.



Tomoko Nishimoto
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Executive Summary

On 11 March 2011, a magnitude 9.0 earthquake hit the north-east coast of Japan, resulting in tens of thousands of deaths and displaced people. As a result of significant efforts by the Government, private, and public sectors in the past two years, major gains have been made in the recovery of employment and labour. However, most information is only available in Japanese, and few attempts have been made to reach the larger global audience. The Japan Earthquake Project's stated mission is to collect and disseminate lessons from the post-disaster recovery efforts in Japan, specifically within the fields of labour and employment creation.

The objectives of the research project were:

- i. collect relevant data on employment measures and the recovery status;
- ii. compile case studies;
- iii. extract lessons and recommendations from the recovery situation in Japan; and
- iv. disseminate these results within the international community.

This project focused on three Tohoku prefectures which were particularly affected by the 2011 Earthquake: Iwate, Miyagi, and Fukushima.¹ Through an examination of the socio-economic situation pre-2011 in these areas, it quantified the disaster's impact on society (human and physical damages), the economy, and labour issues. Next, the project reviewed the employment insurance system in Japan alongside recovery initiatives by public and private actors. Using this information, the project presented a situational analysis on the current status of the economy and its sectors (industry, employment, and labour), as well as the impact of the said recovery measures. This is examined in further detail through ten case studies in Iwate and Miyagi prefectures. Data collection was implemented from late June to early August 2013, followed by the situational analysis, from August to late September 2013. The case studies and the formulation of recommendations were carried concurrently from mid-July through early October 2013.

The final report is broken down into six chapters:

1. Introduction
2. Before and after the Great East Japan Earthquake in three severely affected prefectures
3. Institutional framework for recovery measures by the Japanese Government
4. Introduction of new modality of recovery measures by private initiatives
5. Situation analysis on recovery in the economy, industry, employment and labour sectors, and the achievements of the recovery measures
6. Case studies in Iwate and Miyagi

Following the introduction, the second chapter presents a comparative analysis of the socio-economic situation before and after the 2011 Earthquake, in order to evaluate the extent to which restoration and reconstruction has been achieved. Through an in-depth study of various economic indicators such as

¹ Due to a lack of available data, Fukushima was not chosen to be a case study for this research project.

employment, manufacturing, and GDP, the study concludes that the 2011 Earthquake had a massive socio-economic impact on the local people, primarily through physical displacement (i.e. destroyed households and means of attaining livelihoods) and lower rates of employment. This coincided with a negative impact on the Japanese economy as a whole. In particular, groups that were considered vulnerable geographically (e.g. coastal fisheries) and socially (e.g. women, the elderly, persons with disabilities) suffered the largest setbacks.

Chapter 3 provides a comprehensive overview of the institutional framework of recovery measures initiated by the Japanese Government. It begins by detailing pre-2011 earthquake employment policies and measures, to help the reader understand how existing measures were utilized in the 2011 disaster response. The post-2011 earthquake policy measures are detailed next, and the ‘Japan as One’ Work Project is analysed by phase (emergency, recovery, and reconstruction), implementation structure and fund flows. Local level employment policies and measures in Iwate, Miyagi, and Fukushima are then examined to show how reconstruction plans, employment policies, and measures in disaster response were formulated, while also addressing issues of policy formulation. Lastly, the chapter details a new initiative by the Abe Administration to speed up the reconstruction process, which started in December 2012. Chapter 3 concludes by noting that existing schemes for extreme-situation employment creation were well utilized in covering all affected people (albeit through a number of different measures) and for introducing a human resource dispatch system for reconstruction. These schemes were planned in phases, from emergency to recovery to reconstruction. It is worth noting that the eligibility requirements for employment measures (as listed under the ‘Japan as One’ Work Project) were relaxed as well.

Chapter 4 focuses on the new modality of recovery measures through private sector initiatives. In particular, the five examples of public-private partnerships (PPPs), social businesses, civil funds, private companies, and trilateral collaboration (between industries, academic institutions, and the Government) are highlighted. The chapter concludes by summarizing the contributions of each to the post-disaster recovery process: PPP, by sharing costs between public and private sectors; social businesses, by encouraging the inclusion of social issues within non-profit organizations (NPO) and private company business models; civil funds, by increasing accessibility to internet-based disaster relief opportunities for individual investors; and private companies, by expanding aid efforts from volunteerism to corporate social responsibility (CSR) to creating shared value (CSV).

Chapter 5 presents the project’s situation analysis of recovery progress in the Tohoku region. It starts with an overview of the present status of the recovery in the economy, industry and employment sectors, mainly for Iwate, Miyagi, and Fukushima. Next, some key employment measures under the ‘Japan as One’ Work Project are examined, addressing their achievements, effects, impacts and issues. Based on this situation analysis, the chapter presents the extent to which these measures have contributed to improving the employment situation, and identifies issues within its design and implementation. The impacts of recovery policy measures are also included. The chapter concludes by stating that the recovery of the fishing industry has been noticeably slow due to local factors such as infrastructure reestablishment, which in turn led to a decrease in the working population and an overall negative impact on economic revival. An additional inefficiency is the observed trend of employment mismatching in all three prefectures, which varies by sector. Those affected may also be troubled by uncertainty of housing options affected regions.

Chapter 6 details ten case studies of rehabilitation efforts from Miwate and Iwagi prefectures. The selection criteria for the cases focus on the reconstruction process, prioritizing draw on a wide range of measures, sectors, locations, and stakeholders. Through those case studies that the project observes that successful multiple assistance schemes enabled employers to plan recovery processes in broken-down phases, and that reliable connections with resource institutions played a significant role in ensuring timely access to such public and private schemes. However, inflexible regulation schemes within public assistance often led to inefficient spending and investment by beneficiaries, and innovation and business schemes development is necessary for further economic development in affected areas. The project recommends that business continuity planning (BCP) should be a private sector priority for future disaster preparedness, and public assistance framework schemes should work in favour of job creation for socially vulnerable groups.

The report concludes with a summary of lessons learned and a set of recommendations. Lessons learned can be used by any country, especially ILO member countries in Asia and the Pacific, as long as the socio-economic situation of the country is properly taken into consideration. The lessons are separated into five broad categories: the overall policy framework, operation and management, reconstruction, new modalities, and private efforts. The recommendations as put forth by this project for developing countries were divided into the following categories: institution and organization; designing and operating measures; employment measures; public-private partnerships; private sector; and social vulnerability and inclusiveness.

While the lessons and recommendations produced in this report are of great value in increasing both pre- and post-disaster resilience of countries through employment and labour recovery initiatives, it is important to keep in mind that each ought to be tailored and refined to meet the respective needs of the respective locality.

Abbreviations and acronyms

AMB	agriculture management body
BCP	business continuity planning
BPW Japan	national Federation of Business and Professional Women's Clubs of Japan
CAD	computer-aided design
CFWJ	Cash for Work Japan
CRS	Catholic Relief Society
CSR	corporate social responsibility
CSV	creating shared value
DBJ	Development Bank of Japan
FMB	fishery management body
FY	fiscal year
GDP	gross domestic product
HFA	Hyogo Framework for Action
HIT	Hokkaido Intellect Tank
HOPE	Higashi-Matsushima Organization for Progress and Economy, Education, and Energy
ICA	Institute of Cultural Affairs
IKN	Iwate Kosodate Net (Iwate Childcare Network)
ILO	International Labour Organization
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JILPT	Japan Institute for Labour Policy and Training
KDDI	KDDI Kabushiki Gaisha (Japanese Telecommunications Operator)
LAT	local allocation tax
MAFF	Ministry of Agriculture, Forestry and Fishery
ME	Ministry of the Environment

METI	Ministry of Economy, Trade and Industry
MEXT	Ministry of Education, Culture, Sports, Science and Technology
MHLW	Ministry of Health, Labour and Welfare
MIC	Ministry of Internal Affairs and Communication
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
NDEO	New Energy and Industrial Technology Development Organization
NEC	Nippon Electric Company
NEET	Not in Education, Employment, or Training
NPO	non-profit organization
PFI	public finance initiative
PPP	public-private partnership
RCF	RCF Reconstruction Assistance Team
R&D	research and development
RIETI	The Research Institute of Economy, Trade and Industry
SBN	Social Business Network
SME	small and medium sized enterprises
SMEA	Small and Medium Enterprise Agency
SMRJ	Organization for Small and Medium Enterprises and Regional Innovation
TEPCO	Tokyo Electric Power Company

Chapter 1 Introduction

1.1 Background and objective of the report

On 11 March 2011, a strong earthquake with a 9.0 magnitude on the Richter scale hit the eastern coast of the Tohoku region in Japan. The earthquake was centred in the Sanriku area. Approximately 16,000 people were confirmed dead, with 27,000 injured, and 3,000 missing. In addition, 130,000 buildings collapsed completely as a result of the enormous tsunami that occurred after the earthquake. The tsunami also caused a number of nuclear accidents at the Fukushima Daiichi Nuclear Power Plant. More than two and a half years have passed since the Great East Japan Earthquake (hereafter referred to as the 2011 Earthquake), and yet employment and labour remain as one of the most challenging recovery issues for those affected by the disaster. Many people, particularly the younger generations, left the disaster-affected prefectures, including Iwate, Miyagi, and Fukushima.¹

In the aftermath of the disaster, a number of employment and labour measures were implemented by both the public and private sectors. In April 2011, the Government of Japan launched a job creation scheme under its ‘Japan as One’ Work Project, and created new jobs through its public works and social protection schemes for those affected by the disaster. Private sector actors have also extended their support to the disaster-affected areas through private initiatives. These experiences in Japan demonstrate how crucial employment is for the recovery process. It is worthwhile to document such employment and labour-related practices to serve as a reference for recovery efforts and policies for future natural disasters including those of the post-Hyogo Framework of Action (HFA) in the Asia and Pacific region, and beyond.

This research aims to:

- i. Collect relevant data on employment measures and the recovery status;
- ii. Compile cases studies;
- iii. Extract the lessons learned and recommendations from the recovery efforts in Japan; and
- iv. Share these results with the international community.

1.2 Scope and content of the research

The research comprises the following components:

- introduction, including the background, objective, scope, and methodology;
- overview of the pre-disaster socio-economic statuses of the three prefectures most severely affected by the earthquake (Iwate, Miyagi, and Fukushima), the human and physical damages and losses, and the impact on the economy, industry, employment, and labour at the national level;
- overview of the traditional Employment Insurance System and policies in Japan, and the recovery measures put in place after the earthquake by public actors in terms of employment, labour and livelihoods;
- overview of the recovery measures implemented by private actors in different approaches and modalities in response to the 2011 Earthquake;

¹ When Iwate, Miyagi, and Fukushima are mentioned the report is referring to Iwate Prefecture, Miyagi Prefecture, and Fukushima Prefecture. In cases of Miyagi City and Fukushima City, ‘City’ is explicitly stated.

- situation analysis of the economy, industry, employment, and labour, and the achievement of the recovery measures implemented in the three affected prefectures;
- case study of ten recovery measures implemented in Iwate and Miyagi prefectures; and
- formulation of the lessons learned, as well as recommendations based on the results of the research, which can be used by ILO member countries in Asia and the Pacific to aid their response to future natural disasters.

1.3 Duration of the research

1 July 2013 to 31 March 2013. Field surveys and literature review were conducted between July and September 2012.

1.4 Research team members

Literature review and field surveys were conducted by the following researchers:

Team Leader: Miyoko TANIGUCHI, IC Net Limited
Researcher: Hisamitsu SHIMOYAMA, IC Net Limited
Research Assistant: Takuya SHIRAISHI, IC Net Limited

Shukuko Koyama, ILO Crisis Specialist for Asia and the Pacific, provided overall technical guidance to conduct the research.

1.5 Procedures and methods

1. Compilation of data and information (late June to early August 2013)
 - a. Data and information collection through primary and secondary surveys obtained from relevant Government agencies, private agencies, and the internet.
 - b. Categorization of recovery measures by ministry and by the phase of the 'Japan as One' Work Project.
 - c. Shortlisting of about 20 case studies, taking into consideration the diversity of sectors.
 - d. Selection of ten cases implemented by public and private actors in the recovery process.
2. Situation analysis (late June to late September 2013)
 - a. Analysis of collected data and information.
 - b. Interviews with key informants, including Government officials engaged in designing and implementing post-disaster measures in employment at the national, regional, and local levels, as well as researchers, academics, and private companies.
3. Case studies and preparation of recommendations (mid-July to early October 2013)
 - a. Preparation of questionnaires for each key informant.
 - b. Literature review of Government-led employment measures and key informants.
 - c. Execution and compilation of case studies.
 - d. Identification of issues and lessons learned and recommendations based on the above results.
4. Submission of the draft report to the ILO (mid-October 2013)
 - a. Preparation and submission of the draft report to the ILO.

- b. Discussion with the ILO on the draft report.
- 5. Submission of the final report (mid-November 2013)
 - a. Integration of comments from the ILO.
 - b. Finalization of the final report.

Fukushima was not included in the field survey as the data and information on employment and industry were limited at the time the field survey was conducted.

1.6 Limitations of research

1. The team had difficulty identifying respondents (government officials and beneficiaries of government assistance). Because they had no expectation of receiving any form of assistance for reconstruction from the outside, they felt neither the necessity to respond to the interviews nor had any incentive to participate.
2. Because some people in the target region are considered socially conservative, they were not willing to participate in interviews that involved personal or private matters with outsiders.
3. Some people in the target region were unaccustomed to publicly articulating their ideas and opinions. Thus, the team adopted semi-structured individual interviews with the use of questionnaires that were sent ahead of time. In lieu of group interviews through workshops or group discussions, in-depth individual surveys were conducted.

Other constraints were as follows. First, some data and information on employment was neither available nor made public. Thus, the team tried to carry out an analysis using available data on variables such as gender and age to address the issues on employment in the reconstruction process. Second, not all Government measures for employment in response to the 2011 Earthquake were covered because of the vast amount of information on them. The team chose to cover only core projects and programmes on employment that were initiated mainly in the reconstruction phase. Third, because of the nature of the disaster that hit a vast portion of the coastal areas in the Tohoku region, the field survey covered only some areas within Iwate and Miyagi. Thus, the results of the field survey do not pertain to all of the disaster-affected areas.

With the above limitations, the team tried to synchronize all the data and information that were obtained through the field survey and literature review, and then come up with findings and conclusions.

Regarding the use of the terms ‘rehabilitation’, ‘restoration’, ‘recovery’, and ‘reconstruction’, no strict standard exists in international organizations to differentiate between them. They are normally used interchangeably. In this report, these terms are broadly defined as follows: ‘rehabilitation’ is mainly used for infrastructure such as roads and bridges; ‘restoration’ and ‘recovery’ are used interchangeably for the return to physical conditions or status prior to the earthquake; and ‘reconstruction’ refers to a more longer-term perspective than restoration or recovery.

Chapter 2 Before and after the Great East Japan Earthquake in three severely affected prefectures (Iwate, Miyagi, and Fukushima)

This chapter discusses:

- i. the pre-disaster conditions in areas heavily affected by the 2011 Earthquake; and
- ii. the damages and losses in those areas as a result of the 2011 Earthquake.

This chapter presents a comparative analysis of the socio-economic situations before and after the 2011 Earthquake, in order to evaluate the extent to which restoration and reconstruction has been achieved. Through an in-depth study of various economic indicators such as employment, manufacturing, and gross domestic product (GDP), the study concluded that the 2011 Earthquake had a massive socio-economic impact on the local people, primarily through physical displacement (i.e. destroyed households and means of attaining livelihoods) and lower rates of employment. This coincided with a negative impact on the Japanese economy as a whole. In particular, groups that were considered vulnerable geographically (e.g. coastal fisheries) and socially (e.g. women, the elderly, people with disabilities) suffered the largest setbacks.

2.1 Conditions in the heavily disaster-affected areas before the 2011 Earthquake

2.1.1 Background

The Tohoku region of Japan had been struggling through a long-term economic downturn since the asset bubble burst in the early 1990s. The economic problems were directly connected to unemployment, which increased from 2.0 per cent in 1990 to 5.5 per cent in 2002 (Cabinet Office, 2012a). The Japanese economy had begun to recover during the mid-2000s until the Lehman shock in 2008, when the annual real GDP growth rate dropped by 3.7 per cent from the previous year. Japanese companies reacted by reducing wages, mainly in terms of bonuses and the number of non-regular² workers, but also by regulating overtime work. As a result, the unemployment rate hit a record high of 5.6 per cent in July 2009.³ The regional economy in the Tohoku region was stagnant by 2009.

After 2009, there were signs of improvement in the economy in both Japan and the Tohoku region. The Monthly Economic Report published on 21 February 2011 by the Cabinet Office of the Government of Japan described a trend of rising socio-economic statuses in the Tohoku region, including the three prefectures of Iwate, Miyagi, and Fukushima. The results are shown in table 2.1. At the same time, there were many issues in industry that needed to be resolved (e.g. an excessively strong yen, delayed negotiations on global economic partnerships, high corporation tax, strengthening of labour regulations, and a shortage of electric power).

2.1.2 GDP by industry

The Tohoku region and the three disaster-affected prefectures contributed 8.1 per cent and 4.0 per cent of the national GDP respectively (Cabinet Office, 2012a). Broken down by sector, the GDP

² There are two types of worker status in Japan: regular and non-regular workers (although they are not legally defined). According to the Ministry of Health, Labour and Welfare (MHLW), the differences between regular and non-regular are: (i) terminable or non-terminable employees; (ii) the lengths of working hours (full time or part time); (iii) direct or indirect employment; (iv) with or without long-term employment contract system including promotion, wages, and capacity development; and (v) limits of duty station (Takahashi 2012).

³ About 1.8 million workers involuntarily left their jobs in July 2009, which is more than double the number that voluntarily left their jobs.

shares in Tohoku were 2.7 per cent in the primary sector, 24.4 per cent in the secondary sector, and 73.0 per cent in the tertiary sector (table 2.1). Reflecting the region's GDP shares by sector, the employment rates in the primary, secondary, and tertiary sectors in the Tohoku region were 8.5 per cent, 26.3 per cent, and 65.2 per cent, respectively. The manufacturing sector occupied a relatively high share of Japan's GDP, especially telecommunications (8.7 per cent), electronic circuits (7.3 per cent), and food (5.1 per cent). In the agriculture sector, the three disaster-affected prefectures accounted for 13.0 per cent of Japan's GDP in rice production and 19.5 per cent in broiler production.

The GDP share of the fishery sector in three disaster-affected prefectures was 10.9 per cent of the GDP. The products with the highest shares were saury (29.1 per cent), tuna (16.6 per cent), sea urchin (16.6 per cent), and seaweed (81.6 per cent). In general, the GDP shares by industry in the Tohoku region and three disaster-affected prefectures tended to be similar to the whole country.

Table 2.1 Socio-economic status in the whole country, Tohoku, and three disaster-affected prefectures

	Year/ Fiscal year	Unit	Whole country	Tohoku	Iwate	Miyagi	Fukushima	Total of 3 disaster- affected prefectures	Tsunami -affected area
Population (real number)	2010	10 000 people	12 805.7	1 171.0	133.0	234.8	202.9	570.7	251.0
Comparison to whole country		%	100.00	9.1	1.0	1.8	1.6	4.5	2.0
Youth (<15 years old)		10 000 people	4 680.3	150.0	16.9	30.8	27.6	75.3	33.1
Productive age (15-61 years old)		10 000 people	8 103.2	715.2	79.6	150.2	123.6	353.4	158.8
Elderly (>65 years old)		10 000 people	2 924.6	300.2	36.0	52.1	50.4	138.6	57.3
Population (ratio)	2010								
Youth (<15 years old)		%	13.2	12.9	12.7	13.2	13.7	13.3	13.3
Productive age (15-61 years old)		%	63.8	61.4	60.1	64.4	61.3	62.3	63.7
Elderly (>65 years old)		%	23.0	25.8	27.2	22.3	25.0	24.4	23.0
Number of households	2010	10 000 households	5 195.1	423.8	48.4	90.2	72.1	210.7	99.0
Total area	2010	km ²	377 950.0	79.5	15	7 286.0	13	36 347.0	9 856.0
					279.0		783.0		
Number of employees	2010	10 000 people	62 570.0	5 679.0	653.0	1 132.0	978.0	2 763.0	1 170.0
Fishery employees	2008	10 000 people	221.9	106.4	9.9	9.8	1.7	21.4	21.4
Unemployed	2010	10 000 people	3 340.0	315.0	35.0	70.0	53.0	158.0	92.0
Unemployment rate	2010	%	5.1	5.3	5.1	5.8	5.1	5.4	7.3
	2008	¥ billion	505 016.0	41 003.0	4 392.0	8 193.0	7 667.0	36 347.0	-
GDP in Prefecture									
Percentage in the total		%	100.0	8.1	0.9	1.6	1.5	4.0	-
% by industry									
Primary		%	1.1	2.7	3.8	1.7	2.0	2.3	-
Secondary		%	24.7	24.4	22.2	18.1	29.6	23.3	-
Tertiary		%	74.1	73.0	74.0	80.2	68.4	74.4	-
Income	2008	¥ billion	372 297.0	29 350.0	3 064.0	5 788.0	5 630.0	14 482.0	-
% in the total		%	100.0	7.9	0.8	1.6	1.5	3.9	-
Per capital income		¥ 100,000	29.2	73.0	22.7	24.7	27.4	25.2	-
Amount of large-scale retailing	2010	¥ billion	19 579.1	1 496.2	142.0	386.7	223.5	752.3	-
% in the total		%	100.0	7.6	0.7	2.0	1.1	3.8	-
Shipment of products	2010	¥ billion	285 483.0	20 450.0	2 067.0	3 530.0	4 968.0	10 565.0	3 166.0
% in the total		%	100.0	7.2	0.7	1.2	1.7	3.7	1.2
Amount of agricultural products	2009	¥ 100 million	83 162.0	15 702.0	2 395.0	1 824.0	2 450.0	6 669.0	-
% in the total		%	100.0	18.9	2.9	2.2	2.9	8.0	-

Amount of fisheries & agriculture	2009	¥ 100 million	13 834.0	399.0	791.0	-
% in the total		%	100.0	2.9	5.7	10.9

Source: Cabinet Office, 2012a.

Before the 2011 Earthquake (in 2010), Iwate and Miyagi featured high ratios of food manufacturing in the manufacturing industry in value added. The ratios were 17.5 per cent and 17.6 per cent respectively, with the country average at 9.6 per cent. Furthermore, coastal areas have higher ratios of marine product processing in food manufacturing, as shown in table 2.2 (e.g. Miyako city (61.0 per cent), Kamaishi city (59.7 per cent), Ofunato and Takata city (40.2 per cent) in Iwate, and Ishinomaki city (76.4 per cent) and Kesennuma city (73.9 per cent) in Miyagi). As can be seen, marine product processing played a significant role in local industry in the disaster-affected coastal areas before the 2011 Earthquake, as one of the key components of the fishery and manufacturing supply chains.

Table 2.2 Composition of manufacturing in disaster-affected coastal areas in three prefectures (2010)
(¥million)

	(i) Total in manufacturing	(ii) Manufacture of food	(iii) Manufacture of seafood products	(iv) % of food manufacturing in the whole manufacturing ((ii)/(i))	(v) % of marine product processing in food manufacturing ((iii)/(ii))
Prefecture	90 667 210	8 661 831	993 825	9.6	11.5
Iwate					
Whole prefecture	627 919	110 100	17 841	17.5	16.2
Ofunato and Takata	32 313	14 062	5 658	43.5	40.2
Miyako	27 957	5 337	3 255	19.1	61.0
Kamaishi	59 675	7 116	4 246	11.9	59.7
Miyagi					
Whole prefecture	1 092 968	191 913	77 841	17.6	40.6
Sendai	511 274	71 727	24 912	14.0	34.7
Ishinomaki	115 133	36 471	27 855	31.7	76.4
Kesennuma	40 776	29 415	21 736	72.1	73.9
Fukushima					
Whole prefecture	1 728 065	97 882	8 401	5.7	8.6
Iwaki	337 046	12 468	5 106	3.7	41.0
Soma	101 535	3 806	1 072	3.7	28.2

Source: METI, 2011.

2.1.3 Employment by industry

The labour force by industry in the country and the three disaster-affected prefectures in 2010 is shown in table 2.3. The biggest shares of employment in Iwate, Miyagi, and Fukushima were manufacturing, retail and sales, and medical and welfare service, respectively. In Tohoku coastal areas, fishery was considered very important due to its influence on other industries, such as manufacturing (food processing), transportation, packing, and service (tourism).

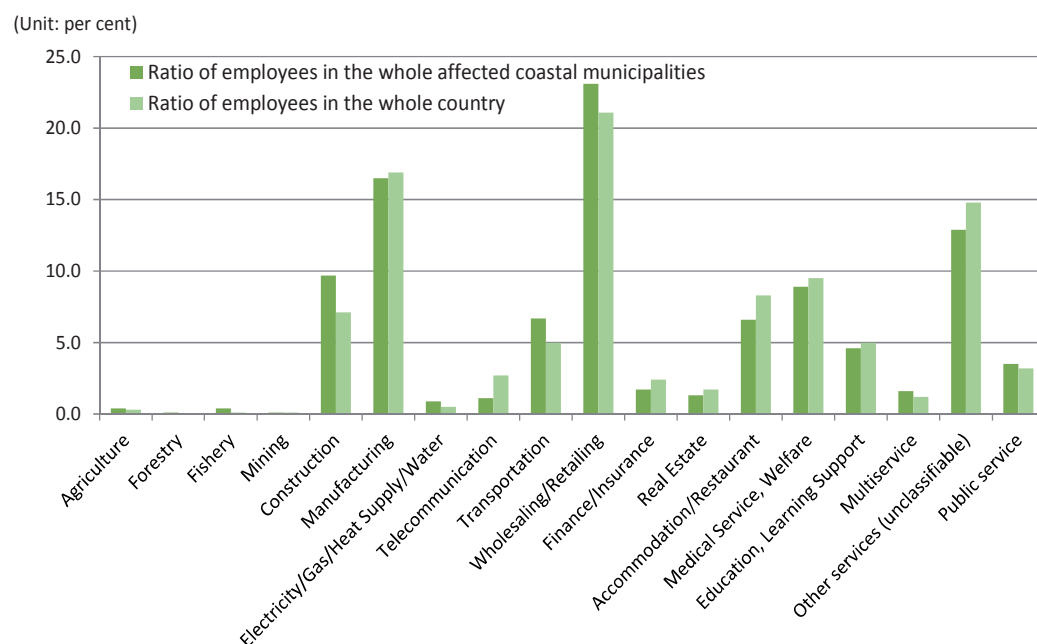
Table 2.3 Labour force by industry in the three disaster-affected prefectures in 2010

Industry	Country	Fukushima	Miyagi	Iwate
	%	%	%	%
Agriculture and forestry	3.7	7.4	4.2	10.9
Fishing	0.3	0.2	0.8	1.1
Mining	0.0	0.1	0.0	0.1
Construction	7.5	9.0	8.9	8.7
Manufacturing	16.1	20.1	13.1	15.5
Electricity, gas, water and supply	0.5	0.8	0.7	0.5
Information technology	2.7	0.9	2.1	1.0
Transportation	5.4	4.9	6.3	5.0
Retail and sales	16.4	15.2	18.7	15.9
Finance and insurance	2.5	2.0	2.4	2.0
Asset property and renting	1.9	1.0	1.8	1.1
Academic research and technical services	3.2	2.0	2.8	1.9
Hotel and restaurant service	5.7	5.5	5.9	5.4
Entertainment	3.7	3.8	3.7	3.7
Education service	4.4	4.2	5.0	4.3
Medical and welfare	10.3	10.2	10.1	11.3
Compound services	0.6	0.9	0.8	1.2
Services, N.E.C	5.7	5.3	6.4	5.0
Public service	3.4	3.4	4.0	4.0
Unclassifiable	5.8	3.2	2.4	1.4
Total	100.0	100.00	100.00	100.00

Source: MHLW, 2013.

More specifically, the composition ratio of employment by industry before the 2011 Earthquake (in 2010) is shown in figure 2.1 for the 774,793 people employed in the disaster-affected coastal municipalities in the Tohoku region. The biggest share of overall employment in these areas was in wholesaling (178,687: 23.1 per cent), followed by manufacturing (127,837: 16.5 per cent), service (99,920: 12.9 per cent), and construction (74,917: 9.7 per cent). These four industries occupied about 60 per cent of total employment. Within manufacturing, food processing accounted for 27 per cent of the total (12.6 per cent of the national total). There was no significant difference in composition ratio by industry between the affected coastal municipalities and the rest of the country. However, the affected coastal municipalities featured a relatively high employment ratio in food processing (within manufacturing). The composition ratio of employment in food processing (comprised mainly of marine product processing), was 27.0 per cent, a relatively high value in comparison to 12.6 per cent at the national level.

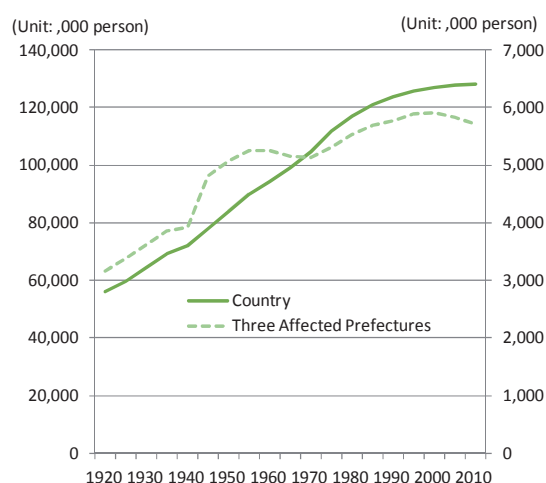
Figure 2.1 Number of employment and composition ratio by industry in the disaster-affected coastal municipalities before the 2011 Earthquake (2010)



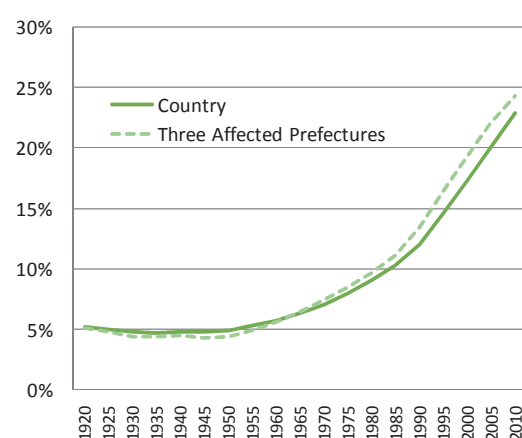
Source: METI, 2011.

2.1.4 Population

Before the 2011 Earthquake, the Tohoku region accounted for about 9.1 per cent of the country's population, with the three disaster-affected prefectures and affected coastal municipalities accounting for 4.5 per cent and 2.0 per cent, respectively. As seen in figure 2.2, the population in the three disaster-affected prefectures had been declining since the mid-1950s. In particular, 25.6 per cent of the population was older than 65 years of age, compared to 22.5 per cent at the country level (figure 2.3). The ratio in the affected coastal municipalities was higher than both at 27.1 per cent. In fact, the disaster-affected areas were characterized by an ageing society, and faced depopulation due to a lack of opportunities in education and employment for the younger generations. As a result, the local economy had also been shrinking over the years. In this sense, these areas were more vulnerable to a natural disaster than elsewhere in Japan.

Figure 2.2 Population trend in the country and three disaster-affected prefectures

Source: MIC, 2011.

Figure 2.3 Population share (more than 65 years of age) in the country and three disaster-affected prefectures

Source: MIC, 2011.

2.2 Damages and losses from the 2011 Earthquake

2.2.1 Earthquake and tsunami

The epicentre of the 2011 Earthquake was at 38°N and 142.9°E, with an estimated depth of 24 km. The earthquake was caused by plate-boundary thrust-faulting in a subduction area with a reverse fault. The Headquarters for Earthquake Research Promotion, and the Ministry of Education, Culture, Sports, Science and Technology, reported that the fault area stretched 400 km north-south and 200 km east-west, triggering a massive tsunami from Hokkaido to Kanto, especially in Iwate, Miyagi, and Fukushima. This area has historically experienced at least three major earthquakes, in 1611, 1896, and 1933, with the crust sliding a maximum of 24 m. The 9.0 magnitude was the biggest earthquake recorded in Japan and the fourth biggest in the world since 1900.⁵

2.2.2 Human casualties

According to the Police Agency, there were 15,879 deceased persons by 16 January 2013 (table 2.4). Miyagi had the highest number (9,534) out of the affected prefectures. Japan, with a high frequency of earthquake and tsunami occurrences especially in the Tohoku coastal area, had been preparing itself against such risks for many years. For the 2011 Earthquake, a tsunami alert was immediately issued by local Governments, and many of the coastal area residents knew exactly how and where to evacuate. However, the waves were much higher than expected. As a result, even though many people properly evacuated to evacuation centres or areas officially designated by local Governments, many lives were lost.

⁵ 1960 Chile Earthquake, magnitude of 9.5; 1964 Alaska Earthquake, magnitude of 9.2; and 2004 Sumatra Earthquake, magnitude of 9.2.

Table 2.4 Human casualties caused by the 2011 Earthquake
(Unit: building)

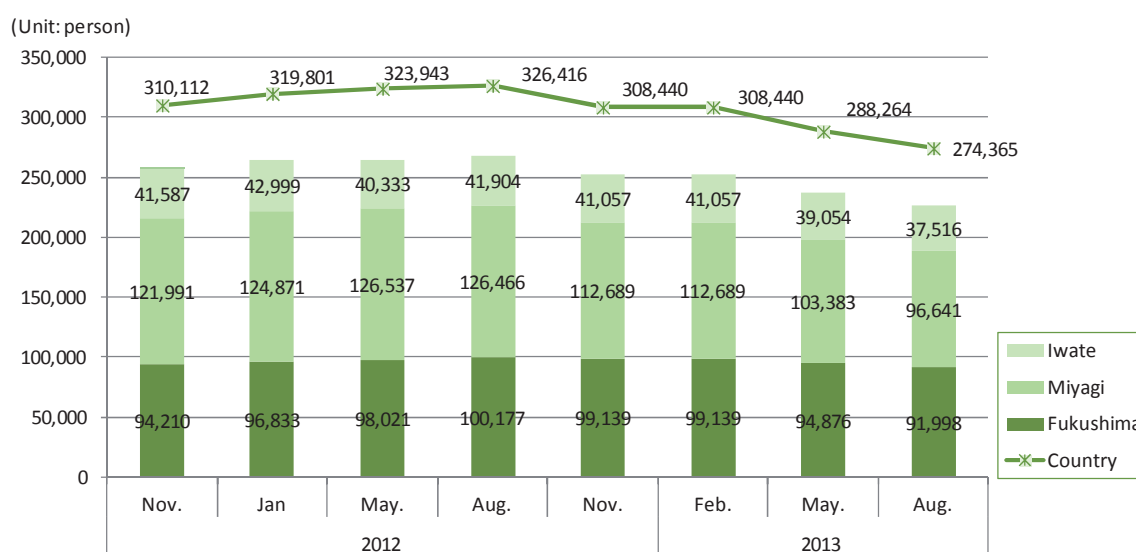
	Human casualties		
	Deceased	Missing	Injured
Overall	15 879	2 700	6 132
Iwate	4 673	1 171	208
Miyagi	9 534	1 314	4 144
Fukushima	1 606	211	182
Ibaragi	24	1	711
Chiba	20	2	252

Source: Policy Agency website [accessed 15 Sep. 2013].

2.2.3 Human displacement

The 2011 Earthquake also triggered massive human displacement (figure 2.4). As of August 2013, there were still 274,365 evacuees. Of the total number of evacuees in 2013, around 70 per cent were from Miyagi and Fukushima. Unlike the response to the tsunami warning, the evacuation from the nuclear accident in Fukushima was done in total chaos, as a severe accident at the power plant or large-scale evacuation had never been envisaged. Thus, the people near the nuclear power plant were forced to flee without information as to the gravity of the accident or radiation risk. Even after two and a half years since the 2011 Earthquake, many people especially in the three disaster-affected prefectures have remained displaced.

Figure 2.4 Number of evacuees caused by the 2011 Earthquake

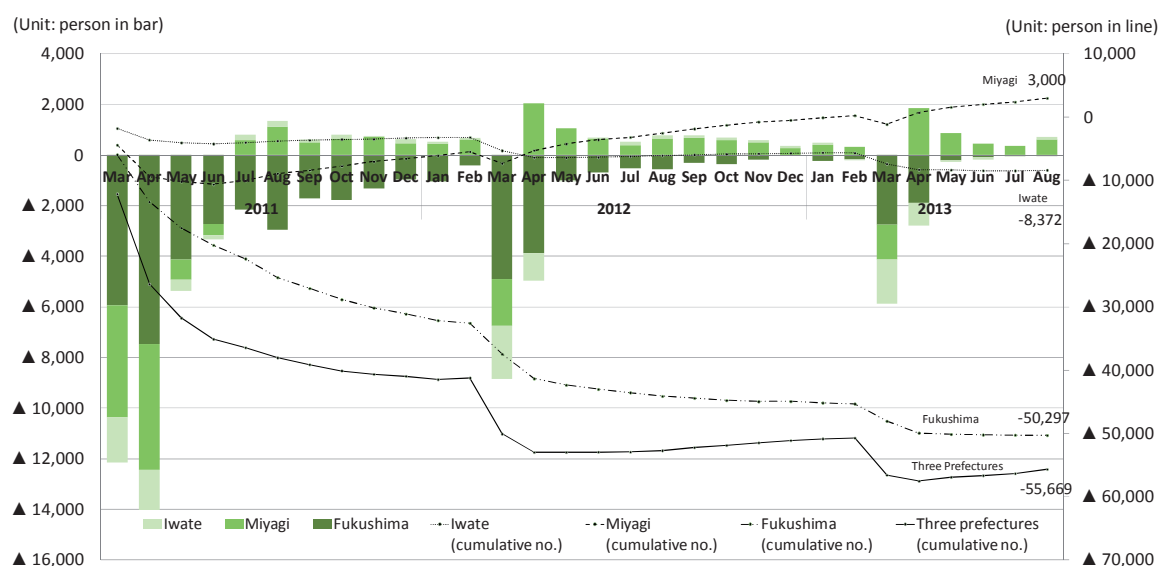


Source: Reconstruction Agency website [accessed 15 Sep. 2013].

The trends of population movement in and out of the three disaster-affected prefectures based off of family registers (Basic Resident Register) at local Governments are shown in figure 2.5. The number of evacuees who moved out of the prefectures exceeded 10,000 in March 2011 and reached 50,000 in March 2012 (one year after the earthquake). As of August 2013, a net cumulative of 55,669 evacuees moved out of their home prefectures. In particular, 50,297 evacuees had left Fukushima by August 2013, scattering to other proximate prefectures, especially in the Kanto and Tohoku regions, including Tokyo (7,215), Yamagata (6,817), Niigata (4,859), Ibaragi (3,799), Chiba (3,396) and Saitama (3,038).

Evacuees sometimes relocated from one place to another in the outside prefectures. Fukushima suffered much more than Iwate and Miyagi in terms of the numbers displaced to outside the prefecture.

Figure 2.5 Population moving in and out of the three disaster-affected prefectures



Source: MIC website [accessed 2 Oct. 2013].

2.2.4 Physical damage

Some 535 km² of land was inundated by the tsunami in the Tohoku and Kanto regions, including approximately 10 per cent (119 km²) of the urban area (MLIT, 2013). Along the 1,700 km coastline of Iwate, Miyagi, and Fukushima was 300 km of coastal levees. Of these, 190 km was fully or partially destroyed (MLIT, 2013). Of river levees (2,115 sites), 1,195 in Tohoku and 920 in Kanto were damaged. Furthermore, infrastructure damage was also widespread: 3,546 areas along roads, 71 bridges, and 26 parts of the railway system were reportedly damaged, which had a strong effect on the recovery process and post-disaster economic activities. Many buildings were also severely damaged (table 2.5). This was due to a large movement of the crustal plate caused by the main earthquake, about a 4.0 to 5.0 m of horizontal offshore movement, and 0.4 to over 1.0 m of subsidence (The Geographical Survey Institute, 2011). Building and infrastructure damages were particularly severe in tsunami-inundated areas.

Table 2.5 Physical casualties caused by the 2011 Earthquake

Unit: building

	Damage to buildings		
	Complete	Half	Partial
Overall	128 911	268 882	733 719
Iwate	18 370	6 501	13 000
Miyagi	86 414	152 523	224 162
Fukushima	21 096	72 390	163 007
Ibaragi	2 623	24 178	183 617
Chiba	800	10 033	52 124

Source: Policy agency website [accessed 13 Sep. 2013].

2.2.5 Comparison between the 1995 Great Hanshin-Awaji Earthquake and the 2011 Great East Japan Earthquake

A comparison of the characteristics of the 1995 Great Hanshin-Awaji Earthquake (hereafter the 1995 Earthquake) and the 2011 Earthquake is shown in table 2.6. In the 1995 Earthquake, damage was caused mainly by the collapse of buildings, whereas in the 2011 Earthquake the main causes of damage were the tsunami and the nuclear power plant accident. The tsunami was also the main cause of death in the 2011 Earthquake, in the form of drowning. It is important to note that the affected areas of the 2011 Earthquake were mainly agricultural and fishing areas, while areas affected by the 1995 Earthquake were urban. Thus, another key difference between the two disasters is that many people who lived in the affected areas of the 2011 Earthquake lost houses or living spaces as well as their livelihoods. Consequently, many evacuees of the 2011 Earthquake are still living in shelters. In contrast, the evacuees from of the 1995 Earthquake gradually decreased.

Table 2.6 Comparison of the 1995 Great Hanshin-Awaji Earthquake and the 2011 Great East Japan Earthquake

	1995 Great Hanshin-Awaji Earthquake (1995 Earthquake)	2011 Great East Japan Earthquake (2011 Earthquake)
Date of occurrence	17 Jan. 1995	11 Mar.2011
Time of occurrence	5:46	14:46
Hypocenter (epicenter)	In the Akashi Strait, off the northern end of Awaji Island	Off the Sanriku coast (Earthquake occurring a distance from land)
Hypocenter depth	16 km	24 km
Magnitude	7.3	9
Maximum seismic intensity	7 (Awaji Island)	7 (Kurihara city, Miyagi)
Type of earthquake	Earthquake along an active fault	Ocean trench earthquake
Affected areas	Urban areas	Mainly agricultural and fishing areas
Affected prefectures above M6	1 (Hyogo)	8 (Miyagi, Fukushima Ibaragi, Tochigi, Iwate, Gunma, Saitama, Chiba)
Main damage	Collapsed buildings, fires	Giant tsunami, Fukushima Nuclear Power Plant accident
Number of deceased	6 474	15 879*
Main causes of death	Crushing, asphyxiation	Drowning
Number of missing persons	3	2 700*
Number of injured	43 792	6 132*
Number of evacuees	307 022 (1 week after)	102 648 (1 week after)
(up to 4 months)	35 280 (4 months after)	138 620 (4 months after)
Dwelling damage (total)	104 906	128 911*
Dwelling damage (partial)	144 274	268 882*
Application of Disaster Relief Law	25 cities and municipalities	241 cities and municipalities (10 prefectures)
Estimated damage on capital stock	About ¥16 000 billion	About ¥10 000 billion

Note: *as of 16 Jan. 2013

Source: The websites of the Cabinet Office, Policy Agency of Japan, MIC Headquarters of Emergency Disaster Response [accessed 2 Oct. 2013].

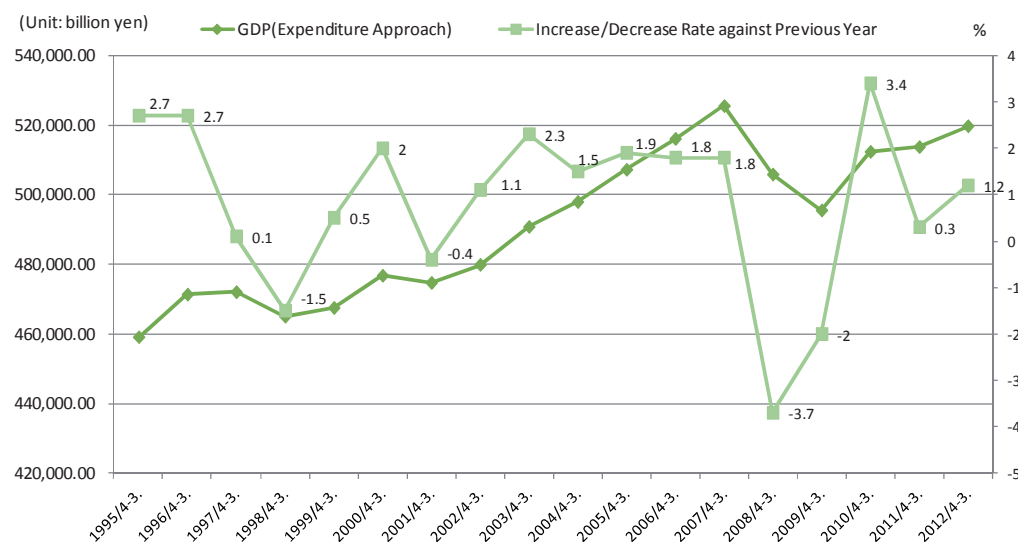
2.2.6 Economic damage

(a) Macro economy

The 2011 Earthquake had an adverse impact on the macro economy. Despite negative annual GDP growth rates in 2008 and 2009 because of the Lehman shock, the Japanese economy had improved

with a 3.4 per cent increase in annual growth rate in 2010 (figure 2.6) over the previous year. However, the 2011 Earthquake disaster had a great negative impact on the country. First were the human and physical damages in the disaster-affected areas. There were also immense indirect damages on the Japanese economy and employment caused by the damage to the Fukushima Daiichi Nuclear Power Plant, the disruption of supply chains, limited electrical power supply in Eastern Japan (including metropolitan areas), and the negative impact on consumption behaviour. As a result, the real GDP growth rate from April 2011 to March 2012 was 0.3 per cent, which was -3.1 per cent lower than the previous year (3.4 per cent).

Figure 2.6 GDP and the change rate in Japan (1995–2012)



Source: MIC website [accessed 2 Aug. 2013].

(b) Capital stock

The Development Bank of Japan (DBJ) estimated that the damage to capital stock in five prefectures (Aomori, Iwate, Miyagi, Fukushima and Ibaragi) was about ¥16,400 billion, which accounted for 7.9 per cent (¥208,000 billion) of total capital stock in Japan (DBJ, 2011a). The DBJ also categorized the damaged areas into five areas: (i) five inland prefectures; (ii) the coastal area in Iwate; (iii) the coastal area in Miyagi; (iv) the coastal area in Fukushima; and (v) the coastal area in Ibaraki (table 2.7). The coastal areas in four prefectures (Iwate, Miyagi, Fukushima, and Ibaragi) were severely damaged, estimated at ¥11,800 billion. The biggest values of damaged total capital stock occurred in Miyagi (¥4,900 billion) and the coastal area in Iwate (¥3,500 billion), respectively.

Table 2.7 Population and damage amount of capital stock in the disaster-affected areas

	Population as of May 2011				Capital stock	
	Total number	No. of the affected	No. of evacuees	Ratio	Damaged amount	Damage ratio /total stock
	(Person)	(Person)	(Person)	(per cent)	(¥1000 billion)	(%)
Inland in five prefectures	6 202 719	10 079	10 020	0.2	4.6	3.3
Coastal area in Iwate	282 866	41 637	34 200	14.7	3.5	47.3
Coastal area in Miyagi	981 373	44 834	30 310	4.6	4.9	21.1
Coastal area in Fukushima	537 085	92 461	90 260	17.2	1.9	11.7
Coastal area in Ibaragi	701 073	23	0	0	1.5	6.8
Total	8 705 116	189 025	164 790	2.2	16.4*	7.9

Note: *There are various estimates on the amount of damage caused by the 2011 Earthquake. The Cabinet Office announced that the direct amount of damage was estimate ¥16,000-25,000 billion on 23 Mar. 2011. The details including the methodology applied are published by the Cabinet Office (2012a).

Source: DBJ, 2011a.

The details of estimated damage in capital stock in the three affected prefectures are shown in table 2.8. The damage rates vary by area type (inland or coast) and by prefecture. For example, the damage rate in the coastal areas in Iwate was 47.3 per cent of the total capital stock in the coastal areas in the three prefectures, while it was just 2.9 per cent inland. On the other hand, in Miyagi, with the biggest capital stock of the three prefectures, the damage rates in the coastal area and inland of the total capital stock were 14.9 per cent and 5.1 per cent, respectively. Of the total damages caused by the 2011 Earthquake, social infrastructure suffered the largest amount at 57.5 per cent (¥7,161 billion), followed by others (27.0 per cent: ¥3,362 billion), and manufacturing (8.9 per cent: ¥1,107 billion).

Table 2.8 Estimated damage of capital stock in four disaster-affected prefectures

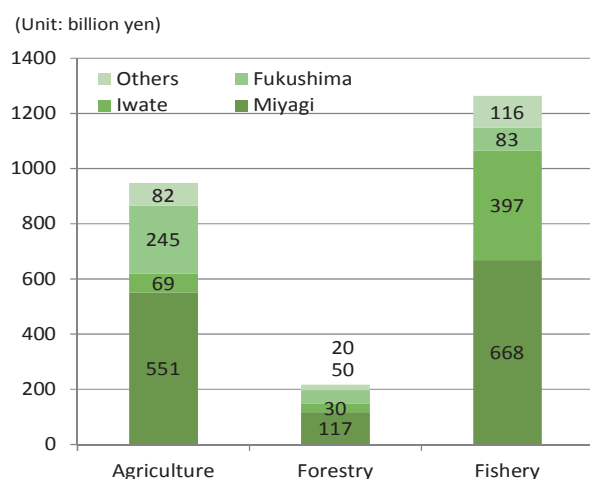
Type	Unit	Area	Iwate	Miyagi	Fukushima
Estimated amount of capital stock	¥ billion	Inland	26 369	31 443	34 314
		Coastal	7 449	23 182	15 941
Community and social infrastructure	¥ billion	Inland	457	856	630
		Coastal	1 943	2 031	1 244
Housing	¥ billion	Inland	22	40	7
		Coastal	607	1 446	145
Manufacturing	¥ billion	Inland	64	148	263
		Coastal	191	290	151
Others	¥ billion	Inland	211	551	370
		Coastal	781	1 130	319
Total	¥ billion	Inland	754	1 595	1 270
		Coastal	3 522	4 897	1 859
Estimated damage ratio	%	Inland	2.9	5.1	3.7
		Coastal	47.3	21.1	11.7

Source: DBJ, 2013.

(c) Agriculture and fishery

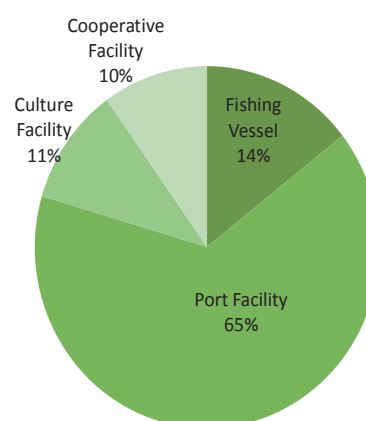
The total damage to agriculture, forestry, and fishery from the 2011 Earthquake is estimated to be ¥1,200 billion. As shown in figure 2.7, the damage in these sectors in the three disaster-affected prefectures accounted for 90.8 per cent of the total damage. Miyagi had the biggest share (55 per cent: ¥1,300 billion), followed by Iwate (20.4 per cent) and Fukushima (15.6 per cent). More than 80.0 per cent of damage in agriculture and fishery in Iwate was related to fishery. Of the total damage in fishery (¥1,200 billion), fishing ports suffered the greatest (65.1 per cent), followed by fishing vessels (14.4 per cent), cultural facilities (10.6 per cent), and cooperative facilities (9.9 per cent), including markets, freezers, warehouses, and refuelling stations (figure 2.8). As mentioned above, the main industry affected by the tsunami was fishery and its related processing. In order to fully recover, it is necessary to rehabilitate and reconstruct the industrial infrastructure, including fishing ports, ice plants, and refrigerating and freezing machines. This requires a large-scale investment along the coastal areas in the Tohoku region.

Figure 2.7 Damage amount in agriculture, forestry and fishery in three affected prefectures



Source: MAFF website [accessed 5 Sep. 2013].

Figure 2.8 Damage amount in agriculture and fishery in three disaster-affected prefectures



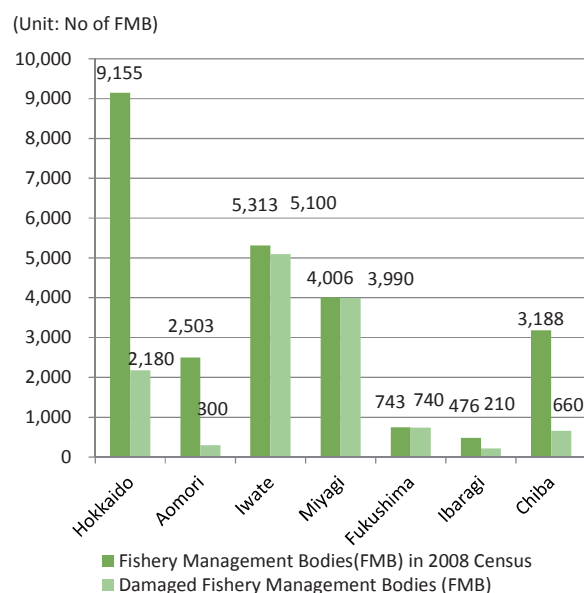
Source: MAFF website [accessed 5 Sep. 2013].

Almost all fishery workers in the coastal areas in the three disaster-affected prefectures were seriously affected by the earthquake and tsunami. The damage to those engaged in the fishery and agriculture sectors is described below. Of the 25,277 fishery management bodies⁷ in the fishery sector in Japan (Ministry of Agriculture, Forestry and Fishery (MAFF), 2008) (figure 2.9), 52.1 per cent were damaged by the earthquake disaster. Almost all fishery management bodies (FMB) in Iwate (96.0 per cent), Miyagi (99.7 per cent), and Fukushima (100.0 per cent) were significantly affected by the earthquake, radioactive contamination, and related damages caused by harmful rumours. According to a survey conducted on 11 July 2011 by the Ministry of Agriculture, Forestry and Fishery (MAFF), of the FMB that were damaged, only 16.0 per cent had resumed operation in Iwate and 17.0 per cent in Miyagi. Even four months after the disaster, those engaged in the fishery sector were still in a severely disadvantaged situation. On the other hand, the damage to agriculture was less than that

⁷ A fishery management body (FMB) is a management unit by a family that holds a small fishing boat and mainly runs a coastal fishery.

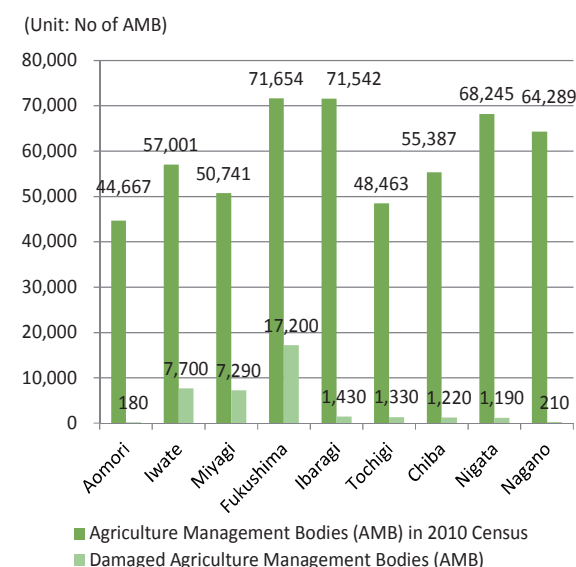
of fishery, as agriculture areas are generally further inland. Only 15.6 per cent of the 531,989 agriculture management bodies (AMB)⁸ were damaged by the earthquake disaster (figure 2.10). The highest damage occurred in Fukushima (33.8 per cent), mainly due to harmful rumours about radioactive contamination surrounding the accident at the Fukushima Daiichi Nuclear Power Plant.

Figure 2.9 Damage to fishery management bodies (FMB) from the 2011 Earthquake



Source: MAFF, 2013a.

Figure 2.10 Damage to agriculture management bodies (AMB) from the 2011 Earthquake



Source: MAFF, 2013b.

(d) Industry

As shown in table 2.9, most of the affected areas depended more on agriculture and marine product industries than did the affected municipalities of the 1995 Earthquake. As these key industries were badly damaged by the 2011 Earthquake, they must be reconstructed in order to revitalize the local economy and employment situation. According to the Cabinet Office, the adverse impact to the Japanese economy as a whole was limited since the Pacific Ocean coast accounted for only 2.5 per cent of the total Japanese economy (table 2.9). The GDP share of Hyogo by itself accounted for 4.0 per cent of the nation's overall GDP in 1994, whereas the prefectures damaged by the earthquake had an aggregated share of 7.1 per cent in 2007. In that sense, the scale of the damage in the 2011 Earthquake is slightly less in economic terms than that of the 1995 Earthquake.

⁸ An agricultural management body is managed by a family that holds agricultural cultivated land (roughly 30)

Table 2.9 Extent of economic activity in the municipalities along the Pacific Ocean coast

	2011 Earthquake				1995 Earthquake			
	Shipment value		Gross value added		Shipment value		Gross value added	
	¥1,000 billion	%	¥1,000 billion	%	¥1,000 billion	%	¥1,000 billion	%
Japan	265.6	100.0	93.9	100.0	311.2	100.0	127.6	100.0
Damaged municipalities*	6.6	2.5	2.1	2.3	8.3	2.7	3.7	2.9

Note: *In the 2011 Earthquake, municipalities along the Pacific Ocean coast in Aomori, Iwate, Miyagi, Fukushima and Ibaraki prefectures. In the 1995 Earthquake, 10 cities and 10 towns which the Disaster Relief Act was applied to in Hyogo Prefecture

Source: METI website (Industrial Statistic Survey) [accessed 15 Sep. 2013].

Despite the limited GDP share of the disaster-affected areas in the country, the 2011 Earthquake had a serious negative impact on the overall Japanese economy, extending beyond the Tohoku region, which was one of the manufacturing production centres in Japan. Production activity was substantially reduced, not only in the directly affected areas, but also throughout Japan due to the disruption of supply chains. For instance, in March 2011, the Industrial Production Index in Japan recorded the biggest drop since 1953 (-15.5 per cent against the same month in the previous year) as a result of a planned blackout⁹, the disruption of supply chains, and a decline in domestic consumption caused by a loss in consumer confidence¹⁰ (Kodama, 2011). In particular, the manufacturing industry was significantly affected by the disruption of supply chains, which included chemical materials, steel, electronic components, machinery, and car-related industries. It is estimated that the total negative impact per year caused by the disruption of supply chains in the manufacturing industry was ¥27,300 billion, a value four times greater than the calculated direct damage (capital stock) of the disaster (Arai, 2013). According to the survey conducted by the Research Institute of Economy, Trade and Industry (RIETI) from December 2011 to February 2012,¹¹ 58.4 per cent of enterprises claimed that there was a direct (19.4 per cent) or indirect impact (39.0 per cent) from the disruption of supply chains (Morikawa, 2012). In addition, 45 per cent responded that planned blackouts or limited use of electricity also had a direct or indirect impact on business operations. The 2011 Earthquake had both direct and indirect negative impacts on the Japanese manufacturing industry, as it was and still is composed of a series of supply chains.

⁹ A taking-turn blackout was carried out from 14 March 2011 by Tokyo Electric Power Corp Inc. to cope with an electricity shortage caused by damage to the thermal power station, hydroelectric power station, and transformer substation transmission facilities, including the Fukushima first and the second nuclear power plants.

¹⁰ The fall had a bigger decrease in capital goods than consumer goods at the time of the Lehman shock, but the decrease in consumer goods increased at the time of this earthquake disaster. Because the Lehman shock was an economic shock, exports decreased, which affected the manufacturing industry. However, the 2011 Earthquake decreased domestic demand due to the loss of individual consumer confidence, so the influence amounted to anti-individual service, a retail trade, because of the supply chain stoppages and premeditated blackouts. In the service industry, most services for non-selective individuals were not affected; however, when it simulated an earthquake-caused disaster for these individuals, there was a large overall effect on them, with the individuals having a good mark facing a depression in their services.

¹¹ The survey was conducted through questionnaires that were posted to 15,500 enterprises, including large, medium, and small-scale businesses. The response rate was 22.2 per cent, from all over Japan.

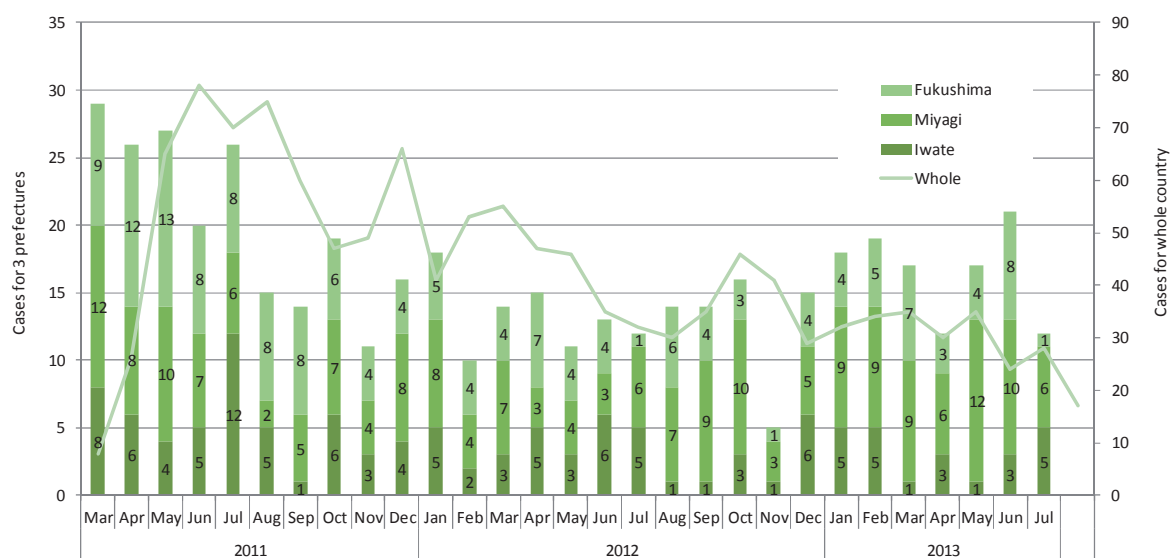
Table 2.10 Effect on the disruption of supply chains
(Unit: per cent)

	Total sample (3 444)	Industry		Region		Scale of enterprise	
		Manufacture	Non-manufacture	Tohoku/ Kanto	Others	Large	Medium and small
Direct impact	19.4	22.4	16.7	24.7	15.6	17.1	24.6
Indirect impact	39.0	38.9	39.1	26.1	41.1	38.8	39.5
No impact	41.6	38.7	44.2	39.3	43.3	44.1	35.9

Source: Morikawa, 2012.

The 2011 Earthquake resulted in the bankruptcies of enterprises in the country. One year after the 2011 Earthquake, 644 bankruptcies were recorded, which was 4.2 times greater than after the 1995 Earthquake (152). The number of affected employees was 11,412, which was 4.3 times greater than after the 1995 Earthquake (2,629). The number recorded was greatest between June and August 2011, with 223 in the country as a whole, and 29 in the three affected prefectures (figure 2.11). While the number has declined over the months, the ratio in Miyagi has increased since 2012. It is likely that enterprises in Miyagi that temporarily suspended business and tried to restart ended up having no choice but to give up.

Figure 2.11 Trend in bankruptcy after the Great East Japan Earthquake

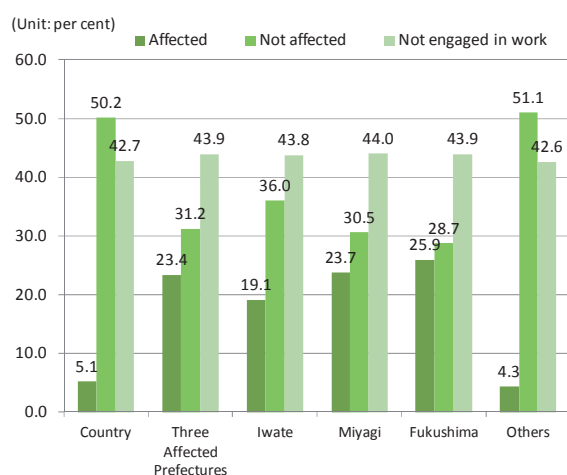


Source: Tokyo Shoko Research Ltd. website [accessed 5 Aug. 2013].

(e) Employment

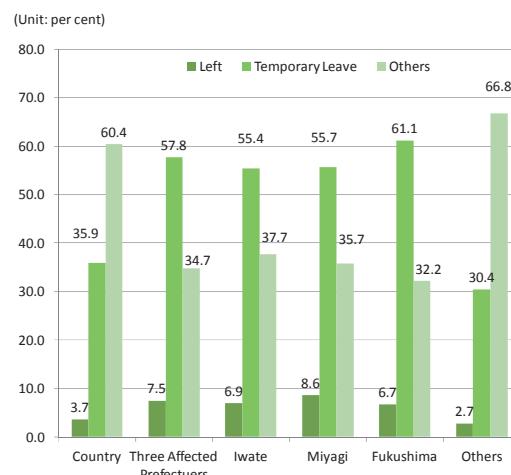
Based on the results of an employment status survey in 2012,¹² the 2011 Earthquake had a negative impact on the employment status of the country, especially in the three disaster-affected prefectures. According to this survey, for the total working population over the age of 15 (108 million people), an estimated 5.7 million (5.1 per cent) jobs in the country and 1.4 million (23.4 per cent) jobs in the three affected prefectures were impacted by the disaster (figure 2.12). Out of the three prefectures, Fukushima was the most affected in terms of working conditions (25.8 per cent), followed by Miyagi (23.7 per cent), and Iwate (19.0 per cent). An estimated 210,000 people across the country left their jobs, of which more than 40 per cent were from within the three prefectures. For workers affected by the disaster, those who left their jobs accounted for 3.7 per cent in the country and 7.5 per cent in the three affected prefectures (figure 2.13). Furthermore, 35.9 per cent temporarily left jobs across Japan, and 57.8 per cent temporarily left in the three prefectures. Fukushima registered the highest figures of 61.1 per cent among the three.

Figure 2.12 Employment status affected by the 2011 Earthquake



Source: MIC website [accessed 5 Sep. 2013].

Figure 2.13 Status of employees affected by the 2011 Earthquake

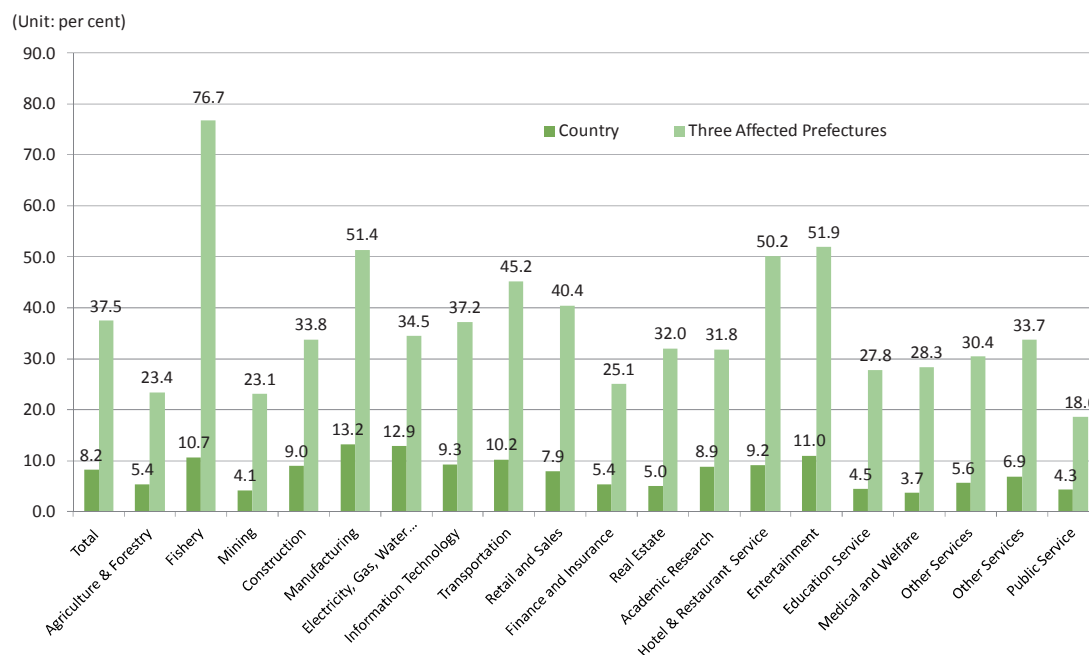


Source: MIC website [accessed 5 Sep. 2013].

The status of affected employees by the 2011 Earthquake by sector is shown in figure 2.14. For the country as a whole, the sectors that experienced a negative impact on employment were: (i) manufacturing (13.2 per cent); (ii) electricity, gas, water supply (12.9 per cent); (iii) entertainment (11.0 per cent); and (iv) fishery (10.7 per cent). In the three prefectures, the fishery sector (76.7 per cent) was affected the most, followed by entertainment (51.9 per cent), manufacturing (51.4 per cent), hotels and restaurants (50.2 per cent), and transportation (45.2 per cent). It appears that the physical damage by the tsunami on infrastructure, buildings, and facilities had a serious adverse impact on employment.

¹² The survey has been conducted by the Ministry of Internal Affairs and Communication (MIC) every three years since 1956. It grasps the employment structure in the country. The sample comprised 1 million randomly selected people from 470,000 households. (MIC website, accessed 5 Sep. 2013).

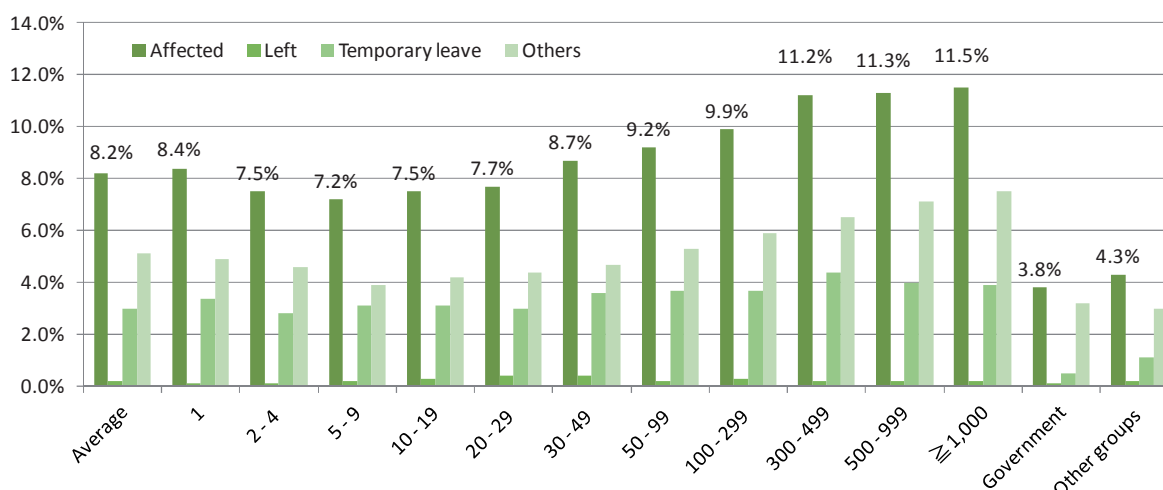
Figure 2.14 Status of affected employees by sector



Source: MIC website [accessed 5 Sep. 2013].

The 2011 Earthquake damaged Japanese enterprises regardless of size. The affected enterprises ranged from small to large in terms of number of employees (figure 2.15). For the country as a whole, the impact of the disaster on employment increased with the size of the enterprise. For example, enterprises that were affected by the earthquake disaster with more than 1,000 employees accounted for 11.5 per cent of the total number of affected enterprises. These findings show that although direct damage from the 2011 Earthquake was concentrated in the coastal areas in the three affected prefectures, the economic impact, including on unemployment, was spread out across the country.

Figure 2.15 Effect on employment status by size of enterprise in the country

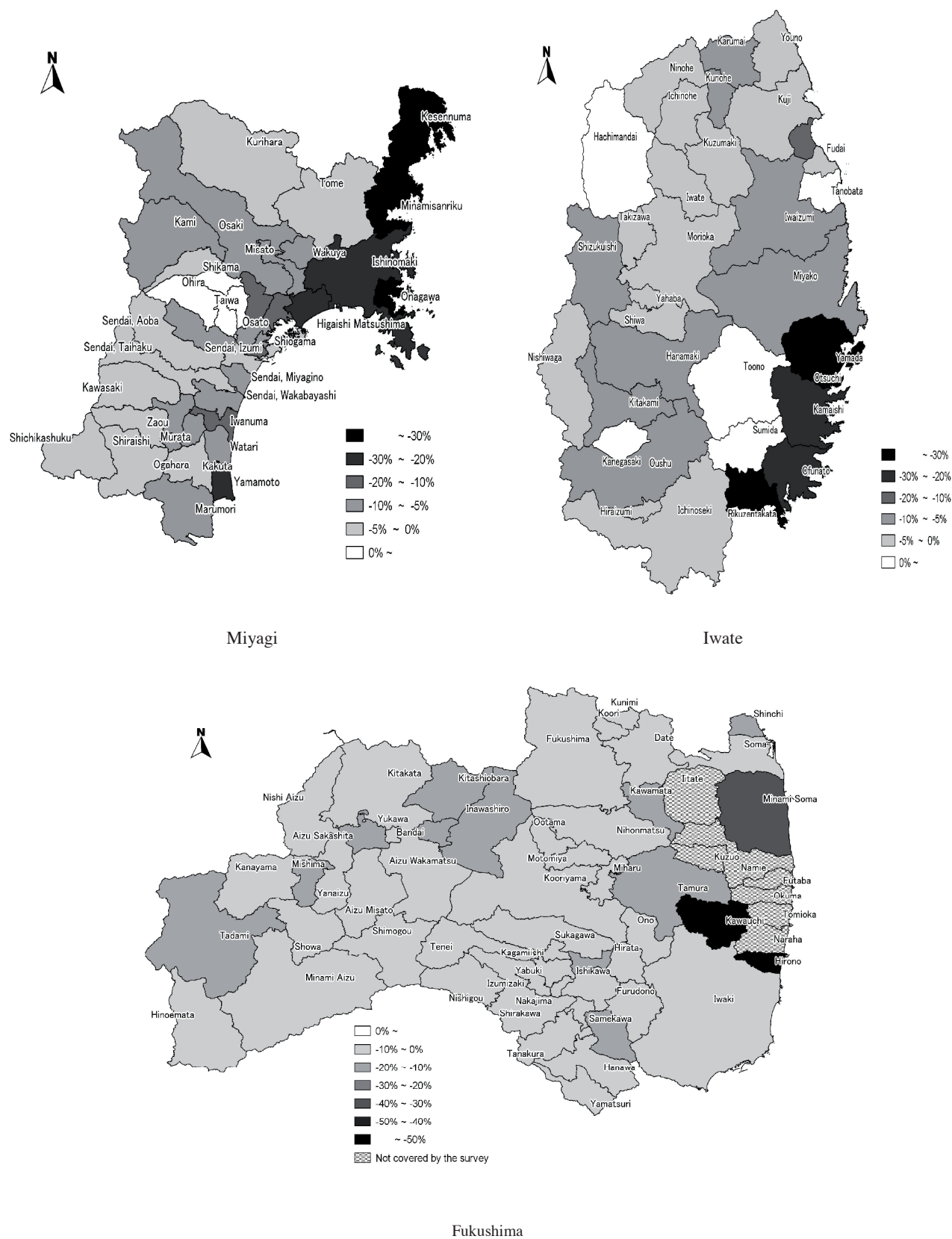


Source: MIC website [accessed 5 Sep. 2013].

The changes in the number of employees and enterprises in the three affected prefectures are shown in the following maps (figure 2.16 and figure 2.17). According to the Economy Census conducted by the

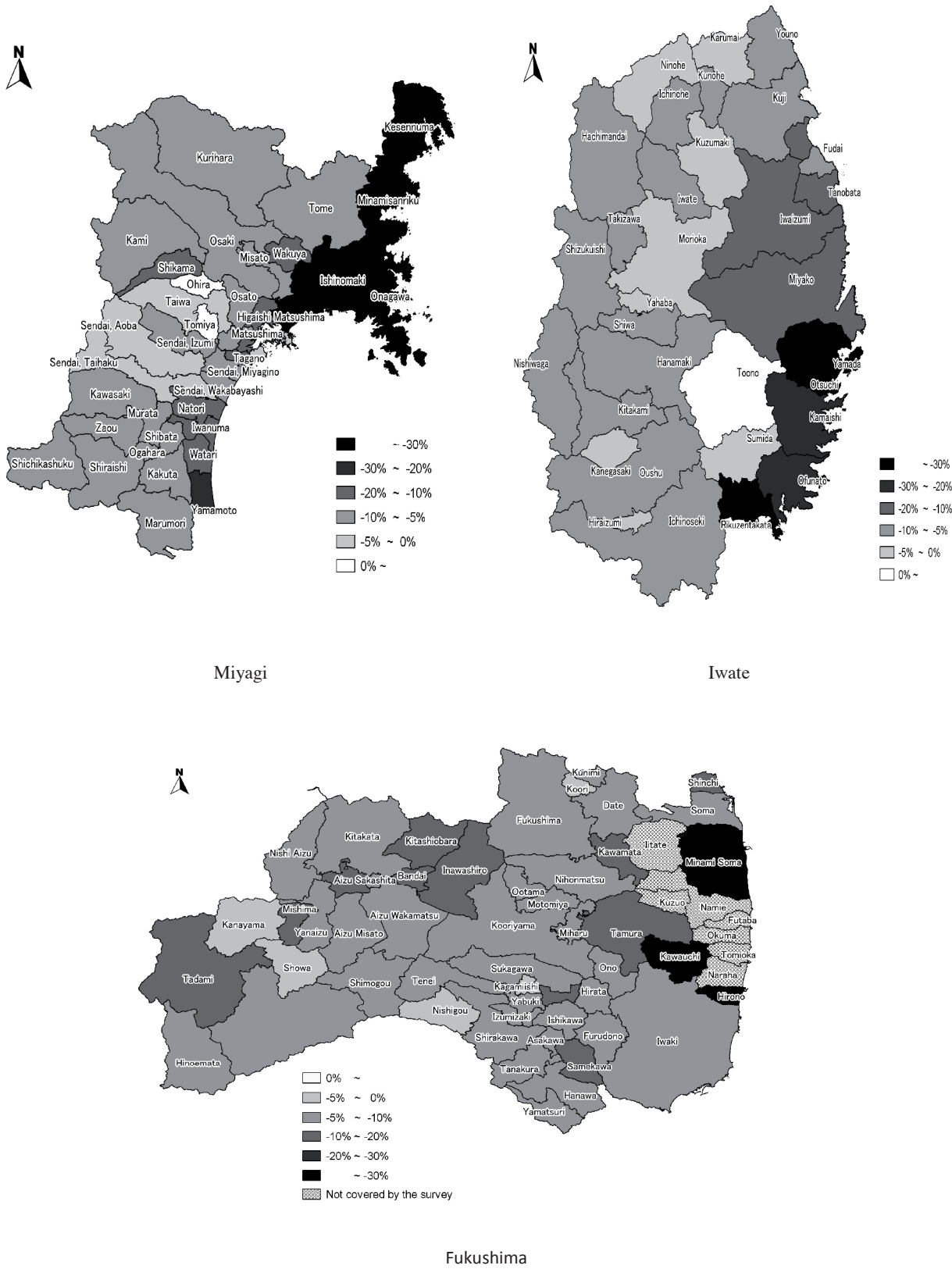
Ministry of Economy, Trade and Industry (METI), the number of employees and enterprises in the prefectures decreased by 13.5 per cent in 2009 and 8.1 per cent in 2012 on average. The employee count decreased by 10.3 per cent in Fukushima, 7.4 per cent in Miyagi, and 6.6 per cent in Iwate, while the enterprise count decreased by 11.7 per cent in Fukushima, 11.8 per cent in Miyagi, and 9.8 per cent in Iwate. As shown in figure 2.16 and figure 2.17, the coastal areas, especially those relatively close to the hypocentre of the 2011 Earthquake and/or to the Fukushima Daiichi Nuclear Power Plant, were generally more likely to be more affected than inland areas. In Miyagi, the number of employees decreased by 69.2 per cent in Minamisanriku town, 49.1 per cent in Onagawa town, and 40.3 per cent in Kesennuma city. In Iwate, the number of employees decreased by 67.1 per cent in Otsuchi town, 49.1 per cent in Yamada town, and 35.5 per cent in Rikuzentakata city. In Fukushima, Kawamura town (62.5 per cent) and Minamisoma city (31.9 per cent) were heavily damaged, although the most affected areas by the tsunami, earthquake and nuclear accident are not covered in this statistic. It is clear that the most affected municipalities in terms of the number of employees and enterprises by the 2011 Earthquake were located near the seismic centre.

Figure 2.16 Change in the number of employees in Miyagi, Iwate, and Fukushima



Source: MIC website [accessed 25 Sep. 2013].

Figure 2.17 Change in the number of enterprises in Miyagi, Iwate, and Fukushima



Source: MIC website [accessed 25 Sep. 2013].

Many residents in the nuclear-affected areas in Fukushima were also forced to evacuate to other areas. According to a survey of residents in the eight areas that were affected most by the earthquake and the nuclear contamination (Fukushima University, 2013),¹³ a profound change in the employment status in the areas was seen after the earthquake. About 20 per cent of the workforce in the areas became unemployed right after the earthquake, though the ratio of those who lost jobs depended on employment status. The rates of those who became unemployed were: (i) 32.4 per cent among the employees; (ii) 60.6 per cent among the self-employed; and (iii) 76.4 per cent among non-regular workers. Out of all the respondents, 81.6 per cent were making a living by the compensation paid by Tokyo Electric Power Company (TEPCO) and the assistance provided by the Government. The effects of the disaster in Fukushima have not just been on employment but also on family separation, living environment, financial status, and, more importantly, stress and depression from the impossibility or uncertainty of returning to their hometown despite their wishes to do so.

(f) Social structure and characteristics in disaster-affected areas

A disaster tends to have a greater impact on socially vulnerable groups than on others. This was certainly the case for the 2011 Earthquake, in which the degree of damage had a negative correlation with the economic status of local Government. The areas that were most affected by the 2011 Earthquake tended to have more workers engaged in the primary sector and a larger share of the elderly in the total population. The following are the characteristics of the damage by the earthquake from the viewpoint of social vulnerability. As of 11 April 2011, out of the people who died as a result of the 2011 Earthquake and tsunami, men accounted for 45.5 per cent, and women, 53.6 per cent. People at the age of 60 or older accounted for 65.2 per cent (Takenobu and Akaishi, 2012). In regards to people with disabilities, the number of those with the passbook for the physically challenged was about 29,000 as of 11 March 2011 (before the earthquake), which accounted for 2.4 per cent of the total population of Miyagi.¹⁴ Meanwhile, out of the 9,407 people in Miyagi who died as a result of the earthquake and tsunami, 15.3 per cent were people with disabilities. The mentally handicapped made up 44.0 per cent of total number of dead with disabilities.¹⁵ The probable reasons are: (i) they were unable to flee from the tsunami in a timely manner because of their disabilities; and (ii) there were structural problems such as a lack of a disaster prevention plan or welfare service. Moreover, according to the Ministry of Health, Labour and Welfare (MHLW), there was little difference by gender in the number of recipients of unemployment insurance before the earthquake. However, in June 2011, the number of female recipients reached a peak of 45,500, which was 1.3 times the number of male recipients.¹⁶ The analysis above shows that socially vulnerable groups suffered more damage than others in the earthquake and tsunami. It also shows the importance of examining the damage caused by the disaster with different social variables.

¹³ In September 2011, the Research Institute of Disaster Reconstruction at Fukushima University conducted a survey on the recovery status in the eight most affected municipalities near the Fukushima Daiichi Nuclear Power Plant. The survey was done through a questionnaire survey to all households in the Futaba region composed of eight municipalities near the power plant, i.e. Kuzuo, Namie, Okuma, Tomioka, Naraha, Kawauchi, Hirono, and Naraha. Of the 28,184 questionnaires sent, the response rate was 48.2 per cent.

¹⁴ *Asahi Shimbun* (a nationally circulated daily newspaper), 20 April 2011.

¹⁵ Japan Disability Forum website, accessed 10 Sep. 2013.

¹⁶ It is also worth noting that the data by gender were not made public until the Network for Supporting Women in the Great East Japan Earthquake, a women's group, formally requested its release by the MHLW Source [Takenobu, M; Akaishi, C. 2012. "Saigaisien ni Jyosei no Shienwo!" (Bring Women's Perspectives to Disaster Relief Assistance!)] Iwanami Booklet Vol.852, Iwanami Shoten, Tokyo].

2.3 Conclusion

In summary, the 2011 Earthquake had a massive socio-economic impact on people's lives and the Japanese economy as a whole. It took away from many people not only a place to live but also their livelihoods. The negative impact of the disaster in regard to employment was the largest in the three most affected prefectures in the Tohoku region, i.e. Iwate, Miyagi and Fukushima. However, the impact was not limited to these three prefectures; it affected Japan as a whole, and caused a significant amount of quitting or temporary leave. Those engaged in fishery in coastal areas were hit the hardest. The issues in Fukushima are complex, as leaks of radioactive materials from the Fukushima Daiichi Nuclear Power Plant and delays in the decontamination process make it more difficult for evacuees to return to their hometown and resume businesses.

Chapter 3 Institutional framework for recovery measures by the Japanese Government

This chapter provides a comprehensive overview of the institutional framework of recovery measures initiated by the Japanese Government. It begins by introducing pre-2011 Earthquake employment policies and measures, in order to help the reader understand how existing measures have been utilized in the disaster response on employment. The post-2011 Earthquake policy measures are detailed next, and the ‘Japan as One’ Work Project is broken down by phase (emergency, recovery, and reconstruction), implementation structure, and fund flows. Local-level employment policies and measures in Iwate, Miyagi, and Fukushima are then examined to show how reconstruction plans, employment policies, and measures in disaster response were formulated, while also addressing issues on policy formulation. Lastly, the chapter details a recent initiative by the new Administration to speed up the reconstruction process, which started in December 2012.

Chapter 3 concludes by noting that existing schemes for extreme-situation employment creation were well utilized in covering all affected people (albeit through a number of different measures) and for introducing a human resource dispatch system for reconstruction. These schemes were planned in phases from emergency to recovery to reconstruction, and the eligibility requirements for employment measures (as listed under the ‘Japan as One’ Work Project) were relaxed.

3.1 Employment policies and measures in Japan before the 2011 Earthquake

The Japanese Government is known to implement employment policies to respond to changes in economic and social conditions. High priority is often given to measures designed to provide employment opportunities, prevent unemployment, and facilitate re-employment, so that all workers can use their abilities to their full advantage. In this sense, the Employment Insurance System is the key to the stabilization of employment, and for the drafting measures designed to obtain work for those in need. Aside from the system, regional employment measures initiated by local Governments in accordance to industrial development have been emphasized as a result of the decentralization movement to transfer power from the central to the local Government since 2000. Furthermore, employment measures for different target groups, namely the socially vulnerable (the young, the elderly, women, and people with disabilities), are also described in this section.

3.1.1 The Japanese Employment Insurance System

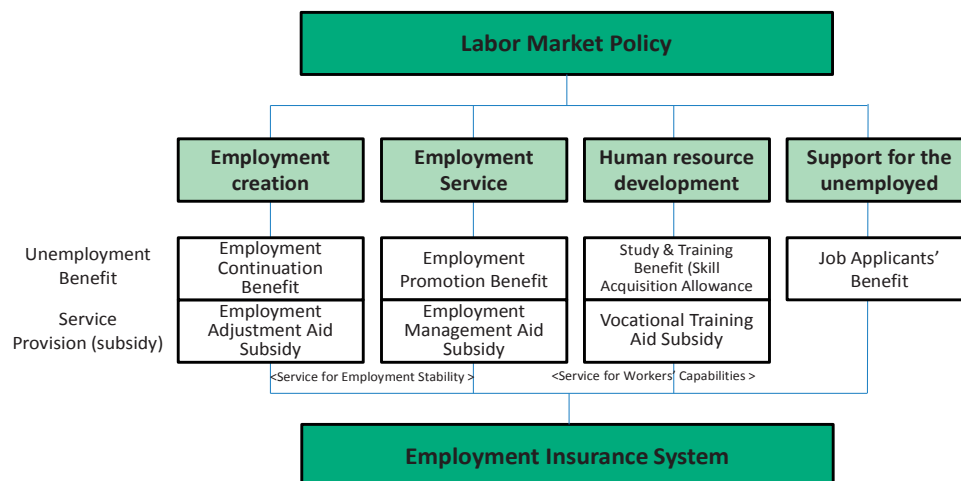
In an effort to prevent and reduce unemployment, the Employment Insurance Act was enacted in 1974 when the unemployment situation became increasingly severe due to the First Oil Crisis. Following the Act, the Employment Insurance System was set to stabilize workers’ living circumstances during times of unemployment and to encourage the unemployed to find new jobs (figure 3.1). The system was operationalized based on labour market policy geared towards: (i) employment creation; (ii) employment service; (iii) human resource development; and (iv) support for the unemployed. With a series of revisions over the years, the system is now comprised of two main functions: (i) the provision of unemployment benefits (insurance); and (ii) service provision to enterprises through the Public Employment Security Offices, or so-called ‘Hello Work’.¹⁷ The first includes job

¹⁷ The Offices manage unemployment insurance benefits for both Japanese and foreign unemployed workers, and provide job matching programmes for the unemployed. Under the Labour Bureau at the prefecture level, there are several branches, grouped with several municipalities.

applicants' benefits,¹⁸ employment promotion benefits, study and training benefits, and employment continuation benefits,¹⁹ while the latter is related to employment stabilization and developing workers' capabilities.

The subsidies (service provisions) for enterprises provided by the MHLW are: (i) assistance for employers hiring new personnel;²⁰ and (ii) an employment adjustment aid subsidy. The employment adjustment aid subsidy is intended to prevent employees from becoming unemployed. When employers retain their staff, even though economic fluctuations and/or industrial restructuring demand that they downsize, the Government pays them subsidies (wage expenses or the other payments). These subsidies enable employers to avoid layoffs or dismissals by covering part of the expenses incurred in paying temporary-leave allowances or salaries. The framework of the employment adjustment aid subsidy was fully utilized to prevent unemployment in emergency relief in the case of the 2011 Earthquake.

Figure 3.1 Labour market policy and Employment Insurance System in Japan



Source: Global Extension of Social Security website [accessed 10 Aug. 2013].

The insurance is compulsory for any enterprise that employs more than one worker in principle. In the Fiscal Year (FY) 2010, during which the 2011 Earthquake occurred, the numbers of covered establishments, insured workers, and beneficiaries were 2.03 million, 38.24 million, and about 730,000 people, respectively (MHLW, 2011g).

¹⁸ It includes: (i) basic daily allowance; (ii) job applicant benefits for the elderly; (iii) job applicant benefits for specially insured people in short-term employment; and (iv) job applicant benefits for insured day labourers. The basic allowance is determined based on previous wages (50-80 per cent), while the duration of payment (90 to 330 days) is calculated in accordance with the length of insured period, age, and the reason for retirement. This insurance is also provided to foreign employees. The insurance enrolment procedures are undertaken by employers at the Public Employment Security Office at the local level. Insurance premiums are paid by both employers and employees, their respective shares being defined by the employees' salary/wages.

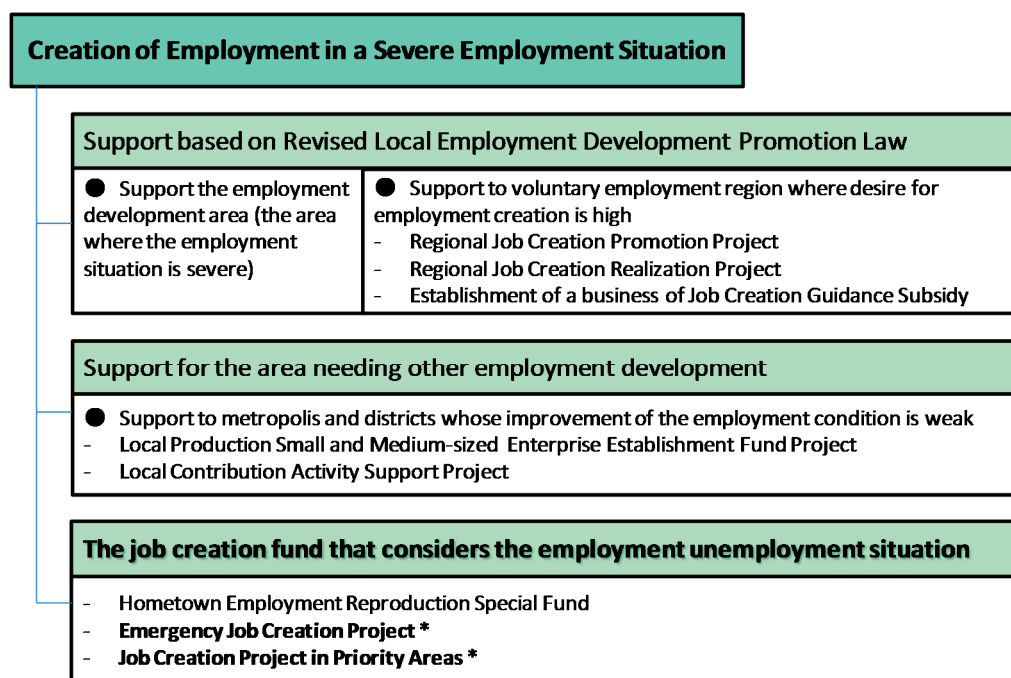
¹⁹ This includes older people, childcare leave, and family-care leave.

²⁰ This includes: (i) the employment creation personnel management aid subsidy for small- and mid-size enterprises; (ii) the highly qualified personnel maintenance aid subsidy for small- and mid-size enterprises; (iii) the working environment enhancement subsidy for small- and mid-size enterprises; (iv) special employment creation subsidies for new and high-growth potential fields; and (v) a nursing personnel maintenance aid subsidy.

3.1.2 Regional employment measures

The duties of the central and local Governments were clarified by the enactment of the comprehensive law on decentralization reform in 2000 and the Revised Employment Policy Act in 2000,²¹ the Revised Regional Employment Development Promotion Act in 2001, the Revised Employment Security Act in 2003,²² and the Revised Employment Policy Act in 2007. In addition, a policy that transfers the authority of the central Government to local Governments was established. According to this policy, regional employment measures are transferred to local Governments, so that they can take initiative in implementing employment measures in accordance with local socio-economic conditions. Employment measures in local areas include the following three pillars: (i) support based on the Revised Regional Employment Development Promotion Act; (ii) support for other areas needing employment development; and (iii) the Job Creation Fund (figure 3.2). In particular, the Job Creation Fund includes: (i) the Hometown Employment Reproduction Special Fund; (ii) the Emergency Job Creation Project;²³ and (iii) the Project on Job Creation in Priority Areas.

Figure 3.2 Regional employment measures



*Projects were expanded during restoration and reconstruction phases for the Great East Japan Earthquake

Source: MHLW, 2010.

²¹ The purpose of this law is to contribute to the balanced development of the national economy and the achievement of full employment by establishing both a qualitative and quantitative balance between labour supply and demand. It also enables workers to use their abilities by the State adopting necessary comprehensive measures for employment, thus promoting employment security and elevating the economic and social status of workers.

²² The purpose of this Act is, together with the Employment Countermeasures Act (Act No. 132 of 1966), to provide every person with an opportunity to obtain a job according to his or her ability and to meet the labour needs of industry by providing an employment placement business via Public Employment Security Offices. They also provide other employment security bodies to serve the public, with the cooperation of related administrative agencies and related organizations, and ensure the appropriate operation of the employment placement business.

²³ The objectives of the Job Creation Project, a former project of the Emergency Job Creation Project, are to: (i) provide the unemployed with a job at local Government and requested private companies in the short-term; (ii) lead to succeeding in a long-term job; and (iii) to stabilize their lives.

With the adoption of the decentralization policy, local Governments have undertaken job creation initiatives through the Job Creation Project (funded by the national Government) and by inviting private investors. However, employment conditions in Japan rapidly deteriorated in May 2008 due to the Lehman Shock.²⁴ In response to the crisis, the Government formulated four packages of employment measures²⁵ from 2008 to 2009 (MHLW, 2009). The main employment measures in these packages were: (i) employment security through the Employment Adjustment Subsidy Programme (as mentioned above); (ii) support for the jobless through comprehensive human resource development with an employment support fund;²⁶ (iii) job creation through the Emergency Job Creation Project in 2008 and the Job Creation Project in Priority Areas in 2009; and (iv) the enactment of the Bill to amend the Worker Dispatching Act. The job creation projects were expanded and used during the reconstruction process after the 2011 Earthquake.

3.1.3 New employment strategy against ageing society

The Government of Japan introduced a new employment strategy against its ageing society in 2010, as the low birth rate and demographic decline reached remarkable levels. The Government acknowledged that it is essential that people, seen as a valuable human resource, should be able to: (i) find a job they enjoy; (ii) make full use of their abilities; and (iii) enhance the professional life of every individual and revitalize society as a whole. To ensure that everyone who is willing to work can find employment, the Government developed a paper titled *A New Employment Strategy for Intensive Action up to 2010* to create “a society in which everyone plays a part” and in which everyone could make the most his or her abilities. Following this strategy, the Government introduced support measures to meet the specific needs of socially vulnerable groups such as the younger generation, older people, and women, and developed conditions to achieve stable employment and living standards and comfortable working conditions.

(a) Employment measures for the youth

Employment measures for the youth have been undertaken since 2010. In response to the needs of the youth who failed to become permanent employees during the employment ‘ice age’, when the job market for new graduates was most severe, and for those who remained *freeters* (job-hopping non-regulars) aged 25-34, employment measures for the youth were formulated in FY 2010 with three pillars. First, support for the *freeters* to find regular jobs was reinforced by implementing total support from providing career consultation services to promoting companies’ actions to expand job application opportunities for them. Second, vocational support, including for NEETs (Not in Education, Employment, or Training), was enhanced by expanding the number of locations where Regional Youth Support Stations were established. Third, employment support for new graduates and non-new graduates was enhanced by assigning job supporters to the Public Employment Security Office to provide total employment support in cooperation with universities. Additionally, human resource development in manufacturing and career building in cooperation with schools was promoted.

²⁴ The employment and unemployment situation in 2008 was growing more severe, shown by the active opening ratio’s decline in December to 0.72, which was the lowest level in the five years since 2003 (JILPT, 2009)).

²⁵ There are four measures: (i) the Comprehensive Immediate Policy Package to Ease Public Anxiety on 29 August, 2008; (ii) the Measures to Support People’s Daily Lives on 30 October, 2008; (iii) the Immediate Policy Package to Safeguard People’s Daily Lives on 19 December, 2008; and (iv) the Policy Package to Address the Economic Crisis on 20 April, 2009, (MHLW, 2009).

²⁶ Measures include: (i) re-employment support and the development of vocational skills; and (ii) measures for *freeters* and others.

(b) Employment measures for the elderly

It is projected that approximately one in three people of Japan will be over the age of 65 in 2030. To maintain socio-economic vitality, the Government believes it is necessary for many elderly to take an active part in supporting society and the economy by continuing to work. Against this background, employment measures for the elderly were structured according to three pillars. First, stable employment security for the elderly was promoted through raising the mandatory retirement age or introduction of a continued employment system. Second, re-employment of middle-aged and elderly people was supported and promoted by providing detailed employment consultation and using subsidies for the trial employment of middle-aged and elderly people. Third, diverse work styles and social participation for the elderly were promoted by providing support for services proposed and planned in cooperation with employment agency called 'Silver Human Resource Centre'.

(c) Employment measures for women

Employment measures for women have been undertaken since the middle of the 1980s. The Act on Securing of Equal Opportunity and Treatment between Men and Women in Employment was enacted in 1985, in order to expand the scope of the prohibition of sexual discrimination, prohibit prejudicial treatment of the groups of pregnancy or childbirth, and to require the introduction of measures to prevent sexual discrimination. The proportion of women in the total labour force population increased from 39.7 per cent in 1985 to 41.4 per cent in 2007, while women's share of managerial positions increased from 2.5 per cent in 1985 to 8.2 per cent in 2007. To ensure compliance with the Act, the equal employment offices in the Prefectural Labour Bureaus were established in each prefecture as local agencies of MHLW for the: (i) active dissemination of information about the Act; (ii) provision of advice, guidance, and recommendations by the head of Prefectural Labour Bureaus; and (iii) proactive guidance based on the Act to ensure equal treatment of the sexes and to monitor the actual status of employment management by enterprises.

(d) Employment measures for people with disabilities

Under the Basic Plan for People with Disabilities and the five-year Plan to Implement Priority Measures, employment measures for people with disabilities were implemented based on three pillars. The first pillar included guidance and assistance for employers as to the employment quota system for people with disabilities and assistance to employers through the Levy System for People with Disabilities, among others. The second pillar covered detailed vocational rehabilitation, considering the characteristics of the disabled to develop their occupational skills. The last pillar comprised raising awareness for employment of the disabled through a promotion campaign for employment of people with disabilities.

3.2 Policy: 'Japan as One' Work Project

3.2.1 Overview

Immediately after the earthquake, the inter-ministerial committee,²⁷ the Committee on Promotion of Employment Support and Job Creation for the Disaster Victims, headed by MHLW,²⁸ was set up on

²⁷ The members include various departments from the ministries related to employment, industry, and infrastructure, including the Ministry of Internal Affairs and Communications (MIC), the Cabinet Office, the Ministry of Economy, Trade and Industry (METI), the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and the Ministry of the Environment (ME).

²⁸ In principle, it is assumed that the Cabinet Office takes the lead in disaster management. However, since the Cabinet Office did not have enough human resources because of the scale of damages all over the coastal areas

26 March 2011, and held its first meeting on 28 March 2011. The purpose of the Committee was to support the disaster victims in the affected areas and to promote employment opportunities. Its secretariat was the Employment Policy Division, at the Employment Security Bureau at MHLW. As a result of discussions and coordination among the Committee members, the ‘Japan as One’ Work Project was formulated.²⁹ It is the most notable post-earthquake employment measure implemented by the Japanese Government. It features a comprehensive framework from emergency to reconstruction that covers employment maintenance and promotion, as well as expanding existing measures with the use of existing implementation mechanisms, such as fund systems and flows.

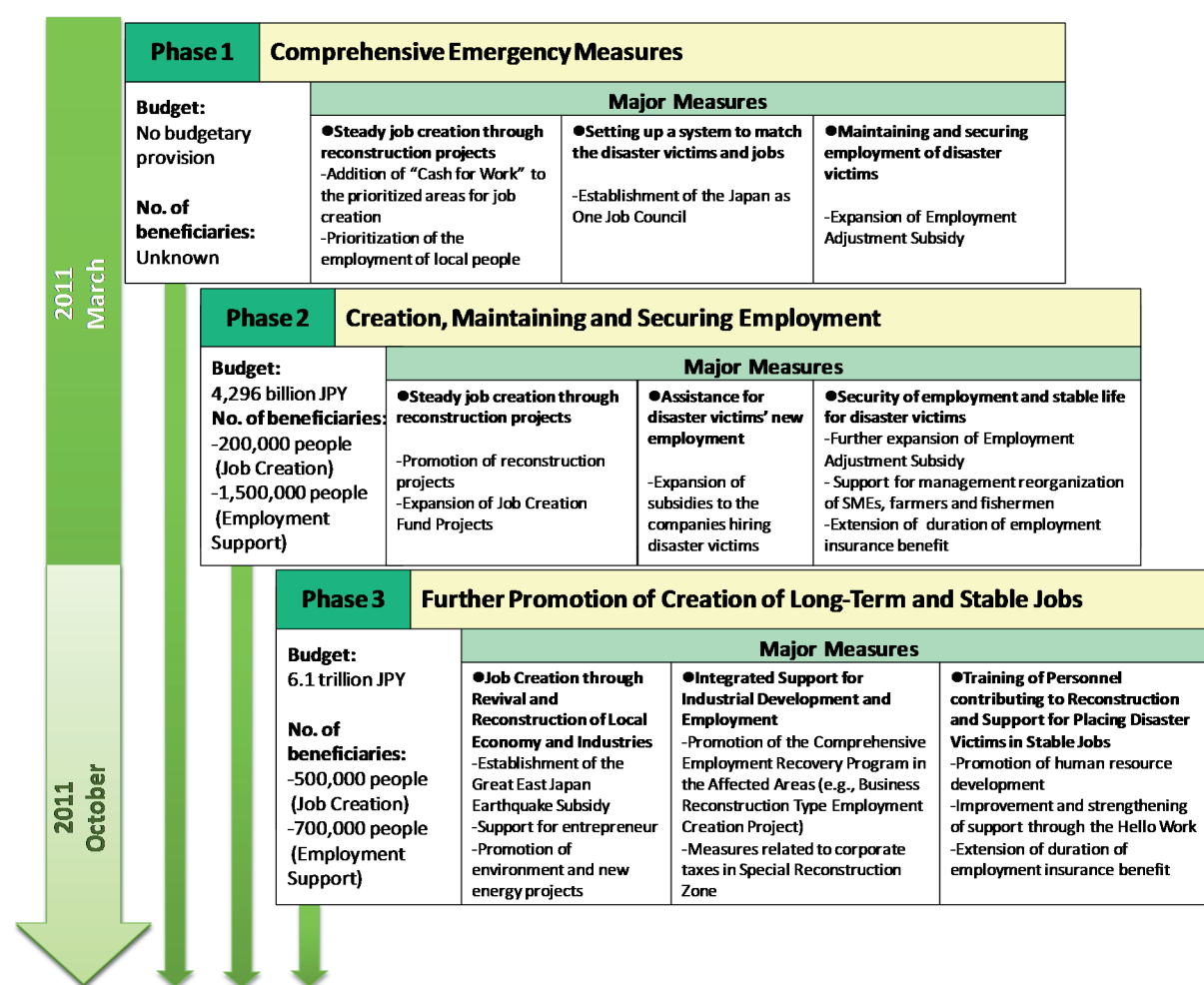
The Project is composed of three phases (figure 3.3). Phase 1 was drafted and finalized at the third meeting held on 5 April 2011 in response to an urgent need for recovery from devastating damages. With the focus on emergency measures such as Cash for Work, job matching, and provision of salaries of employees at disaster-affected enterprises, Phase 1 was compiled without budgetary provisions. The budget³⁰ was re-allocated from the remaining annual budget. Furthermore, existing schemes that were installed for tackling employment issues arising from the Lehman shock were utilized and expanded to the disaster victims. With the supplementary budget and legislative measures, Phase 2 of the Project was formulated on 27 April 2011. The plan in Phase 2 shifted towards medium-term measures, namely creating, maintaining, and securing employment. To further promote the creation of long-term and stable jobs, Phase 3 of the Project was compiled on 25 October 2011 under the financial provision of the third supplementary budget to the FY 2011 and the tax system reform. The Project consists of comprehensive measures that cover emergency measures, short-term employment creation and maintenance, and long-term and stable job creation.

in eastern Japan, it requested that the MHLW take the initiative to design the overall project and coordinate among the ministries on employment (interview with the person in charge of ‘Japan as One’ Work Project at the MHLW at that time in August 2013).

²⁹ This is an official translation of the project. Though the name is ‘the Project’, it appears that this project is rather a Programme composed of many projects and sub-projects. Furthermore, the name of the project implies that all Japanese unite to tackle the hardship through work.

³⁰ The Japanese fiscal year is from 1 April to 31 March.

Figure 3.3 Overall picture of the ‘Japan as One’ Work Project



Source: MHLW, 2011g.

From the beginning of the planning stage, the project was intended to be divided into several phases to meet urgent needs and demands for long-term reconstruction in the disaster-affected areas, in consideration of the scale of damage from the tsunami and nuclear impact. First of all, in response to urgent needs, the existing schemes for employment measures that had been already adopted after the Lehman shock were expanded in Phase 1. Further, other measures that functioned effectively after the 1995 Earthquake were applied, such as the expansion of the Employment Adjustment Subsidy and the Employment Insurance, and the additional staffing at the Public Employment Security Offices, with some modifications and special provisions.³¹ Under the present Administration, the name of the ‘Japan as One’ Work Project is no longer being used, though the concrete measures committed to in the framework of the Project have been implemented as planned.

³¹ For example, attempts were made to create employment outside the affected areas due to nuclear impact and massive scale of damage on economic infrastructure. Also, employment promotion through compulsory law did not work as intended for the Hanshin, since there were not many workers who sought construction work. The provision in fact led to the delay of rehabilitation work in infrastructure. Therefore, for this disaster the Government did not enact any compulsory law for job creation but tried to establish a system in which employment of local people would be prioritized as not compulsory (interview with the person in charge of ‘Japan as One’ Work Project at the MHLW at that time in August 2013).

3.2.2 Phase 1

The three pillars of Phase 1 are: (i) steady job creation through reconstruction projects; (ii) setting up of a system to meet the needs of the disaster victims and jobs; and (iii) maintaining and securing employment for disaster victims.³² The concrete measures of the first pillar are composed of: (i) the expansion of the Project on Job Creation in Priority Areas and the Emergency Job Creation Project, with modifications; (ii) the prioritization of the employment of local people; and (iii) the promotion of reconstruction projects. With respect to priority areas, ‘Earthquake Disaster Response Areas’ were added to the types of work covered by the Project on Job Creation in Priority Areas, and were categorized as ‘Cash for Work’, utilizing the existing fund system developed in response to the Lehman shock. Cash for Work aimed to support the effective recovery of disaster-affected areas by employing and paying wages to the disaster victims who participated in disaster recovery projects. This included various types of work, such as operating evacuation centres, patrolling, disposing of rubble from the tsunami, and supporting office work with local Governments.³³ In terms of prioritizing employment for locals, incentives (i.e. subsidies) were provided to local construction companies that hire the unemployed affected by the disaster.³⁴

For the second pillar, the function of job matching between disaster victims and jobs was strengthened both in and outside the affected areas by establishing the ‘Japan as One’ Job Council (hereafter ‘the Council’). The Council comprises of local Governments, Government agencies, and relevant organizations, and was set up in each prefecture with the leadership of the Prefectural Labour Bureaus. The main functions of the Council include: (i) coordination with the companies engaged in reconstruction projects; (ii) promotion of prioritization on job offers for people affected and contracting companies and materials in the affected areas; and (iii) promotion of submission of job offers for reconstruction projects to the Public Employment Security Office. Moreover, the functions of the Public Employment Security Office were expanded to: (i) provide on-site counselling services to the evacuation centres; (ii) support self-employed workers; and (iii) conduct occupational training.

For the third pillar on maintaining and securing employment for disaster victims, the most important measure was the expansion of the Employment Adjustment Subsidy. After the earthquake, the condition to apply to this subsidy was substantially relaxed for enterprises who owned an office in areas designated in the Disaster Relief Act³⁵ in the Aomori, Iwate, Miyagi, Fukushima, and Ibaraki prefectures. In Phase 1 of the Project, the eased condition was also applied to enterprises in the Tochigi, Chiba, Nagano, and Niigata prefectures. In addition, new exceptional measures were taken for enterprises outside the affected areas, but that had close relationships with those in the affected areas. Other measures were taken, such as assistance for management reorganization of

³² The total budget is not disclosed.

³³ Many municipal local Governments in the coastal areas in three disaster-affected prefectures were damaged by the earthquake and the tsunami. Some office buildings of local Governments were totally washed away and many officials died. Thus, this type of assistance was required. By regulation, there was a provision of a one year restriction on the employment period. However, this was later removed for disaster victims, as many of them could not find other works.

³⁴ In parallel, reconstruction projects such as restoration of infrastructure, clearing of rubble, construction of provisional housing and repairing and rebuilding of houses affected by the disaster were promoted.

³⁵ The Act, Law No. 108, was enacted on 18 October 1947 and revised several times. The purpose of the Act is to protect victims of disaster and maintain social order by causing the Central Government to provide needed relief services on an emergency basis in cooperation with local public entities and the Japan Red Cross, other entities, and the people of Japan. Relief services are provided to people who have been subject to the disaster and actually require relief activities within the territory that has been subject to a disaster of the magnitude specified by ordinance of the prefectural governor.

small and medium-sized enterprises (SMEs), prevention of the cancellation of job offers for new graduates and measures against dismissals, rejection of the extension of contracts, and termination of the contracts of dispatched workers.

3.2.3 Phase 2

Immediately after the compilation of the Phase 1, Phase 2 was compiled at the 5th Committee Meeting held on 27 April 2011 as comprehensive countermeasures according to the first supplementary budget to the FY 2011 and new legislations. The main objective of Phase 2 was to promote the implementation of measures in Phase 1. With a budget of ¥4,296 billion, the measures were composed of the following three pillars: (i) the steady creation of employment through reconstruction projects; (ii) assistance for development of disaster victims' new employment; and (iii) security of employment and a stable life for the disaster victims. In Phase 2, the number of jobs created and recipients of employment support were anticipated to be around 200,000 people and more than 1.5 million people, respectively.

For the first pillar, with a budget allocation of ¥2,544 billion, the following measures were implemented: (i) the promotion of reconstruction projects; and (ii) the expansion of the Job Creation Fund Project. Reconstruction projects on public civil engineering facilities, airports, public housing, water supply systems, industrial water supply systems, and waste disposal facilities were promoted, with an allocated budget of more than ¥900 billion. In addition, the construction of temporary housing and disposal of disaster waste were promoted. The Job Creation Fund was expanded by increasing the funds for its component, the Project on Job Creation in Priority Areas, by ¥50 billion.

The second pillar had a budget of ¥15.8 billion. The core measure in Phase 2 was the provision of subsidies for companies hiring disaster victims. The unemployed affected by the disaster were added to the list of those eligible for the Employment Development Subsidies for Disaster Victims. The enterprises hiring them receive from ¥500,000 to ¥900,000 according to the scale of the business (i.e. large enterprise or SMEs). The second largest measure in the first pillar in terms of the budget was the expansion of vocational training. Public vocational training to the unemployed affected by the disaster related to construction was expanded in addition to exempting fees of vocational training for graduates and employed people in the affected areas. Other measures included the full enforcement of disaster prevention measures for reconstruction work, provision of on-site counselling services at evacuation centres, and the development of employment opportunities based on the needs of disaster victims, support for those who seek jobs outside of the affected areas, and employment support for new graduates in the affected areas.

The third pillar had a budget of ¥1,736 billion. Here, the core measures were: (i) further expansion of the Employment Adjustment Subsidies; (ii) support for management reorganization of SMEs, farmers, and fishers related to credit and loans; and (iii) expansion of the duration of Employment Insurance Benefits to up to 60 days. With respect to (i), when businesses were closed during the special eligible period, employers were eligible for a maximum of 330 days of subsidies.³⁶ This provisional measure was extended for the specified enterprises that suffered from the disaster.³⁷ With regard to (ii), special

³⁶ In general, the subsidies had been provided to those who were insured by Employment Insurance Scheme for more than six months. As a provisional measure to deal with the Lehman shock, the target was expanded, and the subsidies were provided to those whose duration of insured period was less than six months.

³⁷ The specified enterprises include: (i) enterprises who owned an office in areas designated in the Disaster Relief Act in Aomori, Iwate, Miyagi, Fukushima, and Ibaraki, Tochigi, Chiba, Nagano and Niigata Prefectures;

loans and credit services were provided through two schemes: the Special Loan for Post-Great East Japan Earthquake Reconstruction and the Emergency Guarantee for Post-Great East Japan Earthquake Reconstruction. The former offered loans with low interest rates and a long grace period for SMEs in the affected areas, while the latter extends the guarantee limits for SMEs to get a loan from a bank. Other measures included the exemption of various insurance premiums and facilitation of claims for reimbursement for unpaid wages and speedy payments.

3.2.4 Phase 3

Phase 3 featured a group of measures that aimed to create stable jobs in the long run. Phase 3 of the Project was compiled at the eighth Committee meeting held on 25 October 2011 with the third supplementary budget to the FY 2011 and the tax system reform. The measures in Phase 3 consisted of: (i) job creation through the revival and reconstruction of local economy and industries; (ii) integrated support for industrial development and employment; and (iii) training of personnel who can contribute to reconstruction and support for placing disaster victims in stable jobs. With the budget allocation of ¥6,100 billion, the number of jobs created and supported was around 500,000 and 70,000, respectively. Measures implemented in Phase 1 and Phase 2 continued to be strongly promoted, even after Phase 3 began. The first pillar was allocated ¥5,700 billion, and jobs were expected to be created for 350,000 people. The core measures were: (i) the establishment of the Great East Japan Earthquake Subsidy; (ii) support for enterprises; (iii) support for the agriculture, forestry, and fisheries industries; (iv) community-building by promoting an integrated community care system; (v) promotion of infrastructure improvement through disaster recovery and reconstruction; and (vi) promotion of environment and new energy projects. The Great East Japan Earthquake Subsidy was intended to enable the municipalities to implement projects to restore the affected areas on their own initiative, especially in fields that could not be addressed by the reconstruction projects in Phase 1 and Phase 2. With regard to (ii), subsidy programmes for industry reconstruction and development were introduced in addition to loan aid and guarantee schemes in Phase 2. One sample of the subsidies is the SME Group Subsidy, which had been provided for a group of SMEs on the reconstruction of common facilities, such as production facilities, processing facilities, and retail facilities. Regarding (iii), support for fishery industries includes the Fishery Reconstruction Support Project³⁸ and the Aquaculture Reconstruction Support Project.³⁹

(ii) enterprises outside the affected areas with a close relationship with those in the affected areas (i.e. more than one thirds of the total amount of work is related); and (iii) enterprises who have close relationships with (ii) (i.e. more than half of the total amount of work is related).

³⁸ Under the Project, necessary expenses are subsidized for undertakings that contribute to a stable production system of marine products. The target groups of this subsidy are: (i) fishers whose profitability deteriorated because of the fishing boat and fishery-related facilities affected by the disaster; or (ii) fishers who are recognized to have suffered the equivalent damage. The requirements to be selected are: (i) to prepare a 'Fishery Reconstruction Plan' showing the undertakings contributing to the improvement and restoration of the profitability; and (ii) the Plan is approved by the 'Central Council', composed of experts in the relevant field, such as fishery, shipbuilding, and finance. According to the content of the undertaking, the grant rate is determined by the ratios (i.e. 90 per cent, 67 per cent, or 50 per cent) of necessary expenses. The maximum period for an undertaking is three years.

³⁹ Under the Project, necessary expenses are subsidized for undertakings that aim to resume early and manage the reorganization of aquaculture through cooperation, and those that have a long-term aim of becoming independent within five years. The target group is farmers or their successors who are recognized as truly needing the support for restructuring of their businesses. The requirements to be selected are to prepare an 'Aquaculture Reconstruction Plan', which shows the undertakings leading to early resumption of aquaculture through cooperation, and to be approved by the 'Approval Council', composed of experts in the relevant fields in Iwate, Miyagi, and Tokyo. The grant rate is 90 per cent of the expenses that cannot be covered by the earnings from landing. The grant period is within three times of productions.

The second pillar was allocated ¥400 billion, and jobs were expected to be created for 150,000 people. The core measures were: (i) the promotion of the Comprehensive Employment Recovery Programme in the Affected Areas; and (ii) measures related to corporate taxes in relation to the setting up of the Special Reconstruction Zone System. The first measure included two projects: the Business Reconstruction Employment Creation Project; and the Employment Creation Project Characterized by Lifelong Commitment to Work, Employee Involvement, and Generational Transfer, in which local Governments commission private companies to implement a project that can be a model for employment of the elderly, women, and people with disabilities. Regarding (ii), newly established companies and the salaries of disaster victims are exempted from taxation for five years.

The third pillar was allocated ¥100 billion, and employment was expected to be supported for 70,000 people. The core measures were: (i) the promotion of human resource development; (ii) improving and strengthening support through the Public Employment Security Offices; and (iii) extension of the payment of employment insurance benefits. Concerning (i), public vocational training was further expanded in the fields that were expected to contribute to the reconstruction of the affected areas and in growing areas, such as environment and energy.⁴⁰ With respect to (ii), support for new graduates was promoted by extending the covered period for the Subsidy for Regular Employment⁴¹ and also for people with disabilities.⁴² As for (iii), the payment was extended by 90 days in the coastal areas of the three affected prefectures, Iwate, Miyagi, and Fukushima. All committed measures stated above have been either completed or are still on-going, depending on the progress and budget allocation of measures, although the name of the Project ('Japan as One' Work Project) is no longer used as of September 2013. Because of the nature of the Japanese public services and budget system, all measures have been bounded with approved budgets. Thus, even if the name of the project is not used, all approved measures have been implemented by responsible ministries or agencies, though there might be some delays.

3.2.5 Social consideration

Consideration to socially vulnerable people, such as women, the elderly, and people with disabilities was given in some measures with special provisions in the 'Japan as One' Work Project. Two main considerations are addressed in the following.

First, in Phase 1 and Phase 2, special consultation desks for people with disabilities were set up at the Public Employment Security Offices all over Japan and the Local Occupational Centre for the People with Disabilities in Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Tochigi, and Chiba. Three more measures were implemented for people with disabilities in Phase 3. The first measure was the expansion of the Subsidy for Regular Employment for enterprises that hire people with disabilities after an internship period at the enterprises in the affected areas. The second measure was to set up the employment support system at the Employment and Livelihood Support Centre for the People

⁴⁰ For example, support for human resources on training in nursing care has been provided from outside the affected areas, and a practical training course on instalment of solar panel and energy-saving glass coating has been provided.

⁴¹ This is given to enterprises who hire those who have graduated in the last three years among the areas affected by the 2011 Earthquake.

⁴² This is further expansion of a subsidy for those who hire people with disabilities after an internship at the enterprises in the affected areas.

with Disabilities, which was strengthened by the allocation of additional employment support staff and new allocations of clerical staff. The third measure was done through the allocation of an additional job coach at the Local Occupation Support Centre for People with Disabilities.

Second, the Employment Creation Project Characterized by Lifelong Commitment to Work, Employee Involvement, and Generational Transfer was implemented in Phase 3. This Project supported undertakings such as skill transfer from the elderly to the youth and development and sale of local products by women and/or people with disabilities. In this Project, the municipalities in these undertakings are expected to contribute to the long-term job creation of the affected people.

3.2.6 Social assistance for Fukushima

As a result of the long-lasting impact of the accident of the Fukushima Daiichi Nuclear Power Plant, the subsequent dispersion of radioactive substances, the earthquake, and the tsunami, Fukushima has faced a different situation from the other affected areas. Specifically in terms of employment, because of the dispersion of radioactive substances, many people who used to live in Fukushima evacuated to other prefectures, where they now cannot find stable jobs and thus cannot secure stable bases for their livelihoods. Under this situation, special measures for employment in Fukushima were provided collaboratively by METI, MHLW, and the Fukushima prefectural Government, especially in: (i) job creation by public grants and SMEs; (ii) support for the continuation of companies located in Fukushima; and (iii) attraction of new companies to Fukushima. Some examples are described below.

A special provision was also added to the Employment Adjustment Subsidy for Fukushima. When an enterprise that used to be located in an officially designated evacuation zone under the Act on Special Measures Concerning Nuclear Emergency Preparedness continues its business outside the zones, it is eligible for the Employment Adjustment Subsidy. The Employment Insurance benefit was also given special regulation in Fukushima. When any enterprise is closed because of the designation as an evacuation zone, the employees are eligible to receive employment insurance benefits. The other special measure for Fukushima is to support the establishment of new business facilities outside Fukushima and relocation inside Fukushima under the Project for Support for Establishment of New Business Facilities for Industrial Restoration in Fukushima. It also promotes the early resumption of industrial parks⁴³ to speed up the establishment of business facilities. Due to the special conditions in Fukushima caused by the Fukushima nuclear power plant accident, short- and long-term measures on employment have been tailored especially for Fukushima.

3.3 Implementation structure

3.3.1 General implementation structure

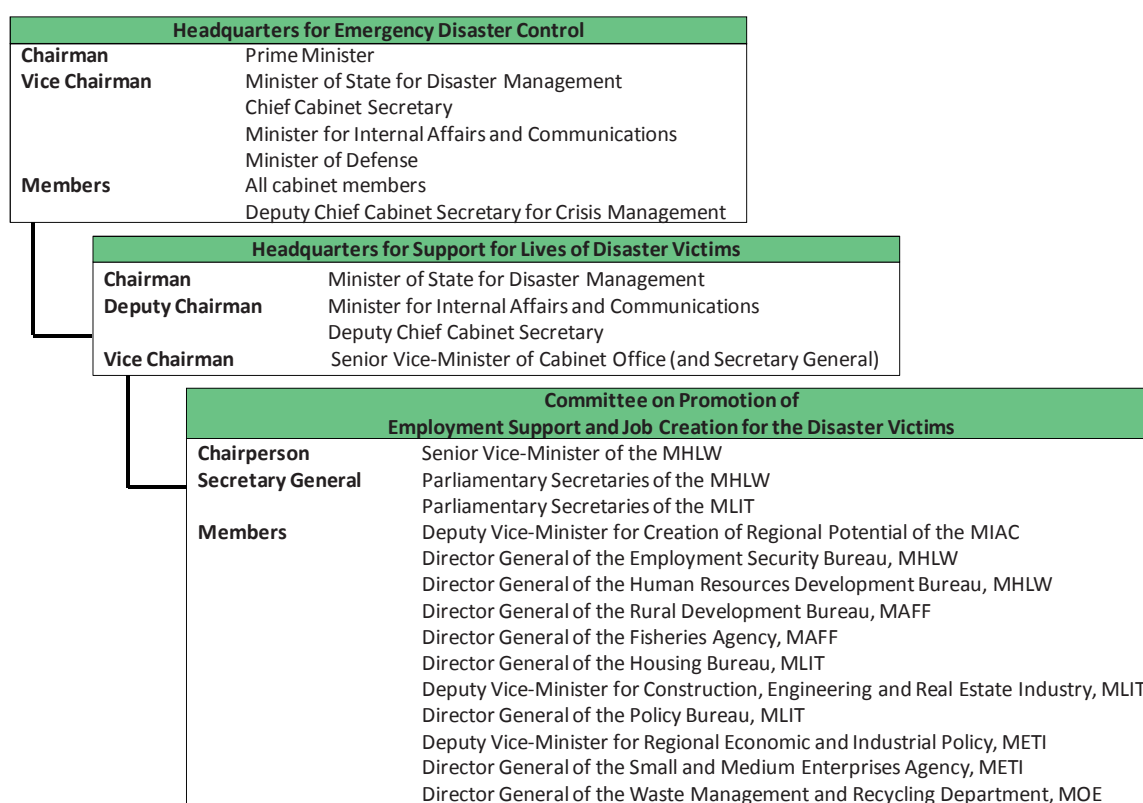
Along with the existing mandates of Government ministries/agencies and local Governments engaged in employment and industry, employment measures for the affected areas of the 2011 Earthquake have been implemented, such as the ‘Japan as One’ Work Project. At both the national and the local Government levels, some implementation structures and mechanisms were established to coordinate and promote the implementation of the Project. At the national level, the Committee on Promotion of Employment Support and Job Creation for the Disaster Victims was established on 26 March 2011,

⁴³ An industrial park is an area zoned and planned for the establishment of factories and storages. They are usually located in areas that have advantages in production activities, such as distant location from the main residential area of a city and good transportation access. In Japan, industrial parks were constructed all over the country after the World War II. As of August 2013, there are 38 industrial parks in Fukushima Prefecture.

with the aim of formulating comprehensive measures across the ministries to promote employment support and job creation for the disaster victims. The structural linkage of the Committee to the Headquarters for Emergency Disaster Control and the Headquarters for Support for Lives of Disaster Victims is shown in figure 3.4. The chairperson of the Committee was the Senior Vice-Minister of the MHLW, and the Secretary Generals were the Parliamentary Secretaries of the MHLW and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). In addition, the Deputy Vice-Ministers and the Director Generals from diverse ministries were the members of the Committee. The Committees on employment promotion in response to the 2011 Earthquake were established collaboratively by various concerned ministries and agencies.

By 28 April 2011, the ‘Japan as One’ Job Council was established in all 47 prefectures at the local Government level in order to strengthen the function of job matching for disaster victims. In principle, the Councils were intended to: (i) share information on jobs and coordinate with the contracted companies of reconstruction projects; (ii) promote the hiring of affected people and form contracts with local companies in the affected areas; and (iii) collect job offer information for the Public Employment Security Offices.

Figure 3.4 Committee on Promotion of Employment Support and Job Creation for the Disaster Victims



Source: MHLW website [accessed 13 Aug. 2013].

Headed by the Prefectural Labour Bureau under MHLW, the Council was composed of the local Government, and outpost agencies of the central Government and relevant organizations. Examples of participants of the ‘Japan as One’ Job Council in Miyagi and Iwate are shown in table 3.1. In Miyagi’s case, aside from central Government and local Government agencies, private actors in fields such as industry, finance and labour, as well as non-profit organization (NPOs) and

the mayors of neighbouring cities also participated. In Iwate, the composition of participants from central Government agencies is similar to that of Miyagi. The major characteristics of the Iwate Council is the participation of agricultural and fishery cooperatives, instead of mayors of neighbouring cities and NPOs in Miyagi. The Council participants differ by disaster-affected prefecture.

Table 3.1 Participants of the ‘Japan as One’ Job Council in Miyagi and Iwate

	Miyagi	Iwate
Prefecture	1) Department of Economy, Commerce and Industry, and Tourism, Miyagi Prefecture	2) Iwate Prefecture (Department Unknown)
Municipality	3) Sendai city Mayor 4) Rifu town Mayor	None
Ministry	5) Miyagi Labour Bureau, MHLW 6) Tohoku Bureau of Economy, Trade and Industry, METI 7) Planning Department, Tohoku Regional Bureau, MLIT 8) Tohoku Regional Agricultural Administration Office, MAFF	9) Iwate Labour Bureau, MHLW 10) Tohoku Bureau of Economy, Trade and Industry, METI 11) Morioka Regional Centre, Tohoku Regional Agricultural Administration Office, MAFF
Industrial circles	12) Miyagi Employers’ Association 13) Miyagi Chamber of Commerce and Industry 14) Miyagi Prefectural Federation, Societies Commerce and Industry 15) Miyagi Prefectural Federation, Small Business Associations 16) Miyagi General Construction Association	17) Iwate Employers’ Association 18) Iwate Chamber of Commerce and Industry 19) Iwate Prefectural Federation, Societies Commerce and Industry 20) Iwate Prefectural Federation, Small Business Associations 21) Iwate General Construction Association
Financial circles	22) Sendai Branch, Japan Finance Corporation 23) Sendai Branch, Shoko Chukin Bank 24) Miyagi Prefectural Federation, Japanese Trade union Confederation	None
Labour world		25) Iwate Prefectural Federation, Japanese Trade union Confederation 26) Iwate Central Union of Agricultural Cooperatives 27) Iwate Federations of Fishery Cooperatives
NPO	28) Equal Net Sendai (NPO)	None
Relevant organizations	29) Miyagi Office, Industrial Employment Stabilization Centre of Japan	30) Iwate Office, Industrial Employment Stabilization Centre of Japan 31) Iwate Centre, Employment and Human Resources Development Organization of Japan
Observers	32) Ishinomaki city Mayor 33) Kesennuma city Mayor	None

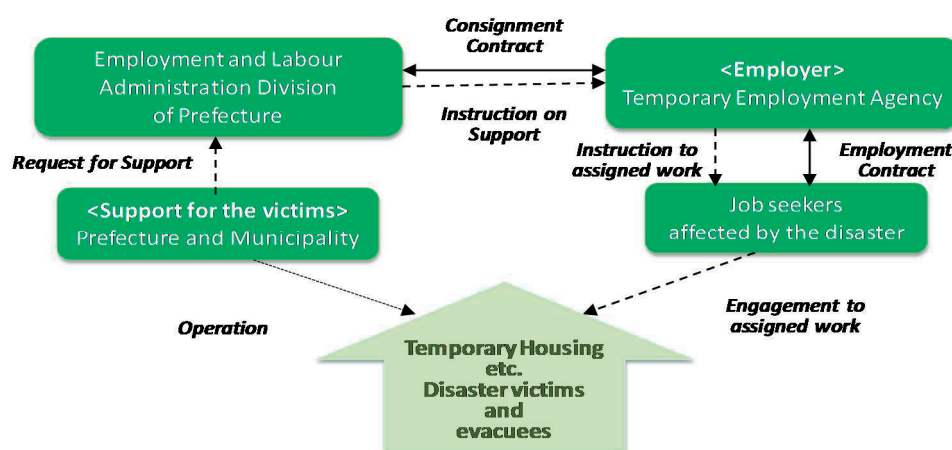
Source: MHLW website [accessed 5 Aug. 2013].

3.3.2 Special implementation structures

Aside from the general implementation structure shown above, there are special implementation structures that account for special circumstances. For example, the Emergency Job Creation Project,

known as Cash for Work, was implemented by municipal Governments. However, given the situation in Fukushima, where the evacuees were spread over the prefecture, the *Kizuna* (tie, bonds) Building Support Project was adopted and promoted to implement the said project by the Fukushima prefectural Government. The objectives were to: (i) strengthen the operational system of temporary housing; (ii) strengthen social ties and bonds among the evacuees and local people; and (iii) provide financial assistance to the evacuees and the unemployed through employment. The operational system for this project is illustrated in figure 3.5. The Employment and Labour Administration Division of Fukushima divided the prefecture into six areas, and consigned temporary employment agency in each area. The agencies offered affected jobseekers work in temporary housing under the operation of the prefecture and municipalities. This project has created around 1,000 employments per year. Thus, the Government attempted to flexibly and effectively respond to the employment recovery in accordance to the circumstances by setting up the special implementation structures.

Figure 3.5 Operational system for the Bond Making Support Project in Fukushima



Source: Fukushima Prefecture website [accessed 7 Aug. 2013].

3.4 Fund flow

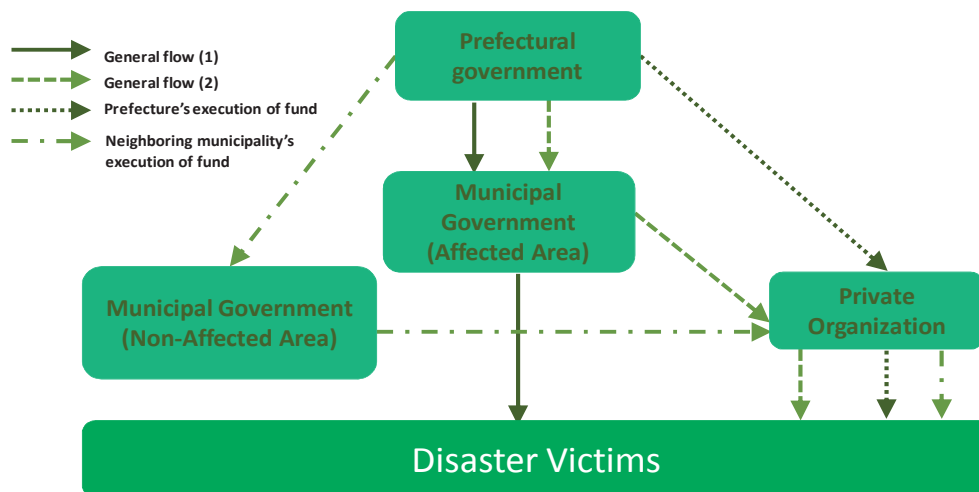
The following section describes the fund flow that was undertaken to implement the disaster-response employment measures following the 2011 Earthquake. Japan's annual budget is approved through a parliamentary cabinet system, as the constitutional authority resides in the Prime Minister's cabinet. In this system, unlike the United States and other countries, the submission of budget proposal to the Diet (the National Parliament of Japan) is not the beginning of budget formulation, but rather the final stage of budget deliberations after negotiations among the ruling parties and the ministries have been completed.⁴⁴ In case of the response to the 2011 Earthquake, the budget for reconstruction was incorporated into the general account and special account of the budget after having been added as a supplementary budget in FY 2011 and FY 2012. There are two transfer mechanisms for budget

⁴⁴ In Japan, the Budget Bureau of the Ministry of Finance (MOF) has primary authority to formulate the budget. Its primary responsibility is to incorporate the budget requests of the ministries and agencies into a final budget proposal. In carrying out this function, the MOF sets forth the basic principles for the ministries and agencies to roughly estimate their budgets. Based on the principles, the ministries and agency come up with a budget proposal and submit to the MOF. After the MOF review the estimates submitted, the MOF adjusts and presents its unofficial first draft of the proposed budget. With minor adjustments to expenditure levels through negotiation with the ministries and agencies, the proposed budget is submitted to the Cabinet for decision. Once the Cabinet has issued its approval, the proposed budget is then submitted to the Diet for final approval.

allocations to local Governments in Japan: (i) the Local Allocation Tax (LAT); and (ii) the State Subsidy. Along the lines of decentralization, the LAT is a general financial resource that local Governments can use autonomously, while the state subsidy is an embarked grant (e.g. for compulsory education). After the 2011 Earthquake, the Special LAT for Recovery from Earthquake Disaster was also established and added to the general LAT. After the budget allocation to the local Government, there were various fund flows for measures on the ground. For example, some grants were directly used by prefectures, while others were transferred to municipalities or private companies. According to an interview with the person in charge of formulating the Project, each responsible agency that proposed specific employment measures decided the most effective implementing structures and fund flows considering the damage, capacity, and expertise of the expected responsible agency. In fact, in most cases, an existing fund flow mechanism for each measure in the pre-earthquake period was used.

Examples of various fund flows in the Job Creation Fund are illustrated in figure 3.6 below. For the operation of temporary housing using the Job Creation Fund, there are several fund flows from the prefecture local Government to: (i) municipal Governments in the affected areas; (ii) municipal Governments to private organizations; and (iii) the municipal Government in non-affected areas (figure 3.6). The most common fund flows show that: (i) an affected municipality local Government receives the fund from the prefecture and operates the temporary housing themselves; and (ii) a municipal Government commissions private organizations to take charge in the operation of the temporary housing. When affected municipalities are extremely damaged, prefecture or neighbouring municipalities commission private organizations to manage the temporary housing in their stead. The fund flows of the Job Creation Fund were determined in consideration of the local situations.

Figure 3.6 Fund flow for the Emergent Job Creation Fund



Source: Modified from JILPT, 2013.

For some measures, the budget is not transferred to the prefectures, but is instead provided directly from the METI to private companies as a subsidy, as exemplified by the Subsidy for Promotion of Establishment of New Business Facilities of Domestic Companies. As another exceptional case, the budget for the Special Loan for Post-Great East Japan Earthquake Reconstruction is provided from METI to the Japan Finance Corporation, which subsequently loans SMEs directly or through a designated financial institution.

3.5 Employment and labour policy for recovery in the three affected prefectures

3.5.1 Overall

Employment and labour policy for reconstruction at the local Government level is integrated into the overall Reconstruction Plan. Thus, before explaining the employment and labour policy at the local Government level, a brief background of the formulation of the Reconstruction Plan at the local Government level is necessary. Based on the Basic Act on Reconstruction in response to the 2011 Earthquake⁴⁵ enacted in June 2011 and recommendations by the Reconstruction Design Council, the Basic Guidelines for Reconstruction⁴⁶ were formulated in July 2011 to overview the basic principles on reconstruction and measures undertaken by the central Government to help disaster-affected local Governments in formulating their own reconstruction plans. One of the principles of employment is to promote employment of affected people through recovery and reconstruction investments under the 'Japan as One' Work Project.

In fact, disaster-affected local Governments had already begun formulating reconstruction plans to show residents prospects for recovery and reconstruction and build a consensus among them⁴⁷ even before the guidelines were made public by the central Government. Most reconstruction plans included a vision, principles, land use plan, and proposed time frame (Sato and Imamura, 2013).⁴⁸ Out of the nine prefectures in the specified affected prefectures under the Disaster Relief Act, all the three heavily disaster-affected prefectures of Iwate, Miyagi and Fukushima, as well as Aomori formulated reconstruction plans.⁴⁹ Similarly, out of the 227 specified municipalities under this Act, more than 120 completed plans by August 2013. As shown in figure 3.7, Fukushima was late in formulating its plan because of the damage in local Governments and the nuclear power plant accident, which restricted access to contaminated areas and led to the evacuation of many residents.

⁴⁵ The Act was drafted based on recommendations by the Reconstruction Design Council composed of experts in various fields headed by Dr. Iokibe, a President at the Hyogo Earthquake Memorial 21st Century Research Institute.

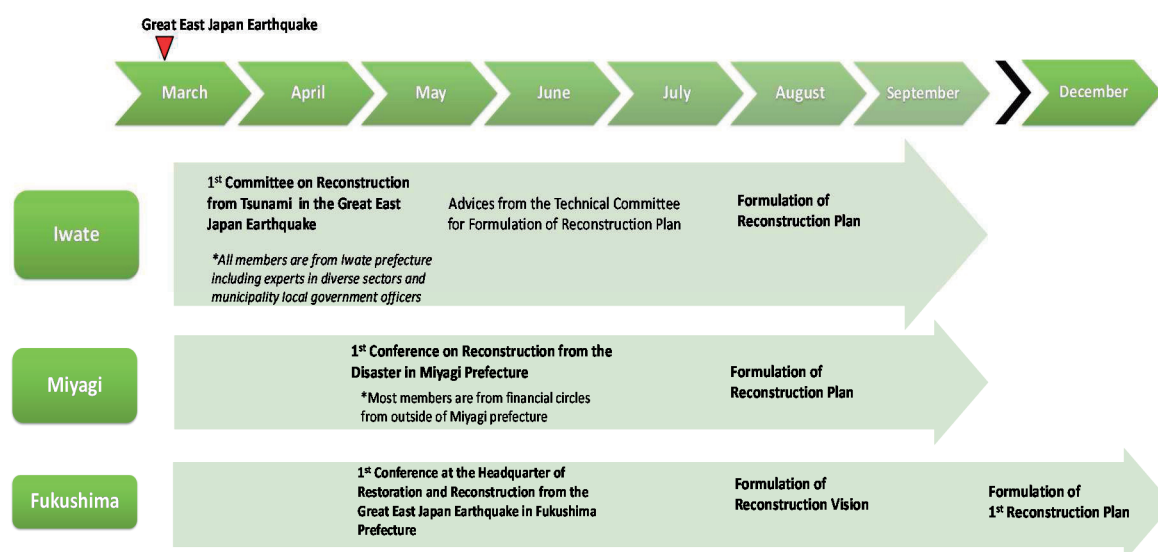
⁴⁶ For details, refer to the Reconstruction Agency website, <http://www.reconstruction.go.jp/topics/000052.html> [accessed 8 July 2015].

⁴⁷ The specified affected prefectures are actually nine, but only four prefectures formulated the plans.

⁴⁸ According to the survey on contents of reconstruction plans in 51 municipal Governments, the following are the main contents: (i) major policies are tsunami disaster mitigation infrastructure development, life recovery and industrial recovery; and (ii) major components of regional development are physical measures for human damages such as levee and road raising and working areas such as farming, fisheries industry.

⁴⁹ In the process of formulating reconstruction plans, the technical committees were organized to give advice to local Governments. The committee at the Miyagi prefectural Government was composed of experts in different fields from outside Miyagi; all the members in Iwate are from Iwate including municipality local Governments.

Figure 3.7 Formulation process of reconstruction plan in three affected prefectural Governments



Source: Research team

The formulation processes as well as the ultimate policy directions undertaken by the three disaster-affected prefectural Governments are different. In this sense, Miyagi and Iwate took contrary methods in policy formulation. In Miyagi, the committee members are mainly well-known intellectuals from outside, headed by a former Dean of the University of Tokyo. It originated in the Miyagi governor's belief that a bold change of ideas was needed for reconstruction. On the other hand, based on bottom-up and build-up approaches initiated by the governor, the reconstruction committee in Iwate was comprised of 19 local representatives⁵⁰ and reflected local voices into the plan through deliberations.⁵¹ Each of the three prefectural Governments has two schemes to implement reconstruction plans: (i) the central Government designs and implements projects in cooperation with prefectural Governments with the budget allocation from the central office; and (ii) the prefectural Governments design plans on their own and implements it within its own budget. Local Governments occasionally provide a partial subsidy on the top of the central Government schemes to reduce the financial burden of disaster-affected people or increase the amount of assistance and beneficiaries. The differences in basic ideas for recovery or reconstruction among the prefectures resulted in different policy formulation processes and projects as described in the following sections.

3.5.2 Miyagi

In Miyagi, the Disaster Reconstruction Plan, the Bond among Miyagi, Tohoku and Japan from Recovery to Prosperity, was formulated in October 2011 for a ten year period (Miyagi Prefectural Government, 2011). To achieve recovery, it has five basic principles: (i) developing a disaster-resistant and secure community; (ii) positioning each citizen as a key player in the recovery efforts; (iii) ensuring not only restoration, but also reconstruction; (iv) prioritizing progressive community development; and (v) building a model outlining the necessary steps from catastrophic damage to

⁵⁰ The Dean of Iwate University, the Board Directors of the Chambers of Commerce, Agricultural Cooperative, Fishery Cooperative and Banking Committees in Iwate.

⁵¹ Kahoku Shimpou (a local daily newspaper circulated in the Tohoku region), 18 May 2011.

recovery. Along with seven priority fields⁵² for future direction in the plan, concrete projects funded by either the central Government or prefectural Government are listed in the Reconstruction Implementation Plan, although the budget was not secured at the time of formulation. On employment and recovery of industry, the following are listed in the plan: (i) rebuilding the manufacturing industry; (ii) revitalizing commerce and tourism; and (iii) strengthening employment maintenance and security. For rebuilding the manufacturing industry, restoration and maintenance of factories and equipment are supported for early resumption of business, with the loan system being enhanced for business stability. For revitalizing commerce and tourism, new industries for future generations are promoted such as clean energy, medicine and high electronics machining, which consequently leads to job creation. For employment, the central Government-driven projects or measures under the ‘Japan as One’ Work Project such as job creation project and the Employment Adjustment Subsidy are implemented.

It is also geared towards industrial restructuring through deregulation. For example, in the fishery sector, which is the key industry in the disaster-affected coastal areas, the local Government has tried to: (i) undertake a structural change in management from a family-based one to a cooperative-based one; and (ii) promote a new job entry, introducing a new management system such as the joint use of a public facility; grouping into a cooperative and induction of private capital; and setting up a special fishery zone. In addition, to be more cost-effective, the integration of fishing facilities and functions have been promoted, e.g. by combining several small fishing ports into one. This direction to be more efficient has been a matter of controversy between the local Government and fishery managers and employees, who hold certain rights on fishery. The proposed industrial structural change will alter the employment structure, especially those in the disaster-affected coastal areas.

3.5.3 Iwate

In Iwate, after addressing basic policy for reconstruction in April 2011, the Iwate Prefecture Great East Japan Earthquake and Tsunami Reconstruction Plan, To Protect Life, To Live Together with the Sea and Land and To Create a Homeland Iwate and Sanriku, was formulated in August 2011 (Iwate Prefectural Government, 2011). The plan covers eight years between 2011 and 2018. The basic policy is accompanied by the Reconstruction Implementation Plan.⁵³ The former includes general principles and approaches to reconstruction, grand designs for community planning, and details of specific efforts, while the latter contains measures, policies, operations, and schedules. The three basic principles for reconstruction are as follows: (i) ensuring safety; (ii) rebuilding lives; and (iii) regenerating industries.⁵⁴ Besides, the Sanriku Creation Project is promoted not for the restoration and reconstruction of the Sanriku region, but as the leading project embodying the long-term goal of the creation of a new world-class Sanriku region.

On employment, concrete measures are in line with the ‘Japan as One’ Work Project that covers the short- to long-term, such as the Employment Adjustment Subsidy and insurance, job matching and job training, especially in new industrial areas. In contrast to Miyagi, the direction of the Iwate

⁵² (i) Environment, living, sanitation and solid waste management; (ii) health, medical and welfare care; (iii) economy, commerce, tourism and employment; (iv) primary industry; (v) public works; (vi) education; and (vii) disaster management, safety and conformability.

⁵³ The plan is divided into three phases: Phase 1 (from 2011 to 2013); Phase 2 (from 2014 to 2016); and Phase 3, or the consolidating period for further development (from 2017 to 2018).

⁵⁴ Based on the three principles, efforts in the following ten fields are set: (i) disaster-preventative community planning; (ii) traffic network; (iii) lives and employment; (iv) health, medical care, and welfare; (v) education and culture; (vi) regional communities; (vii) administrative functions; (viii) fishing industry and agriculture and forestry; (ix) commerce and industry; and (x) tourism.

prefectural Government is towards reviving or recovering the local economy, not necessarily changing the industrial structure. For example, in the fishery sector, policy emphasis is on strengthening the functions of fishery cooperatives within the existing framework of fishing, marketing and processing. At the same time, the prefectural Government has promoted industrial agglomeration and job creation, by setting up a special zone for industrial recovery with tax benefits.

3.5.4 Fukushima

The Fukushima prefectural Government has taken a different step in formulating a reconstruction plan from the other two disaster-affected prefectures mentioned above because of the still-continuing effects of the nuclear disaster. Such circumstances made it difficult for the prefectural Government to formulate a concrete reconstruction plan. Instead, the prefectural Government compiled a concept paper with a vision for revitalization to emerge from a reconstruction plan (Fukushima Prefectural Government, 2011a).⁵⁵ The vision was compiled in August 2011 and consisted of three basic concepts and seven major measures. The concepts were as follows: (i) building a safe, secure and sustainable society free from nuclear power; (ii) revitalization that brings together everyone who loves and cares about Fukushima; and (iii) a homeland we can all be proud of once again.⁵⁶ Unlike Iwate and Miyagi, Fukushima started formulating the concept paper before the reconstruction plan because of unclear future direction for reconstruction caused by the accident at the Fukushima Daiichi Nuclear Power Plant. Based on the vision, the first version of the Plan for Revitalization in Fukushima was developed and formulated in December 2011 to illustrate the concrete efforts and major projects for the following ten years through consultation with municipal Governments and residents (Fukushima Prefectural Government, 2011b).

The priority projects for revitalization in the plan include a few employment-related projects. First, the Livelihood Rebuilding Support Project includes job creation through the Emergent Job Creation Fund and support for resumption of farming at the place of evacuation. Second, the Primary Industry Revival Project includes the Project on support to farmers engaged in sixth industrialization. Third, the SMEs Revitalization Project utilizes the Group Subsidy and the Project for Support for Establishment of New Business Facilities for Industrial Restoration in Fukushima, among others. The revitalization plan in Fukushima includes emergency job creation, sixth industrialization, and SME assistance. The revitalization plan also describes the measures by area. The plan, while basically maintaining the traditional seven districts scheme, divides the prefecture into five areas based on the damage by the disaster: Soma area, Futaba area, Iwaki area, Naka-dori area and Aizu area.

⁵⁵ The governor's vision is that through the process of revitalization or reconstruction, Fukushima would return pride by demonstrating a world-leading model for reconstruction in the wake of the disaster.

⁵⁶ The measures are split into three groups: (i) emergency measures; (ii) responses that look to the future of Fukushima; and (iii) responses to the nuclear disaster. The emergency measures include the restoration of living infrastructure and industrial infrastructure; support for emergency employment of disaster victims and resumption of disaster-hit businesses; offer of substitute services to affected municipalities and reduction of radiation level in schools, among others. The measures relevant to responses that look to the future of Fukushima contains the following: (i) raising and supporting children and young people through enhancement of medical services and creation of secure environment for bearing and raising children; (ii) reviving and developing community bonds through, for example, support for the activities of public groups; (iii) creation of new industries and subsequent employment by, for example, encouraging renewable energy industry clusters to replace nuclear power generation; (iv) building a forward-looking and disaster-resilient community; and (v) harnessing breakthroughs in renewable energy to build a new society. The measures which deal with the nuclear disaster include attraction of national and international nuclear power research and monitoring facilities, among others.

The overall revitalization of Fukushima will be made up of coordinated measures to revitalize each area. For example, the Soma area is located in the caution zone and the planned evacuation zone, and the damage from the tsunami was the most devastating in the prefecture. In this area, in addition to the Livelihood Rebuilding Support Project, the Fukushima Bond-Building Project was implemented to promote the resumption of farming at the place of evacuation and to maintain and secure employment. Considering the changing situation surrounding the evacuees because of the re-designation of evacuation zones, the Plan for Revitalization in Fukushima was revised and compiled as the second version in December 2012. In the plan, new efforts that take into account the situations of each disaster victim were added, such as more support for the evacuees and improvement of their new living place because of the lengthening of evacuation, and efforts to promote the return of the evacuees to where they lived. Thus the employment status has been in flux. Unlike the other two prefectures, living conditions of evacuees from Fukushima including place, return or resettlement, have yet to be stabilized. In accordance with the changing situation of evacuees, the revitalization plan has to be revised.

3.5.5 Issues on policy formulation

According to the survey on formulating a reconstruction plan by local Governments conducted by the Cabinet Office (Cabinet Office, 2012b), there were issues in putting policies into practice. First, despite the importance of reconstruction to show the vision and principles, no concrete plan can be formulated without budget allocation and scheme. Many local Governments formulated the plan towards the end of 2011 or did not formulate one until the budget was approved, as the third supplementary budget was approved in December 2011. This implies that the formulation of the plan, as well as the implementation of projects or measures in recovery, could have been sped up if the budget was approved earlier. Second, one of the causes of delays in reconstruction in the disaster-affected coastal areas was the lack of fund allocation to land elevation under private ownership. This prevented local Government from providing detailed briefing to residents and promoting a reconstruction plan including employment and industry recovery.

3.6 New direction towards speeding up the reconstruction process

After the inauguration of the Abe Administration in December 2012,⁵⁷ the policy paper, *Towards the Creation of New Tohoku*, was formulated by the Reconstruction Promotion Committee at the Reconstruction Agency to speed up the reconstruction process (Reconstruction Promotion Committee, 2013). The new Administration has prioritized the following three themes: (i) strengthening of the Reconstruction Agency's function a control tower and a thorough focus on the disaster-affected areas; (ii) revision of budget frameworks for reconstruction; and (iii) giving shape to and promotion of the measures to speed up reconstruction. In the paper, ideal images of society in the future are imagined as: (i) a reliable society to promote the healthy growth of children; (ii) a vibrant aged society with elderly people as standards; (iii) a society with sustainable energy; (iv) a leading society introducing robust and highly resilient social infrastructure; and (v) a society with the ability of wide appeal in utilizing regional resources.

In consideration of the current status of the disaster-affected areas where many localities have faced issues such a declining and ageing population, and the shortage of human resources (as well as

⁵⁷ As a result of the last general election in December 2012, the Government changed from the Democratic Party of Japan to the Liberal Democratic Party.

networks and funds), especially experts on various reconstruction-related fields, the paper emphasizes the necessity to set up the following two types of reconstruction platforms to create the desirable society mentioned above: public-private partnership to address the shortages and connect places in and out of the disaster-affected areas; and the public and private sectors. For example, the Reconstruction Agency launched on 4 October 2013 the Work for Tohoku,⁵⁸ a framework for human resource dispatch for reconstruction. The implementing agency is the Japan Foundation in collaboration with RCF Reconstruction Assistance Team (the details are addressed in Chapter 4). In addition to the existing dispatch system of local Government officials to the disaster-affected municipalities, the human dispatch for reconstruction from private firms and NPOs as well as the acceptance of interns from universities who can assist town or community development, are promoted to meet demands in the disaster-affected areas. Thus, the new policy under the present Administration has attempted to tackle the issues in the disaster-affected areas, especially in meeting the demands of human resources required for the long-term reconstruction.

3.7 Conclusion

The existing schemes and implementation structure on employment stability and creation including the schemes for emergency action on employment have been effectively used in disaster response, especially the unemployment insurance scheme, and the Employment Adjustment Subsidy Programme, and the Emergency Job Creation Project. In accordance with the employment situation and the scale of damage, the eligibility requirements on all the measures under the ‘Japan as One’ Work Project have been relaxed, and the duration of the implementation and the coverage was extended. The Project was intended to cover all socially vulnerable groups of people through different measures. For example, the unemployment insurance functions as a safety guard for employees, while the Job Creation Project provides short-term work to self-employees who are not covered by the insurance. At the same time, under the METI and MAFF, the subsidies for restarting business operation for SMEs and the primary sector, the Temporary Factories and Store Project, the SME Group Subsidy, and the Fishery Reconstruction Support Project, have been introduced to revitalize the local economy. Over time, the project has shifted its direction from benefit provision or Cash for Work to new job creation in the long-term, considering the need to include socially vulnerable groups such as the elderly, women and people with disabilities in the reconstruction process. In the same direction, local Governments have implemented the measures on employment, adjusting them to meet local contexts. In addition, the new direction to speed up the reconstruction process has been undertaken, setting up a human resource dispatch system to disaster-affected areas to supplement the shortages of human resources for long-term reconstruction, especially urban planning.

⁵⁸ For details, refer to the Work for Tohoku website, <http://www.work-for-tohoku.org/about/concept.html> [accessed 8 July 2015].

Chapter 4 Introduction of new modality of recovery measures by private initiatives

Chapter 4 focuses on the new modality of recovery measures through private sector initiatives. In particular, the five examples of public-private partnerships (PPPs), social businesses, civil funds, private companies, and trilateral collaboration (between industries, academic institutions, and the government) are highlighted. The chapter concludes by summarizing the contributions of each to the post-disaster recovery process: PPP by sharing costs between public and private sectors; social businesses by encouraging the inclusion of social issues within NPO and private company business models; civil funds by increasing accessibility to internet-based disaster relief opportunities for individual investors; private companies by expanding aid efforts from volunteerism to corporate social responsibility (CSR) to Creating Shared Value (CSV); and trilateral industry-academia-government cooperation, by promoting research and development (R&D) investment and technology transfer to relevant industries for further job creation.

4.1 Overview of new modalities of recovery and reconstruction measures

After the 2011 Earthquake, many recovery measures were undertaken. As discussed in previous chapters, the national and local Government offices took initiative for the majority of recovery measures. The private sector also conducted recovery measures on its own initiative, which were different from the approaches and methods by the Government. Moreover, the Government, private sectors, and academic institutions collaboratively started working together. Two and half years after the 2011 Earthquake, some of the emerging recovery measures conceptualized new modalities including: (i) public-private partnerships; (ii) social businesses; (iii) civil funds; (iv) various types of assistance and activities by private companies; and (v) collaborations among industry, academic institutions and the government.

This chapter briefly explains those five new modalities for recovery measures. Each section contains the following three components: (i) overview that covers background, objectives, approaches, and stakeholders; (ii) practice of new modalities;⁵⁹ and (iii) lessons learned, including a brief analysis of new modalities.

4.2 Public-private partnership

4.2.1 Overview

After the 2011 Earthquake, PPP was highlighted as one of the new modalities for effective recovery and reconstruction in the affected areas. After the 2011 Earthquake, many Government staff members have suffered from large volumes of recovery duties due to newly created duties stemming from a massive committed budget. Under such conditions, PPP is characterized as the following: (i) PPP provides an opportunity to use funds in the private sector, e.g. using private savings and bonds; (ii) a variety of knowledge from the private sector can be introduced for reconstruction; (iii) the private sector can enhance its business opportunities by joining public works; and (iv) PPP

⁵⁹ Practices were selected from accessible information resources such as the internet, documents or books, and any organizations that were recommended by the local Government, NGOs, and companies who have been involved in reconstruction assistance in the disaster-affected areas in Iwate and Miyagi. The research team took this method mainly due time limitations during the research period.

contributes to the public sector by sharing costs of public works with the private sector. In this context, PPP became more common after the 2011 Earthquake due to the limitations of public sector in terms of human resources and funds.

There are two major stakeholders: public and private sector organizations. The public sector stakeholders are national, prefectural, and municipal authorities. These public sector organizations often take on initiatives as public service providers, but they start collaborating with private sectors under the PPP concept. The stakeholders in the private sector are banks, companies, foundations, non-profit organizations, and cooperatives. They have hedge funds and knowledge, which can be used for effective reconstruction. These two stakeholders worked collaboratively under the PPP framework. There are two major approaches to PPP: (i) the public sector leads the private sector; and (ii) the private sector leads the public sector. The former is a traditional style of PPP, such as the Public Finance Initiative (PFI) and Concession.⁶⁰ PFI is the financial scheme that the public sector utilizes to design projects (e.g. constructing hospitals) and invite financial institutions to invest.

Examples of PFI include the construction of common marine product processing facilities and the rehabilitation of school lunch facilities. In contrast, the latter approach demonstrates how the private sector can join in on planning and implementing projects with the support of the public sector through financial, technical, and administrative inputs. Examples of this style include rehabilitation of shopping districts, sightseeing facilities, and agribusinesses. In the context of recovery and rehabilitation from the 2011 Earthquake, both approaches are widely observed.

4.2.2 Practice

The foundation for Minamisoma solar and agricultural park was co-established by Minamisoma city and a private company. Minamisoma city was severely impacted by the tsunami on 11 March 2011, as well as by radioactive pollution. To rehabilitate the city, the city proposed two key concepts: (i) community rehabilitation through renewable energy; and (ii) safe agricultural production without any radioactive effects. By covering these concepts, the park provided educational programmes related to renewable energy and agriculture. To develop the park, the public sector (Minamisoma city Government) procured the land from its owners, and changed the land registration from agricultural to commercial use. In contrast, the private sector (the Foundation called '*Fukushima Fukkou Solar Agri Taiken Kouryu no Kai*' in Japanese: 'Solar Electricity and Agricultural Experience for Fukushima's Restoration Foundation') designed and operated educational programmes related to electricity and agriculture. The Foundation created local job opportunities for facilitators in these educational programmes. This is a case of the public sector leading the private sector.

4.2.3 Lessons learned

PPP has both advantages and disadvantages. A major disadvantage is that PPP requires a lot of time for preparation. The PPP procedure includes four time-consuming processes: (i) specifying the detailed plans of the project; (ii) holding a competition for bidding; (iii) selecting a partner from the private sector; and (iv) clarifying and sharing the risks. Since these procedures normally take one to one and a half years, the stakeholders have to carefully choose appropriate projects for PPP. Therefore, projects with high urgency or priority are not suitable. These are, for instance, reconstruction of roads, hospitals, and schools. In contrast, PPP is suitable for projects that require

⁶⁰ Concession is the management style in which the public sector owns the property rights of the facility, such as an airport or seaport, while the private sector manages the operation of the facility.

significant time for discussion among stakeholders and careful design. These are, for example, reconstruction of libraries, research institutes, and parks. As shown above, Minamisoma city solar and agricultural park is an important educational facility for children in the long-term, but its priority was lower than basic infrastructures such as roads and schools. Thus, it was suitable to PPP. Stakeholders need to be aware of these pros and cons when they apply the concept of PPP to their projects.

4.3 Social business

4.3.1 Overview

Many people have been aware of social business in the context of social reconstruction in the Tohoku region, especially after the 2011 Earthquake. In particular, public, private, and academic sectors all expect that social business can help alleviate social problems and create job opportunities. These social problems are, for example, decreasing successors in the primary sector, serious population outflow from disaster-affected areas, and mismatching between job offers and jobseekers. Social business has been focused on since the Government introduced the concept of the ‘New Public’. The ‘New Public’ encouraged the private sector to take over the roles of public service providers (Arakawa, 2013).⁶¹ To materialize this concept, stakeholders consider social business as one of the models which can provide public services in a sustainable business manner.

Social business needs to establish a sustainable operational system. Operators of social businesses charge appropriate fees in exchange for providing the services required. The fees are either fully subsidized by the public sector, or shared by the public sector and end users accessing these services. Since this system is still new, those operators are still developing their business structure to sustainably provide their services along with making a proper profit.

Social businesses primarily address social or regional problems. The major social business operators are NPOs. In Japan, NPOs traditionally tend to address social problems and thus their working fields are very close to people who have to face these social problems. In addition, recently, private companies started extending their services to the social business sector. This is for two major reasons. First, these private companies can improve their corporate image by increasing their presence within the sector. Second, these companies can develop new services. Besides these two stakeholders (NPOs and private companies), cooperatives and foundations are also very active in starting social businesses. Although these stakeholders have different institutional characteristics, they commonly address social and regional problems as well.

4.3.2 Practice

After the 2011 Earthquake, operations of social businesses are often highlighted in the disaster-affected areas, and the media pays special attention to the *Tohoku Roku Project* in Miyagi. The *Tohoku Roku Project* is highlighted because their businesses materialize the sixth industrialization. The ‘sixth industrialization’ is a new concept in which producers in the primary sector (e.g. farmers, fishers, and stock farmers) are responsible for processing (the secondary sector)

⁶¹ The Government started promoting the idea of the ‘New Public’ in the 1970s with a view to solving issues such as disaster prevention, crime prevention, child care and welfare, that cannot be solved solely by the public administration. In other words, the Government requires external stakeholders such as self-governing parties, NPOs, volunteer group and enterprises, who can take charge of certain elements of public affairs. In July 2011, the then Government stipulated in the ‘New Growth Strategy’ that the ‘New Public’ can lead new growth.

and marketing (the tertiary sector). The concept of the sixth industrialization aims to increase the value of the primary sector producers by adding new roles.

The *Tohoku Roku Project* has its own farm and restaurants. The project established a noodle shop, bakery, and Western food restaurant. The agricultural produce harvested from their farms are cooked and served in these restaurants. Moreover, these restaurants hire approximately 60 people with disabilities as staff. Thus, this social business simultaneously addresses local agriculture promotion and job creation for the people with disabilities. Since the operational models of the sixth industrialization are not so common, the media still pays attention to this project.

*Natsukashii Mirai Souzou Limited*⁶² (the Company), in Rikuzentakata city, Iwate, was established on November 2011. In the city, the population outflow was very obvious even before the 2011 Earthquake. The outflow was further accelerated after the disaster because people lost their jobs in the city and neighbouring areas. Without people in the area, the community could not be rehabilitated. Therefore, the Company was established to create local job opportunities. As of September 2013, the Company collaborates with a foundation called Social Business Network (SBN), with whom they designed a training course to teach participants about social business. SBN provides lectures, while the Company offers opportunities for field studies. This training programme addresses how social business needs to be conducted by studying the actual situation in the city. Through these activities, the Company attempted to stop the local population outflow.

Similarly, the NPO called *@RIAS NPO Support Centre*, Kamaishi city, Iwate, has been involved in implementing the Emergency Job Creation Project funded by the Government and in creating a website for job matching between job offers and jobseekers. The former project mainly focuses on patrolling the temporary housing complexes. By July 2013, 97 people were employed under this project. The latter project aims at matching job opportunities and jobseekers. Local public employment security offices under the Prefectural Labour Bureau can only provide very basic information of job vacancies, and thus these jobseekers cannot understand details (such as job descriptions) before applying. This website is meant to describe what kinds of posts and job openings are available. This allows jobseekers to better understand the jobs and to find their appealing points. This system contributes to reducing the mismatch between jobs offered and jobseekers' expectations. By creating job opportunities in this area, the NPO attempts to stop the local population outflow.

An NPO called *Tadaima Ishinomaki* (Welcome Back to Ishinomaki) in Miyagi established a community centre to disseminate information on the current status of Ishinomaki city to its visitors in July 2013. The director of the NPO opened this facility to share the positive and attractive aspects of the city through the voices of solo proprietors, who often have limited opportunities to show their charms and fascinations. This centre has three major functions: (i) a small shop to sell local handicrafts and food; (ii) tourist information; and (iii) rest areas. The centre aims to attract tourists by providing these services. Although the director established the centre with his own funds, the operational costs, (e.g. salaries of two employees with non-regular statuses), was estimated to be covered by shop revenue. These services contribute to sustaining the function of this centre to disseminate the latest information on Ishinomaki city.

⁶² It literally means the 'Company to create the future that feels nostalgia'.

Aside from the local NPOs mentioned above, an incorporated body called RCF Reconstruction Assistance Team (hereafter, RCF) based in Tokyo and with branches in the disaster-affected areas, has been actively involved in the reconstruction process, especially in the fields of: (i) research; (ii) planning reconstruction projects; and (iii) facilitating or coordinating stakeholders including local Governments, NPOs and companies.⁶³ RCF is especially strong in (iii), connecting various stakeholders in and out of the disaster-affected areas with the use of a wide range of networks. The future vision of RCF is to transform the regional society through reconstruction in the disaster-affected areas and to create a new future society in Japan beyond reconstruction. Under such a vision, RCF has been playing a role operating the above human resource dispatch scheme set up at the Reconstruction Agency.

4.3.3 Lessons learned

Social business primarily addresses social problems and tries to sustain providing services as a business model. Therefore, social business operators need a high level of awareness of social problems paired with business management skills. There are two major potential business operators. One is NPOs and the other is private companies. Local NPOs often face social problems and sometimes start social businesses by themselves. However, since NPOs often face a lack of business management experience, their capacities in business management are not yet well established. Therefore, the Government needs to consider how public services can support NPOs' management skills development, as observed in the case of assistance for promoting social business by METI.⁶⁴ One of the trials to supplement the shortage of human resources in the disaster-affected areas is the set-up of the human resource dispatch system. Lessons learned from the assistance need to be examined through case studies to modify the process of how the Government can effectively provide support in collaboration with private entities. If private entities can access this support, their social businesses will have greater potential to continue to provide services to address social problems in the long-term.

4.4 Civil fund

4.4.1 Overview

Civil funds are part of a relatively new system to broadly collect funds from individuals through the internet. The unique feature of civil funds is that it is invested for a specific purpose rather than for company management as a whole, which is how stock investors traditionally operate. This does not mean that the civil fund does not consider a whole management status of recipient companies. Rather, these companies are often required to clarify how the funds will be used, thus giving investors a clearer idea on its purpose. Also, one of the advantages in the civil fund is that investors can closely monitor their business statuses. Many recipients are required to submit their business reports or data periodically as a condition of the fund recipient. This transparency encourages the investors to make a close tie (*Kizuna* in Japanese) with business operators. One of the unique features in the civil fund is that investors are often willing to support the disaster-affected companies while still expecting profits from business investments. Thus, some of the civil fund schemes merge investment and donation into

⁶³ Many joint projects with private firms such as Johnson and Johnson, Google, UBS (a bank), Microsoft, Kirin Beer Ltd. as well as local Government have been undertaken in the fields of reconstruction, town development, industrial development, and information dissemination. RCF has also been facilitating community development at the temporary housing for evacuees in Kamaishi City, Iwate, in cooperation with the municipal Government.

⁶⁴ For details, refer to the METI website, <http://www.meti.go.jp/information/publicoffer/kobo/k130401002.html> [accessed 8 July 2015].

one package. With this, a part of the fund is used for investment while the other part is used for donation. This unique system also attracts individual investors.

In the context of business recovery supported by people's donations, a lack of the transparency became a prominent problem in the disaster-affected areas. Although people often donated to affected individuals or relief organizations, they hardly knew how the donations were utilized. On the contrary, the civil fund scheme clarifies how the donation is used. This transparent system allows investors to feel secure, knowing that their money is surely and effectively used for the recovery of the disaster-affected companies.

There are three major stakeholders for the civil fund: the fund manager, the fund recipient, and individual investors. A fund manager designs projects according to a request by a recipient. The recipient proposes a given fund to the manager, and makes the final decision on how this fund is used. An individual investor finds the information on civil funds and invests in recipient companies. The majority of such individual investments are conducted through websites.

4.4.2 Practice

Yagisawa Store (the Store) was a recipient company of Music Securities Inc. On the website to attract investors, the Store specified that the collected fund would be invested to furnish the interior of the temporary production factory. In order to build a sense of trust with investors, the Store chose to disclose its management and financial status, including that the company had become insolvent after the 2011 Earthquake. These disclosures helped attract investors, and the Store successfully collected ¥50 million for its furnishing. The amount collected by the civil fund is normally smaller than major public assistance, such as the SME Group Subsidy. For the case of the Store, the civil fund provided ¥50 million while the subsidy provided about ¥280 million. Thus, the recipients tended to specify the requesting amount, which were suitable and collectable by a scheme of civil fund. The appropriate target was one of the succeeding factors for the Store.

4.4.3 Lessons learned

First of all, civil funds are still a new option for many business operators and investors, and thus are not so common in the financial markets. In particular, in the context of business recovery from the natural disaster, public assistance from the local Government and loans by public or private financial institutions are still common. The civil fund offers an opportunity to let individual investors support disaster-affected companies. The Government supports promoting the presence of civil funds by relaxing its definition of semi-capital. However, the Government still needs to increase the availability of this scheme in the financial market by providing more information and by guiding its financial structure. Moreover, civil fund managers and recipients need to create more success stories to improve its status of the scheme in the financial market. If any or all of these measures are taken, the civil fund will be more well known in the financial market.

4.5 Various types of assistance and activities by private companies

4.5.1 Overview

This section introduces a variety of relief and recovery activities that private companies have undertaken after the 2011 Earthquake. Private companies have exhibited a variety of support undertakings for the disaster-affected. The following table depicts major categories and activities.

Table 4.1 Categories of assistance and activities of private companies

Category 1	Category 2	Activities
Emergency relief (Examples: (1) rehabilitation of infrastructure, (2) recovery of production and merchant facilities)	Financial assistance	1) Simple donation from corporate accounts 2) Donation, but the amount is changing along with sales
	Assistance by commodities	1) Donation of their own products 2) Donation of the commodities which were not their company brands, but purchased in the market
	Assistance of facilities	3) Donation of companies' stockpiles 4) Donation of the commodities that company employed voluntarily offer
	Offers of human resources, services, and knowledge	1) Offer of company properties to relief works or reconstruction without charges 2) Offer of employees' houses or welfare facilities to relief works or reconstruction without charges 3) Offer of hotel rooms without charges
		1) Directly dispatching employees to the voluntary programmes coordinated by their own 2) Dispatching employees to voluntary programmes, which other agencies coordinate
		3) Supporting the activities that employees take initiatives
Recovery and reconstruction (Examples: (1) new construction of offices and factories, (2) job creations	Financial assistance	1) Simple donation from corporate accounts 2) Donation by companies' employees 3) Donation collected through consumers in general
	Assistance of commodities	1) Donation of their own products 2) Donation of the commodities which were not their company brands, but purchased in the market
	Daily support	3) Donation of companies' stockpiles 4) Donation of the commodities that company employees voluntarily offer
		1) Supports through repeatedly purchasing the products that the affected people produced 2) Support through purchasing foods that are produced in the affected areas
		3) Conducting trainings or conferences in the affected areas 4) Assistance with no relation with contents of their core businesses
	Offers of human resources, services, and knowledge	5) Assistance with some relations to contents of their core businesses 6) Assistance with direct relations to contents of their core businesses

Source: Reconstruction Agency, 2013a.

As shown in the table above, companies conducted both emergency relief and recovery and reconstruction. Emergency relief took form in a group of the activities that were conducted soon after the 2011 Earthquake. These activities were very basic works or services, which promoted recovery, and directly helped those who were under emergency situations. The activities included, for example, restoration of infrastructure, and construction of temporary factories and shopping facilities. On the contrary, recovery and reconstruction is a group of the activities that are aimed at long-term reconstruction, such as the reconstruction of offices and factories, which fully rehabilitated capacities of production or service delivery. These activities were necessary to regain pre-disaster employment levels.

4.5.2 Practice

For the emergency relief activities, many companies collected cash or in-kind donations and donated them to the Earthquake-affected areas through relief agencies such as the Red Cross. Another option was the One per cent Club, an in-house club by the *Keidanren* (Japan Business Federation). The club was established in 1989. Club members commit to contributing 1 per cent of annual recurring profit (for corporations) or disposable income (for individuals) to any recipient agencies the club selects. In the case of the 2011 Earthquake, the contributions were also used to meet emergency needs in the disaster-affected areas through the provision of daily commodities. Also, some companies sent their own brand products. For instance, clothing companies such as UNIQLO and North Face sent their winter clothes, as in March 2011 the weather was still cold in northern Japan. Yahoo! Japan (IT industry) established the special disaster taskforce department, which held approximately 70 staff members at its initial stage. The taskforce opened a special website to share disaster information in the affected areas, while planning and conducting many charitable events.

For the recovery and reconstruction, many companies conducted various activities under the concept of CSR.⁶⁵ For example, KDDI (Kabushiki Gaisha, Japanese Telecommunications Operator) established the Reconstruction Support Office in July 2012. This office has five staff members and dispatches its staff to foundations, schools, and the local Government offices. One staff member was dispatched to Higashi-Matsushima Organization for Progress and Economy, Education, and Energy (HOPE), a foundation supported by the local city Government. HOPE functions as a think tank which the city Government and private companies corroborated. In particular, HOPE is expected to plan and implement projects that can promote further development of the city. KDDI sent one staff member to HOPE, who now works in the industry department. This is one example of how private companies practice recovery services, followed by CSR.

The following is a summary of a few private efforts related to industrial revitalization and employment creation. For example, Kirin Beer Ltd., launched the *Kirin Kizuna* Project for Reconstruction Assistance with a budget of about ¥6 billion⁶⁶ for three years in May 2011. One of the components of the project lies in the reconstruction of the fishery sector. Under the slogan of “from production to the dining table”, the project aims to assist: (i) production; (ii) branding of fish products; (iii) market expansion towards the so-called sixth industrialization; and (iv) the development of young leaders. Mitsubishi UFJ Research and Consulting, a think tank associated with a mega-bank in Japan, launched the *Beyond 311 Project* right after the earthquake, conducting research while helping formulate the reconstruction plan in Kesennuma city. In particular, in Kesennuma, the institute established the *Go-ahead Club* in Kesennuma city in collaboration with the Kesennuma municipal Government to revitalize the fisheries industry and create employment opportunities, matching fisheries producers and markets in other areas, especially Tokyo.

⁶⁵ CSR in Japan is understood as containing the following features: (i) it can be realized through communicating among various stakeholders including consumers, employees, investors, local residents and NGOs; (ii) it includes an institution building within a company; (iii) in addition to a minimum compliance, the activities range from security guarantee of services to environmental protection, labour environment improvement, and labour standards enforcement; (iv) human resource development; (v) respect for human rights; (vi) corruption prevention; and (vii) contribution to society including philanthropy (METI 2004).

⁶⁶ The budget is composed of the donations from the employees and their families and a part of sales of the firm's products. ¥ 1.00 per one bottle of beverage automatically goes to the fund.

Yahoo! Japan has been pro-actively engaged in solving social problems, by opening a special online shopping site for the companies and producers dealing the products in the affected areas. Customers can support these companies and producers through their purchases. This site is a marketing channel to promote their products to a nationwide audience. According to Yahoo! Japan, before the 2011 Earthquake, internet literacy was relatively low among the producers and companies in the Tohoku area. Thus, the use of internet for marketing was uncommon among local people. To give access to these people and let them join the site, Yahoo! Japan established an office in Ishinomaki city, employed five staff members, and also arranged ten to 15 local sales offices. The branch office and local sales offices bridged Yahoo! Japan with local companies and producers to create their online stores. The approach is closer to the concept of CSR than Creating Shared Value (CSV),⁶⁷ whose central premise lies in mutual dependence between the competitiveness of a company and the health of the communities to solve social problems.

4.5.3 Lessons learned

Private companies took very fast action in response to the 2011 Earthquake. In particular, the Government offered public works related to the rehabilitation of basic infrastructure, (e.g. roads, electricity, gas, and telecommunications), and private companies quickly implemented these public works since they recovered their business operations very fast. They smoothly recovered their businesses partially because public works for restoration were quickly started. This combination functioned very well. IT companies also created a new system to share disaster-related information soon after the 2011 Earthquake. These services helped those who were affected by the disaster by sharing information through a user-friendly console. This innovation helped disaster-affected people quickly access necessary information. In this emergency situation, these companies introduced a new system especially for public goods, including distribution of disaster information and online shops for disaster-affected producers. These companies have corporate cultures to invest in a public good as CSR. Such corporate cultures should be encouraged and the Government needs to establish assisting schemes in which companies are more encouraged to create these new methods for supplying public goods and services.

4.6 Collaboration among industry, academic institutions, and the Government

As one of the modalities for recovery and reconstruction following the 2011 Earthquake, the cooperation among industries, academic institutions, and Government became prominent. Since industries often hesitate to conduct R&D that contains a risk irrespective of its outcome, the Government encourages these academic institutions, such as universities and research institutions, to transfer their technologies to concerned industries through laws. The companies are expected to commercialize or industrialize these new technologies. The expansion of business opportunities by these new technologies eventually leads to job creation.

Iwate University has undertaken this collaboration with local Government and companies in the disaster-affected coastal areas in Iwate. This collaboration aims at reconstructing these areas through three components: (i) development assistance for livelihoods; (ii) rehabilitation of industry;

⁶⁷ The concept of CSV emerged against the prevailing approaches to CSR that are so disconnected from business as to obscure many of the great opportunities for companies to benefit society. According to Porter and Kramer (2006, 2011), the concept of shared value is beyond the arena of CSR, suggesting that by adopting shared value principles, business and society will be reconnected creating new innovation and socially imbued capitalism.

and (iii) creation of regional disaster management. The university set-up the main management office called Kamaishi satellite, and three branch offices in Kuji city, Miyako city, and Ofunato city. The university started a number of new projects after the 2011 Earthquake. For example, since the university has marine cultural technologies, one project surveys the feasibility of aquaculture by *sargassum*, a type of seaweed, which can prevent some illness symptoms such as osteoporosis and constipation. The other project conducts business seminars targeting women entrepreneurs. These seminars teach product development, effective presentation methods, and case studies in which local companies were invited as presenters.

Another project bridges local job opportunities with the university's alumni associations. These activities show samples of the collaborations among industry, academic institutions and the Government.

4.7 Conclusion

This chapter introduced five major new modalities of recovery measures: PPP, social business, civil fund, private company, and the collaboration among industry, academic institutions, and the Government. PPP contributed to sharing the recovery and reconstruction costs between public and private sectors, through which the private sector obtained an opportunity to enhance their business chances in the public sector. The concept of social businesses encouraged NPO and private companies to address social issues along with establishing a sustainable business model. Civil funds enhanced the opportunities for individual investors to support disaster-affected companies and producers, particularly through the internet. Private companies experienced their various support approaches to the emergency and to reconstruction in the disaster-affected areas, shifting the concept from voluntarism to CSR to CSV. Although these measures emerged even before the 2011 Earthquake, they became more prominent after the disaster.

Chapter 5 Situation analysis on recovery in the economy, industry, employment and labour sectors, and the achievements of the recovery measures

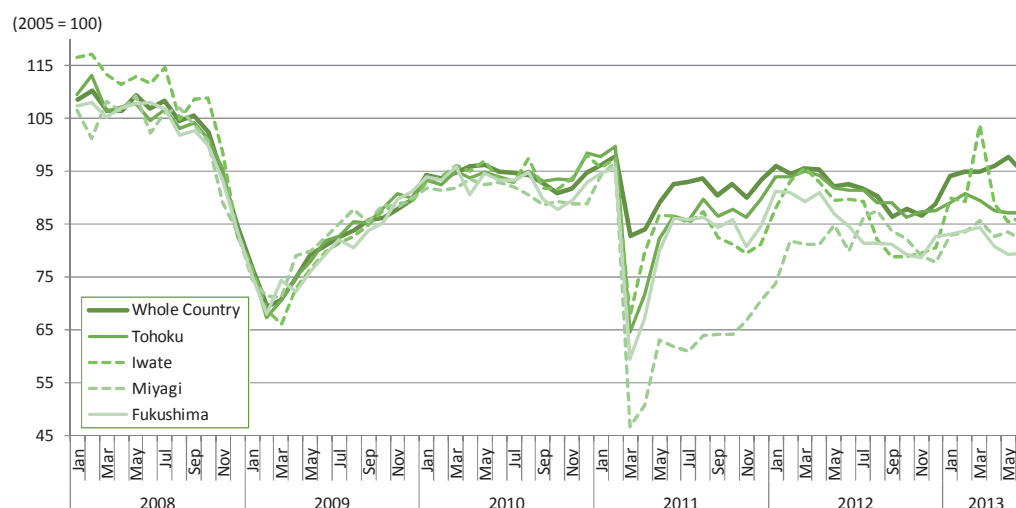
Chapter 5 presents the project's situation analysis on the recovery progress in the Tohoku region, describing: (i) the status of recovery in economy and industry; (ii) the status of recovery in employment and labour; (iii) the achievements, effects/impact, and issues with recovery measures for employment; and (iv) the contributions and issues of recovery measures for employment. It starts with an overview of the present status of the recovery in the economy, industry and employment sectors, mainly for Iwate, Miyagi, and Fukushima. Next, some key employment measures under the 'Japan as One' Work Project are examined, addressing their achievements, effects, impacts and issues. Based on this situation analysis, the chapter presents the extent to which these measures have contributed to improving the employment situation, and identifies issues within its design and implementation. The impact of recovery policy measures such as the Employment Adjustment Subsidy, the Emergency Job Creation Project, and the Small Medium Enterprise Group Subsidy are also included.

The chapter concludes by stating that the recovery of the fishing industry has been noticeably slow due to local factors such as infrastructure reestablishment, which in turn led to a decrease in the working population and an overall negative impact on economic revival. An additional inefficiency is the apparent trend of employment mismatching in all three prefectures, which varies by sector. Those affected may also be troubled by uncertainty of housing options in impacted regions.

5.1 Status of recovery in economy and industry

5.1.1 Industrial production activity

The Industrial Production Index recovered to the same level as the national average one year after the 2011 Earthquake, and has followed nearly the same trends since (for the most part). After marking the lowest index (65: 100 = 2005) in the Tohoku region in March 2011, it rapidly recovered up to 80 in May 2011. After reaching its peak (95) in March 2012, the indexes settled around 90. In Miyagi, which experienced the greatest amount of damage among the affected prefectures, it took about one year to recover to the average level for the Tohoku region (47 in March 2011 to 82 in February 2012). On the other hand, after the index in Iwate dropped to 66 in March 2011, it sharply recovered to 90 in June 2011. After reaching a record high of 98 in March 2012, it has been fluctuating between 80 and 90 since.

Figure 5.1 Trend of the industrial production index in three affected prefectures

Source: MHLW website [accessed 2 Sep. 2013].

Amidst a steady recovery of industrial production in the Tohoku region, the recovery status differs by industry. For example, the high production recovery in Iwate shown in figure 5.1 above is attributed to the production growth of the transport machines industry⁶⁸ due to: (i) the recovery of production capacity; (ii) the increase in volume of new car models; and (iii) the effects of subsidies for environmentally-friendly cars. Other industries that have constantly exceeded pre-earthquake levels (100 in 2007) are: electronic machines, electric parts and devices, precision instruments, and oil products. Despite the massive impact enterprises had on business operations in the whole country, especially in the three affected prefectures, manufacturers recovered from earthquake damage at a quicker pace than anticipated, through strenuous business efforts and collaboration among companies as pointed out by METI (2012). It is remarked that these manufacturers, especially the global enterprises, were well prepared for a crisis, as they went through hard times during the global financial crisis and the prevalence of the strong yen (DBJ, 2011b).⁶⁹ With a strong demand for restoration and reconstruction, the production of ceramics, stones, and sand largely exceeded their pre-earthquake levels as well.

In contrast, recovery in food, cigarettes, and marine product processing industries has been slow, particularly in Miyagi where the inundation damage was severe. The recovery of the marine product processing industry is the most delayed out of the manufacturing industries. For example, a survey in Miyagi conducted by the Central Bank of Agriculture and Forestry shows that the recovery rate for the processing facilities and factories remains at only 52 per cent among the cooperative members (Demura, 2013). It also states that the production volume of marine product processing remains at only 40–50 per cent of pre-earthquake values, while the production volume of frozen marine products and food has recovered by only about 10–20 per cent due to delays in restoring the necessary freezers. Another survey⁷⁰ conducted in February 2013 shows that 82.4 per cent of enterprises that engaged in

⁶⁸ A big Japanese automobile company set up and enhanced the production basis in Iwate (inland).

⁶⁹ According to the survey conducted by the Development Bank of Japan, those companies which already formulated the Business Continuity Planning (BCP) prior to the 2011 Earthquake made a quicker recovery than those which did not have the BCP.

⁷⁰ It was conducted by the local Government of Miyagi. Out of 749 questionnaires distributed to food processing enterprises in Miyagi, 295 were collected (39 per cent).

marine product processing claimed a decrease in sales. The reasons claimed were: (i) market loss (37.1 per cent); (ii) market competition (16.2 per cent); and (iii) damages caused by harmful rumours (27.0 per cent) (Miyagi Prefectural Government, 2013). The marine product processing industries in the areas inundated by the tsunami have fully recovered in terms of the restoration of facilities and production volume.

5.1.2 Capital investment

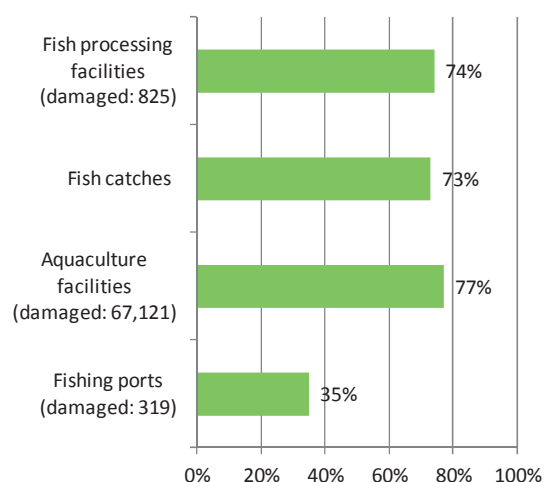
In an effort to predict future economic trends, capital investment in the Tohoku region is described below (METI, 2013). Investment has continued to slow for manufacturing sectors but is improving for non-manufacturing sectors. This results from the widespread effects of the economic slowdown. Capital investment increased by 17 per cent from the previous year for two consecutive years. The growth rate was considered high in comparison to the whole country. Iwate, with a 20 per cent growth rate, has taken a leading role, especially in manufacturing. On the other hand, investment in Fukushima has decreased by 36 per cent from the previous year, and capital investments in manufacturing have decreased over two consecutive years; while investments in the non-manufacturing sectors in Fukushima had a high growth rate of 58 per cent compared with the previous year. Despite the continuous increase of capital investment in the Tohoku region, investment in Fukushima has decreased, especially in manufacturing.

5.1.3 Fishery

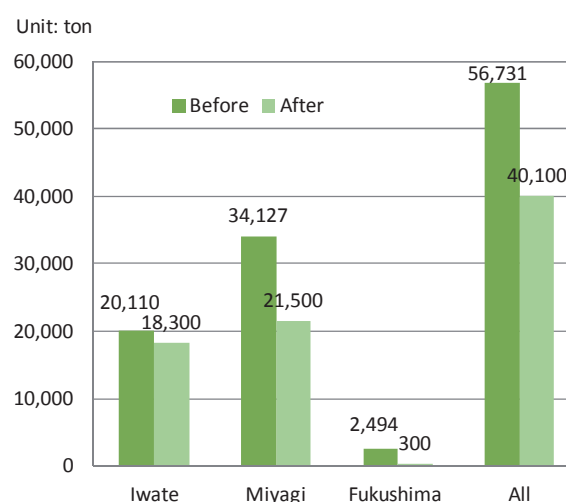
In the fishery industry, the recovery of fishing ports has been delayed, which is essential infrastructure that accommodates many of the functions of the fishery industry: (i) the mooring and supply of fishing vessels; (ii) the unloading of fish; and (iii) the processing and distribution of fish. Out of ¥1,200 billion in total damages to the fishery industry, fishing ports account for 65 per cent of the damage (¥823 billion) (Reconstruction Agency, 2013b). However, the recovery rate of fishing ports remains at only 35 per cent as of July 2013 (figure 5.2). This is due in part to policy directions⁷¹ that emphasize cost effectiveness of the Japanese Government and a lack of allocated budget for the restoration of small-scale ports that are normally used by local fishers (classified as a Category One⁷² fishing port by the Government) (Koushu, 2012). Accordingly, the local Government of Miyagi was determined to restore ports to the minimum level and integrate several ports and functions. As a consequence, only 35 per cent of fishing ports out of the total damaged fishing ports have been recovered. The delayed recovery of fishing ports has caused obstacles in the implementation of the Reconstruction Grant Project and the revitalization of local areas. The Fisheries Agency plans to restore the main ports which can fill the role of hubs by the end of 2015.

⁷¹ The policy was influenced by the proposal for reconstruction prepared by the Reconstruction Design Council set up by the Government, composed of academics, members from the business sector, and civil society.

⁷² According to the fishing port establishment law, fishing port types are defined by the prefectural governor. Category One fishing ports are mainly locally used in the port area. Category Two fishing ports are those between Category One and Category Two. Category Three fishing ports are more widely and nationally used.

Figure 5.2 Recovery status in fishery (as of July 2013)

Source: Reconstruction Agency, 2013b.

Figure 5.3 Volume of fish catch before and after the 2011 Earthquake (as of July 2013)

Source: Reconstruction Agency, 2013b.

Those involved in the fishery industry in the affected areas have a strong will to restart market operations and take the first step towards reconstruction that contributes to the local economy, as the wholesale market for fisheries products is the starting point of distributing marine products. With support from the national and local Governments, temporary markets restarted operations through collaborative efforts (Fisheries Agency, 2013). Out of 34 public fish markets, located in Iwate, Miyagi and Fukushima, 22 in Iwate and Miyagi were restarted by September 2012, while in Fukushima only one (Konahama) out of 12 facilities started operating due to the effects of the Fukushima Daiichi Nuclear Power Plant accident. According to the Fisheries Agency, the restart of fish markets in all affected prefectures is expected to be completed by the end of 2015.

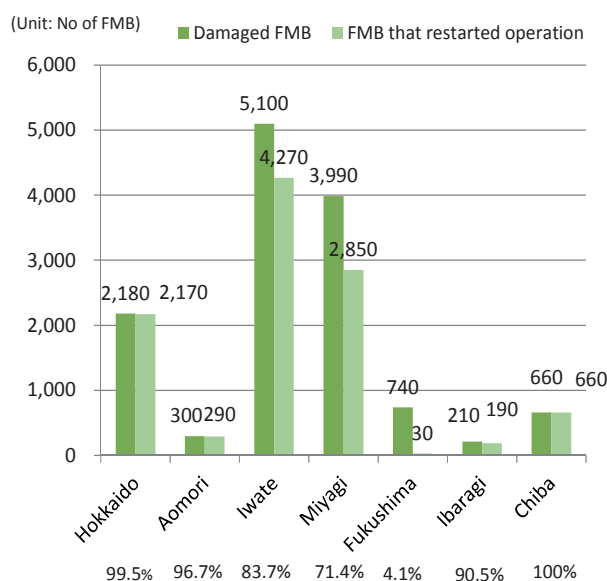
The damages and recovery status of fish processing and aquaculture facilities is described in the following section. Fishing ports account for 65 per cent (¥823 billion) of ¥1,200 billion in total damages to the fishery industry. The recovery rates for the fish processing and aquaculture facilities are at more than 70 per cent (Fisheries Agency, 2013).⁷⁴ As most of the damaged processing facilities and fishing ports were located in the coastal areas of remote regions before the earthquake disaster, it was required by regulations to elevate the ground subsided by the earthquake. For example, the restart of marine product processing in Kesennuma city was postponed due to the delay in land elevation work caused by the lack of private funds for landowners. In principle, the Government is not supposed to provide the funds or subsidies to formulate individual assets. However, with the strong initiative of the Minister of MAFF, countermeasures were taken by expanding fishing port areas where the cost for elevation was covered by the Government. It also took time to dispose of disaster waste that impeded the set-up of aquaculture facilities. Thus, the recovery status of fishing processing and aquaculture facilities has depended partially on the coverage of public assistance.

⁷⁴ There are 958 fishery processing facilities. Out of the 958 facilities, 825 cooperatives have the willingness to restart operations.

The fish catch at the fisheries markets in Iwate, Miyagi and Fukushima from January to March 2013 in comparison to the same season in 2011⁷⁵ was 71 per cent in volume and 61 per cent in amount (¥) (figure 5.3). As the facilities needed for refrigeration and transportation are restored, the volume of the fish catch has also been recovering. However, for further recovery, a freezing refrigerator with an automatic ice maker is required to hasten the resumption of operations for marine product processors.

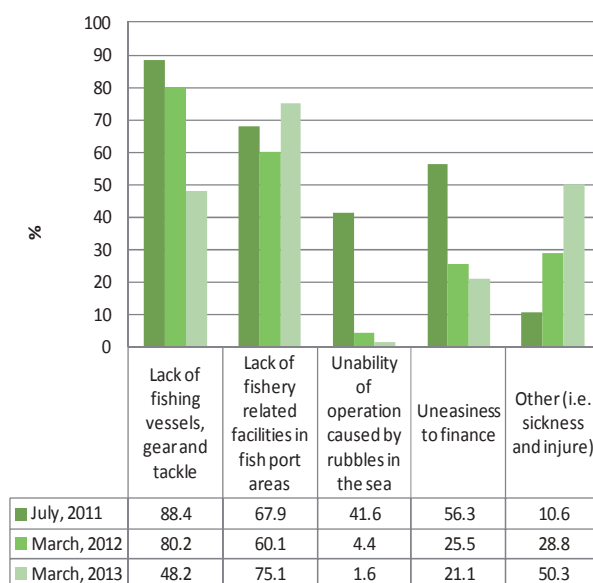
The following are the damages and recovery status of FMBs. As shown in figure 5.4, the total number of all FMBs damaged by the tsunami was 25,277. According to the interview survey conducted by the Fisheries Agency, many FMBs have restarted their operations, especially in Iwate (83.7 per cent) and Miyagi (71.4 per cent) and are gradually increasing in number (as of March 2013). As indicated in figure 5.5, the main reasons that the FMBs are unable to restart their operation are: (i) a lack of fishing vessels, gear and tackle; (ii) lack of fishery-related facilities in fishing port areas; (iii) uneasiness of those in the fishery industry to provide finance; and (iv) others. The reasons have been changing over the years, with the most recent being the lack of fishery related facilities in fishing port areas (75.1 per cent) (figure 5.5). The delay in the improvement of fishing ports has impinged on the restart of business operations.

Figure 5.4 Recovery status of fishery management bodies (FMB) (as of March 2013)



Source: Reconstruction Agency, 2013b.

Figure 5.5 Reasons for not restarting (as of March 2013)



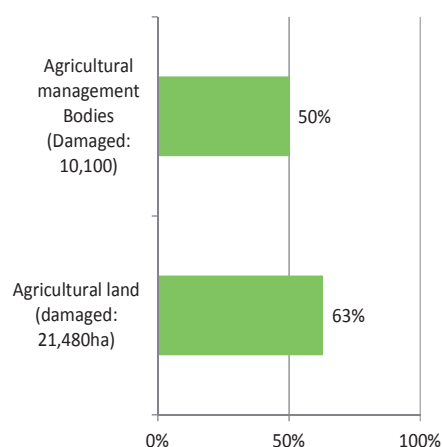
Source: Reconstruction Agency, 2013b.

In terms of the damage amount (¥), the damage in the agricultural sector by the earthquake disaster was slightly less than that in the fishery sector. The total agricultural land damaged by the tsunami was 21,480 ha, which accounted for 2.6 per cent of the total agricultural land in the affected prefectures. 63 per cent of the land is estimated to have had recovered as of March 2013 (figure 5.6). After the disaster, 17,500 ha of agricultural land had piled up rubble on it, yet 95 per cent (16,600 ha)

⁷⁵ January to February 2011 and March 2010.

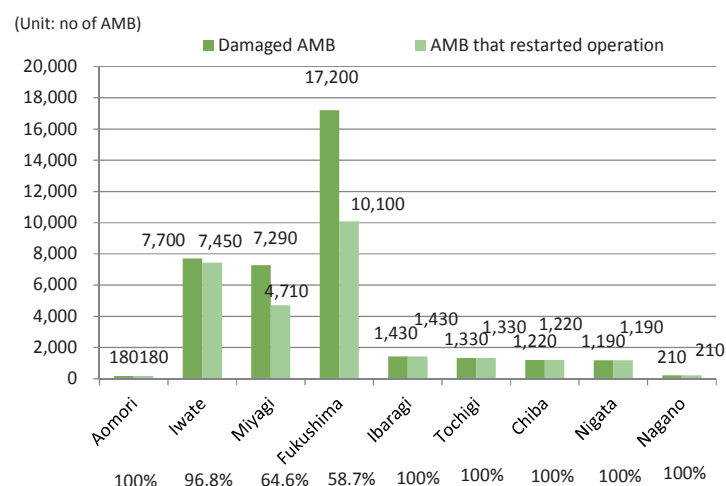
of this land has had the rubble completely removed. Furthermore, 71 per cent of drainage pumping stations that were damaged have been restored, while agricultural costs which require a full-scale restoration still remain at 51 per cent of the total. The schedule for restoration prepared by MAFF has been more or less on schedule.

Figure 5.6 Recovery status in agriculture (as of March 2013)



Source: Reconstruction Agency, 2013b.

Figure 5.7 Recovery status of agricultural management bodies (AMB) (as of March 2013)



Source: Reconstruction Agency, 2013b.

The following is the recovery status of the AMBs. As of March 2013, the percentage of AMBs that resumed agricultural operations are: (i) 97 per cent in Iwate (7,450); (ii) 65 per cent in Miyagi (4,710); and (iii) 59 per cent in Fukushima (10,100) (figure 5.7) (MAFF, 2013a). According to the same survey result, the obstacles to resuming operations, which are mostly identified by those in Fukushima, are: (i) the effects of the accident of the Fukushima Daiichi Nuclear Power Plant (80.4 per cent); (ii) malfunctions in agricultural land and facilities (21.9 per cent); and (iii) lack of agricultural instruments. Despite the introduction of food security measurements (i.e. devices used to measure doses of radiation), it is likely that the price of agricultural products from Fukushima is still going to be lower than before the earthquake disaster (10–60 per cent). It is obvious that the accident at the Fukushima Daiichi Nuclear Power Plant still has serious effects on local residents and the agricultural producers.

5.1.4 New enterprise establishment

The establishment of new enterprises has also become apparent after the 2011 Earthquake. While the number of bankruptcies caused by the 2011 Earthquake is bigger than the 1995 Earthquake, the number of new enterprises in the affected prefectures increased by 12.3 per cent (1,833) from March to October 2011 as compared to the same period in the previous year (March to October 2010), while the rate for the country as a whole declined 0.3 per cent. By type of industry, service accounts for the largest share of newly established enterprises, followed by construction and retail (the details of employment status are addressed below). The increase in the number of new enterprises show the economic recovery related to reconstruction works.

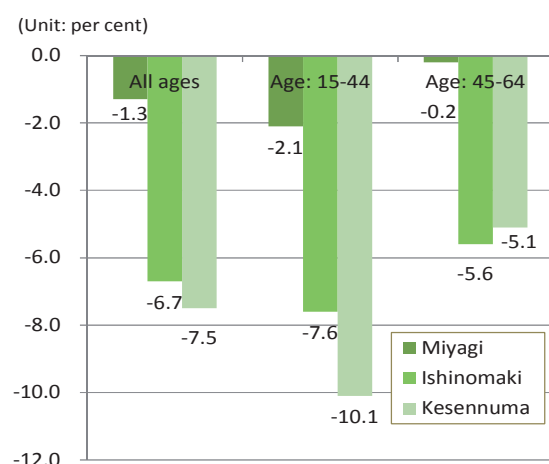
5.2 Status of recovery in employment and labour

5.2.1 Three severely affected prefectures

(a) Working population

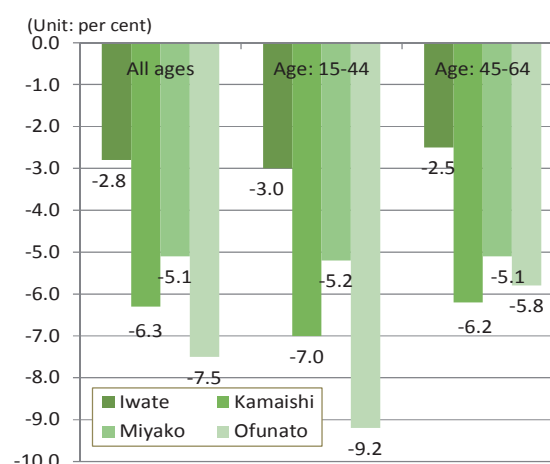
The working population, being defined as those aged from 15 to 64 in Iwate and Miyagi,⁷⁶ has decreased especially in the coastal areas after the disaster. Comparing the populations between October 2010 and October 2012,⁷⁷ the change rate was -1.3 per cent in Miyagi, while local rates in coastal cities such as Ishinomaki and Kesennuma were very high, at -6.7 per cent and -7.5 per cent respectively (figure 5.8). Similarly, there was a decrease in the working population in Iwate (-2.8 per cent), while the local rates of decrease in the coastal cities of Kamaishi, Miyako, and Ofunato were much higher (figure 5.9). Fukushima also faced the same situation, as the working population of all ages decreased by 4.3 per cent (age group 15–44: 5.4 per cent, and age group 45–64: 3 per cent). It can be deduced, however, that the rates of decrease are much higher in reality, since not all people reported their movements to the local Government office.

Figure 5.8 Change of working population by age group in Miyagi and its coastal municipalities



Source: MIC website [accessed Sep. 2013].

Figure 5.9 Change of working population by age group in Iwate and its coastal municipalities



Source: MIC website [accessed Sep. 2013].

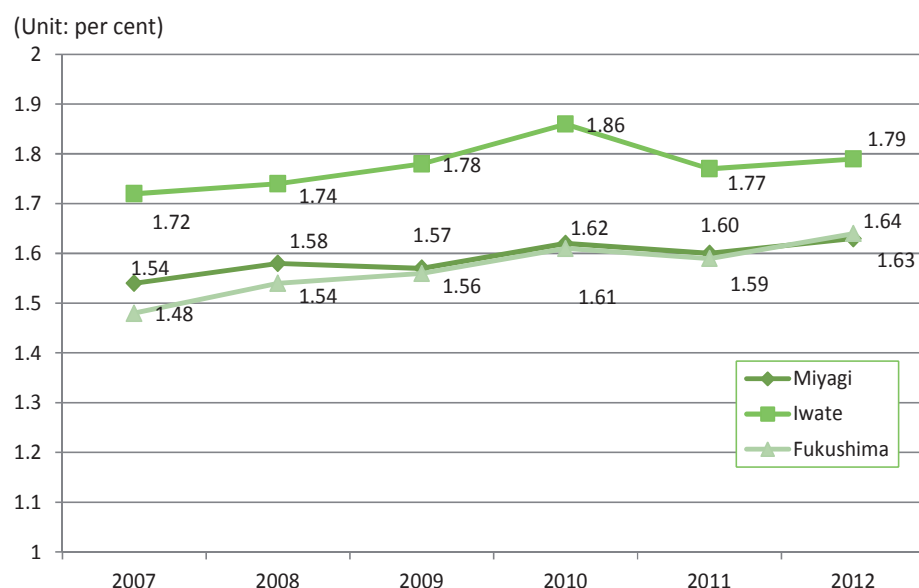
The changes of employment rates of people with disabilities in the total working population of the three disaster-affected prefectures are shown in the following figure.⁷⁸ The rates in the three disaster-affected prefectures dropped after the 2011 Earthquake, especially in Iwate (-0.9 per cent). However, the rates in all three prefectures recovered in 2012, and are now at the same level as before the 2011 Earthquake.

⁷⁶ No information is available in the case of Fukushima

⁷⁷ The data are based on the resident registers of local Governments.

⁷⁸ Further information and data are not available to compare the three prefectures as of 10 November 2013. Thus, further examination cannot be undertaken.

Figure 5.10 Change of employment rates of people with disabilities in the three disaster-affected prefectures



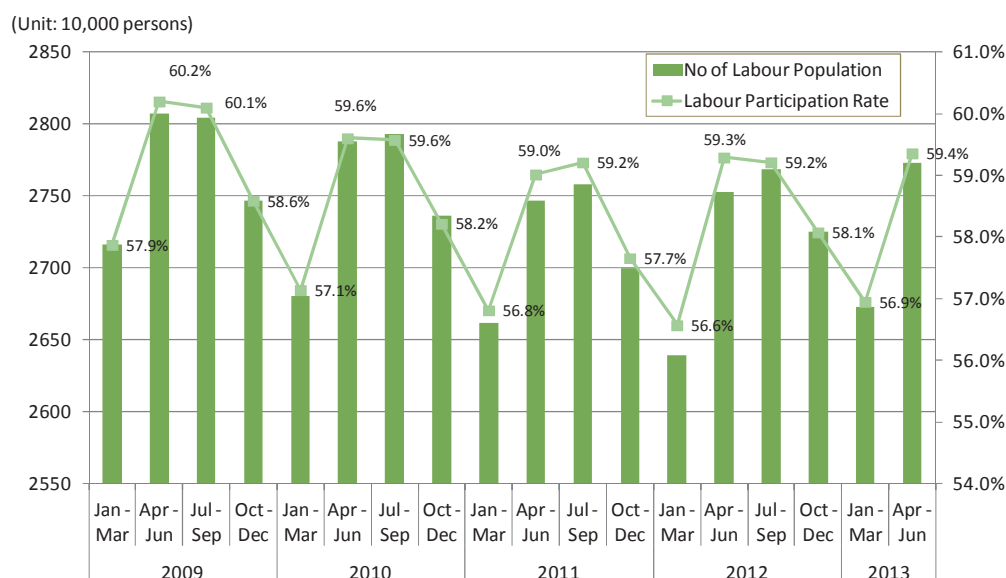
Source: MHLW website [accessed 10 Nov. 2013].

(b) Employment and unemployment

The employment statuses in terms of labour participation and unemployment rates in the three disaster-affected prefectures have improved since the 2011 Earthquake. The following figures show the status of labour participation and unemployment. In the Labour Force Survey conducted by the Ministry of Internal Affairs and Communication (MIC),⁷⁹ the number of employees in the three disaster-affected prefectures was around 2.75 million for the six months (September 2010 to February 2011) before the disaster (figure 5.11). After the earthquake, it dropped by 2.65 million between April and June 2011. The number of employees has recovered to the same level as in April to July 2011, as the same period in the previous year (April to July 2010). The unemployment rates in the three heavily affected prefectures have been decreasing after temporarily increasing right after the earthquake (figure 5.12). This is attributed to the special procurement demands for reconstruction and also to the improvement of the business environment by the weaker yen and the high stock prices resulting from the economic policy called the *Abenomics* under the Abe Administration.

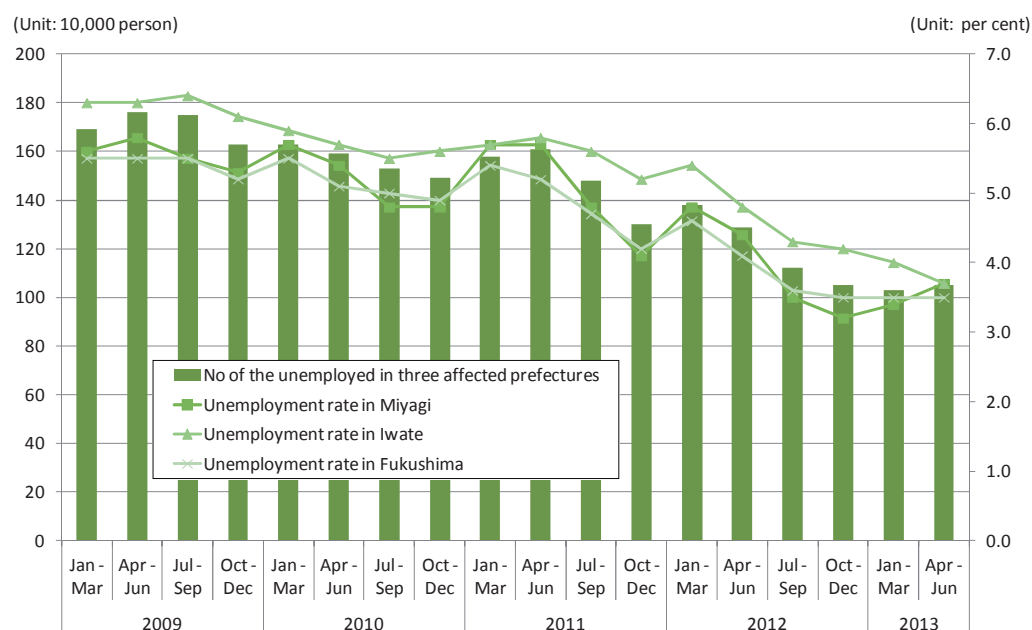
⁷⁹ In Japan, the Labour Force Survey is conducted monthly to grasp employment situation by MIC. However, there was no survey conducted in three disaster-affected prefectures during the period of March to August 2011 due to the disaster.

Figure 5.11 Status of labour participation in the three affected prefectures from 2009-13



Source: MIC website (Labour Force Survey) [accessed 16 Sep. 2013].

Figure 5.12 Unemployment status in the three affected prefectures from 2009-13

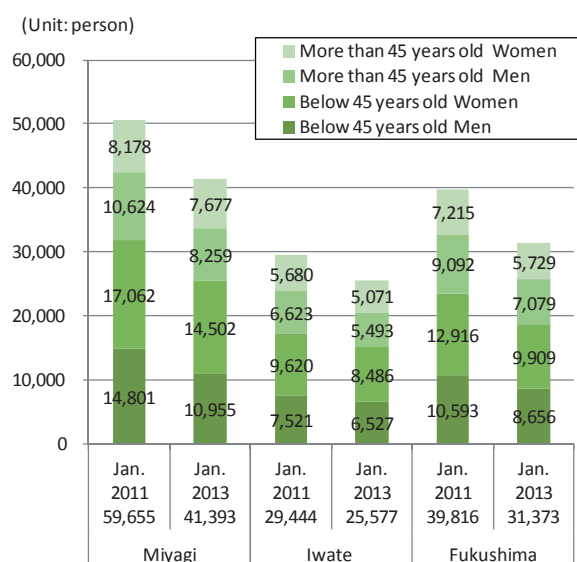


Source: MIC website (Labour Force Survey) [accessed 16 Sep. 2013].

As indicated in figure 5.13 and figure 5.14, which show the status of job applicants by age, gender, and prefecture, the total number of job applicants to the Public Employment Security Offices in the three affected prefectures decreased from 119,925 in January 2011 to 98,343 in January 2013. It is inferred that the decrease in the number of job applicants to the Public Employment Security Offices has contributed to the declining employment rates referred to in the above. Miyagi holds the largest share of applicants (about 42 per cent in both years). The number of job applicants has not reached

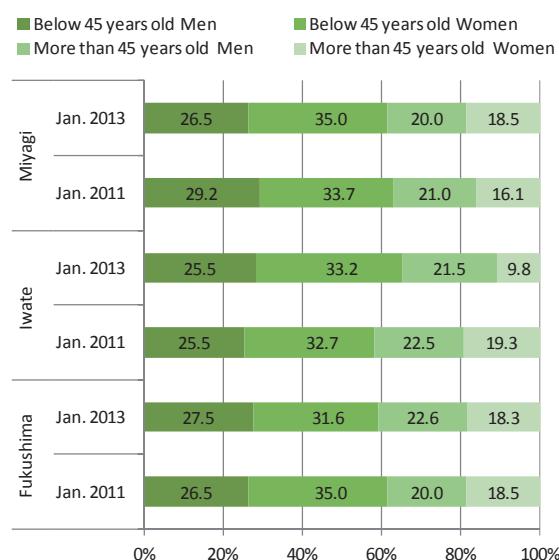
the same level as before the disaster. The proportions of age and gender did not change between 2011 and 2013. Furthermore, the share between women and men are almost equal in ratio, while the share of the age group below 45 in women is generally more than the age group over 45.

Figure 5.13 Change of job applicants by age and gender in the three affected prefectures by numbers



Source: MIC website (Labour Force Survey) [accessed 16 Sep. 2013].

Figure 5.14 Change of job applicants by age and gender in the three affected prefectures by percentage



Source: MIC website (Labour Force Survey) [accessed 16 Sep. 2013].

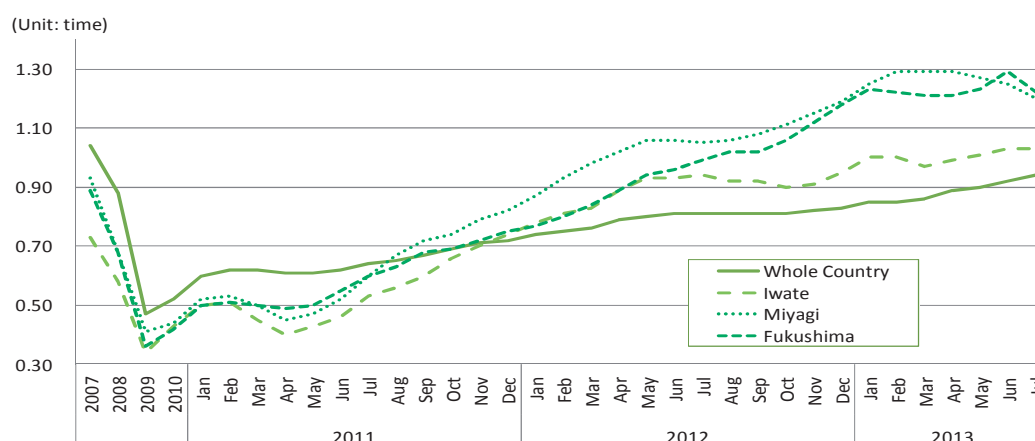
(c) Job offers and applicants

On the surface, the employment situation appears to have been improving up to one year after the 2011 Earthquake, as measured by the status of effective⁸⁰ jobs-to-applicants in the three disaster-affected prefectures. The effective jobs-to-applicants ratio, one of the indicators to measure employment status,⁸¹ started to rapidly grow in June 2011. The ratio in the three affected prefectures has been higher than the national average since December 2011, when disaster victims started normalizing their daily lives and moving from evacuation centres into temporary housing. The ratio exceeded one in Miyagi in April 2011, and Iwate and Fukushima in June 2011, though the ratio in Miyagi appears to be slightly declining after peaking in March 2013. It is noticeable, however, that the employment situation differs by area (i.e. inland and coastal areas) and by the type of industry, as shown in the following figure.

⁸⁰ Job applicants and offers are effective for two months.

⁸¹ The indicator is used to judge whether or not any employment promotion policy is introduced. For example, if it is far below one, a policy to promote job offers is adopted. On the other hand, if it largely exceeds one, a policy to solve a 'mismatch' between job offers and applicants will be adopted.

Figure 5.15 Ratio of effective jobs-to-applicants in the three affected prefectures from 2007-13



Source: MHLW website [accessed 10 Sep. 2013].

5.2.2 Miyagi

(a) Status of job offers and applicants

The following section outlines the change of the employment-related indicators in Miyagi from January 2011 to July 2013. The effective number of job applicants increased by 31 per cent from 53,551 (the lowest since the earthquake) in March 2011, to 70,165 (the highest since the earthquake) in June 2011 (figure 5.16). In the period after June 2011 the number has gradually decreased (up until July 2013). In contrast, after the number of effective job offers reached its lowest (25,983) in March 2011, the number increased in March 2012 before decreasing again in July 2013. As a result, the effective jobs-to-applicants ratio started to exceed one after the earthquake. Accordingly, the number of recipients of employment insurance initially increased in the aftermath of the disaster then declined and has stabilized since April 2012, as a result of terminating the reception period of insurance and promoting employment. In Miyagi, the employment mismatch between job offers and applicants has become apparent since April 2012.

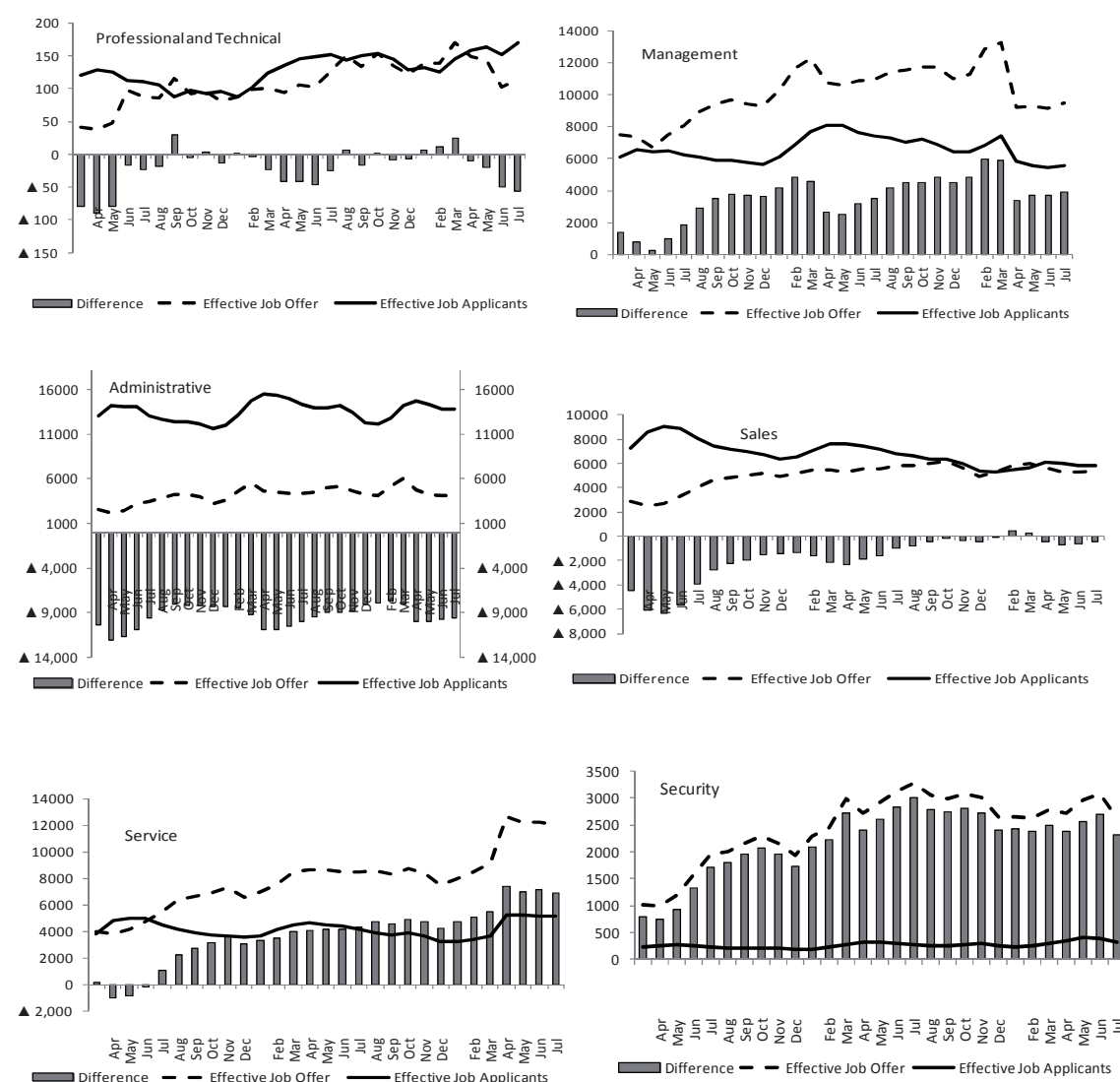
Figure 5.16 Effective jobs-to-applicants ratio in Miyagi from 2011-13

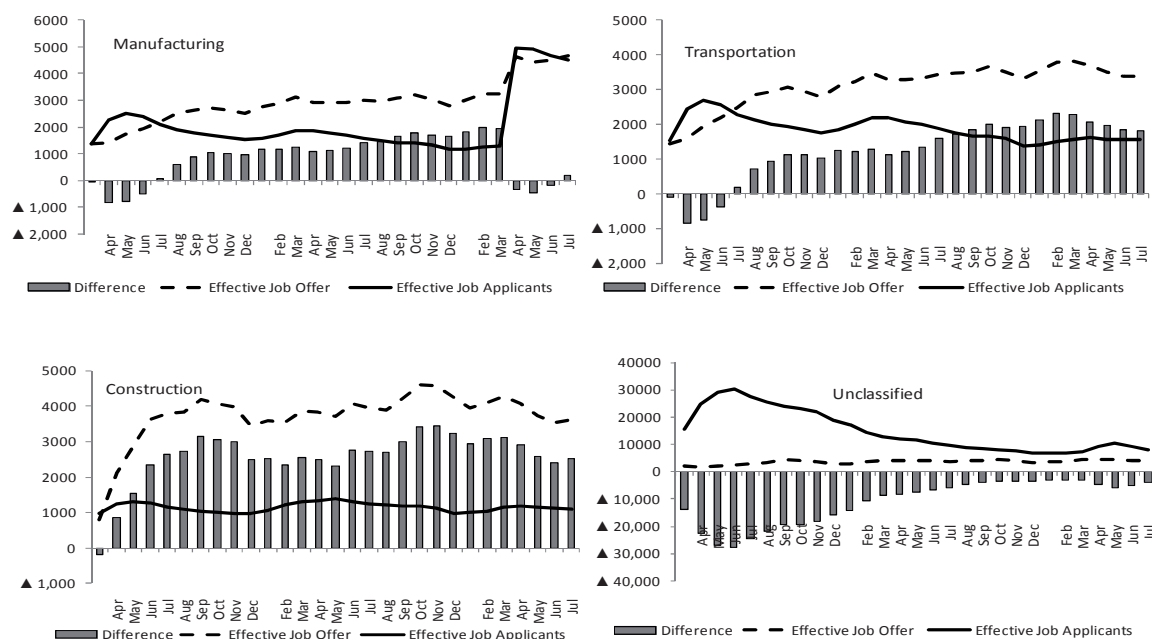


Source: Miyagi Labour Bureau website [accessed 5 Sep. 2013].

The status of effective job offers and job applicants by sector from 2011 to 2013 is shown in figure 5.17. It appears that the status significantly differs by sector. While job offers in security, construction, transportation and service have continuously exceeded the number of job applicants with no improvement over the last two years, offers in administrative work are far below the number of applicants. Some improvements towards eliminating this mismatch can be observed in manufacturing and sales, where the number of job applicants has slightly exceeded the number of offers since April 2013. This may have been caused by business recovery and the restarting of business operations in this sector.

Figure 5.17 Effective job offers and job applicants by sector in Miyagi from 2011-13



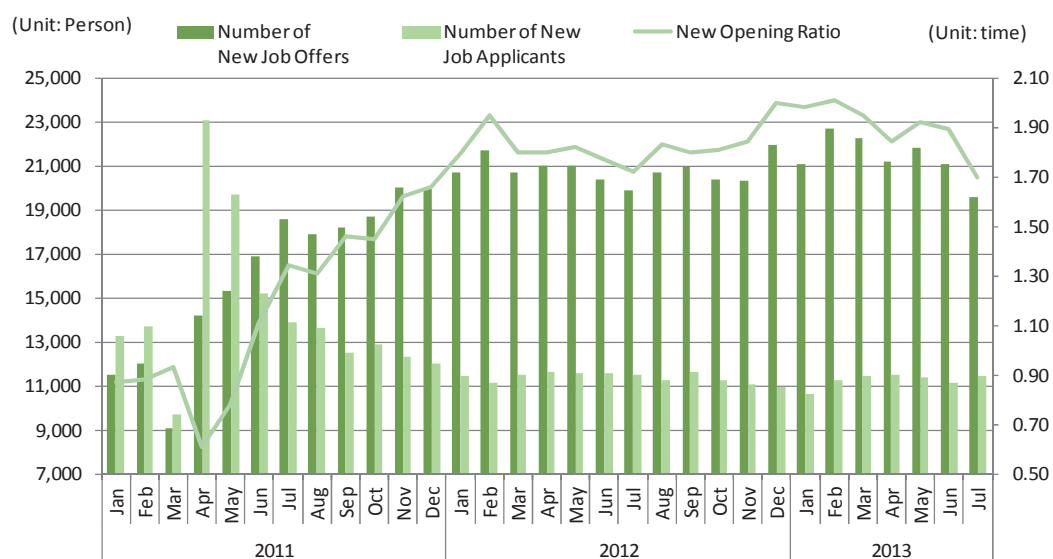


Source: Miyagi Labour Bureau website [accessed 5 Sep. 2013].

(b) Status of new job offers and job applicants

Similarly, as shown in figure 5.18, the number of new job offers in Miyagi rose due to an increase in job offers in various sectors, particularly those related to reconstruction projects and to increase in production in manufacturing after it dropped right after the earthquake. On the contrary, the number of new job applicants declined after peaking in April 2011. It has been slightly fluctuating since September 2011. The number of new job applicants turned out to be at the same levels as before the earthquake. Consequently, the jobs-to-applicants ratio has continuously stayed over one since June 2011.

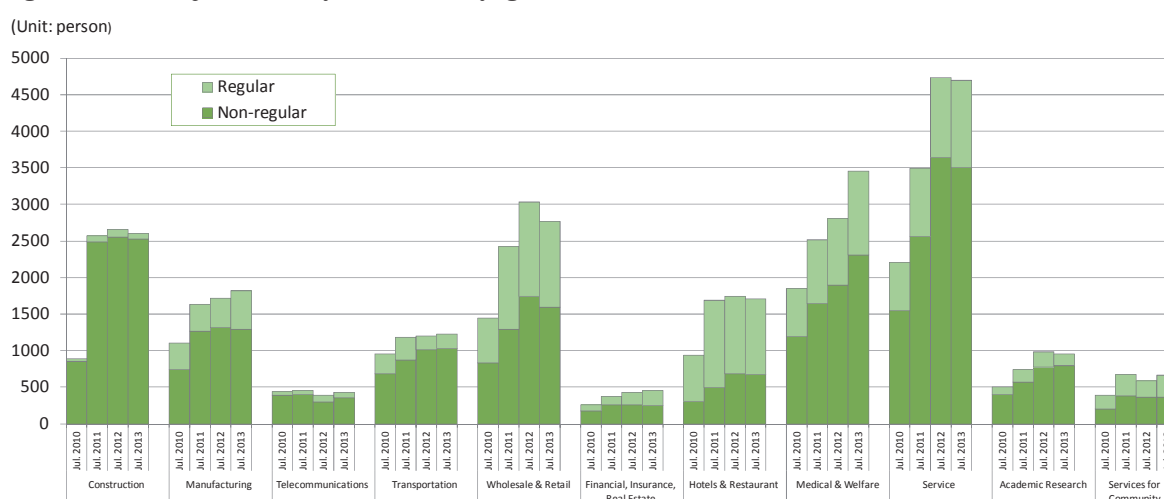
Figure 5.18 Effective new jobs-to-applicants ratio in Miyagi from 2011-13



Source: Miyagi Labour Bureau website [accessed 5 Sep. 2013].

The status of new job offers by industry in Miyagi is described below. As indicated in figure 5.19, the number of new job offers in the construction industry rose sharply, followed by service, medical and welfare, and wholesale and retail. While the new job offers in construction are regular, the job offers in services, medical and welfare, and wholesale and retail, which are engaged more by women, are non-regular. These new job offers increased in response to the demand for reconstruction. Under the disaster economy that consists of different industries and fund-inflow driven more by the Government, the increase of job offers is a temporary symptom of the recovery phase. Thus, over time, the job demand in these sectors will decrease. Because of this, the employment status in sectors that have created new job offers must be carefully monitored in the future.

Figure 5.19 New job offers by sector in Miyagi from 2010-13

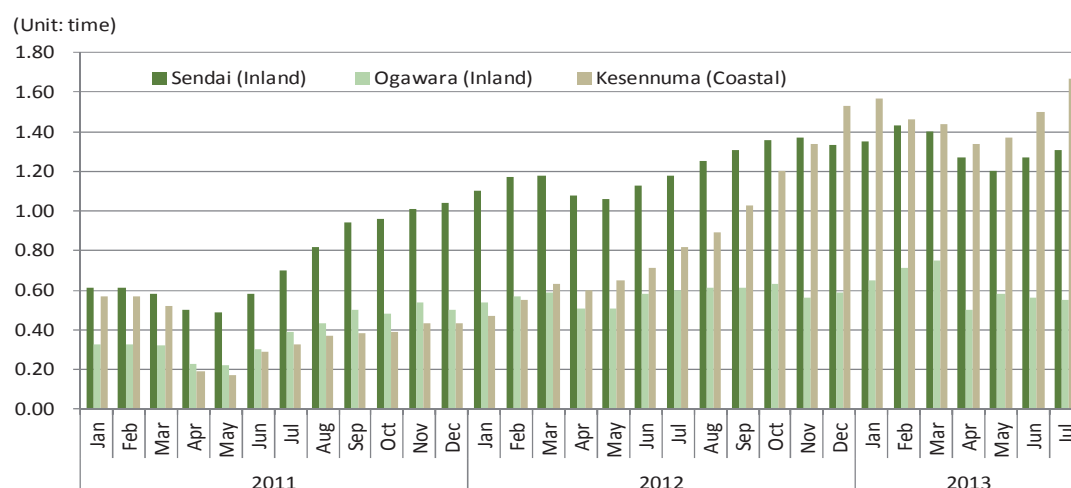


Source: Miyagi Labour Bureau website [accessed 5 Sep. 2013].

(c) Regional gap of employment status

The employment situation in Miyagi differs by area and period (figure 5.20). For example, the number of job offers rose mainly in the third sector (e.g. wholesale and retail services, and hotel and food related services in Sendai city, due to the inflow of population from the coastal areas). On the other hand, in Kesennuma city, which was severely damaged by the tsunami, the number of job offers increased in construction, wholesale, retail, and welfare. The mismatch between job offers and applicants has risen in the disaster-affected areas, especially in the coastal regions. Ogawara, a town located inland, and other rural areas have had little influence on the employment situation caused by the earthquake (0.33 in July 2011 and 0.55 in July 2013) (Miyagi Labour Bureau website). In contrast, Kesennuma city recorded the highest increase (1.53) in Miyagi in July 2013 due to the increase of construction (3.33), manufacturing (2.16), and professional and technical services (1.71). This resulted from the number of increases in job offers and the lack of change in the number of job applicants.

Figure 5.20 Effective jobs-to-applicants ratio in inland and coastal areas in Miyagi from 2011-13



Source: Miyagi Labour Bureau website [accessed 5 Sep. 2013].

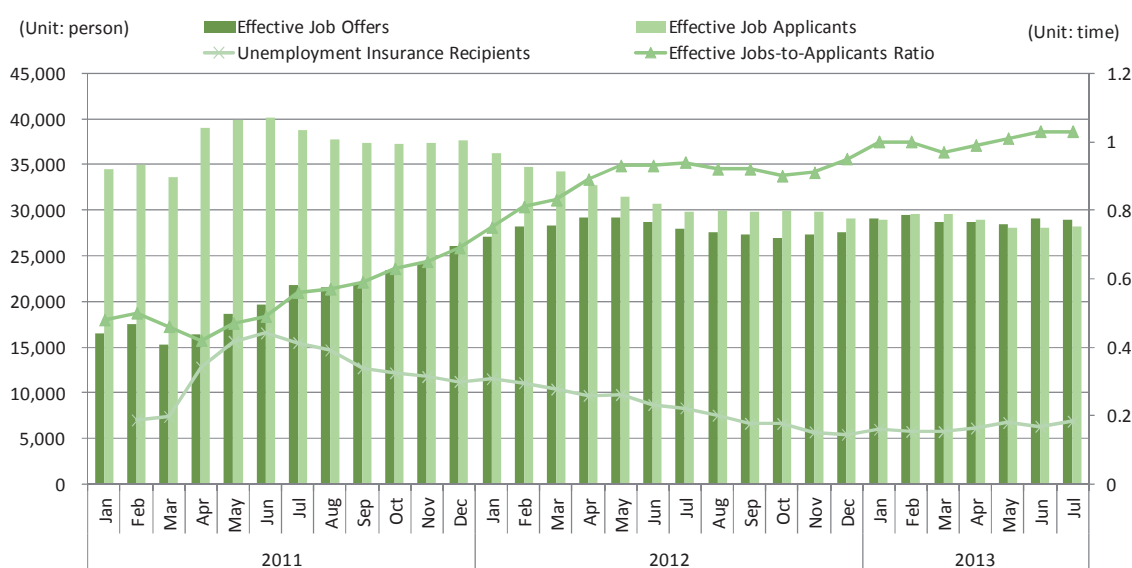
(d) Change of employment structure

While the effective jobs-to-applicants ratio is on an uptrend, the number of insured people under unemployment insurance gradually increased from 638,066 in March 2011 to 670,351 in July 2013, especially in construction (8,417) and medical care and welfare (6,576) (Miyagi Labour Bureau website). However, the number of insured people under unemployment insurance in manufacturing (including food processing) declined (-7,867). For example, in Kesennuma city, after the number of people under unemployment insurance reached a low in May 2011 (11,348), the number climbed up to 16,572 in June 2013. This is still lower than what was recorded before the earthquake (18,286), in February 2011. In particular, the number of insured people in the food processing industry (including marine product processing) declined by 1,822 between February 2011 and June 2013. This implies that the number of insured people in food processing largely decreased (only 52.9 per cent recovery) while the number in other industries such as construction and service increased (Miyagi Labour Bureau website).

5.2.3 Iwate

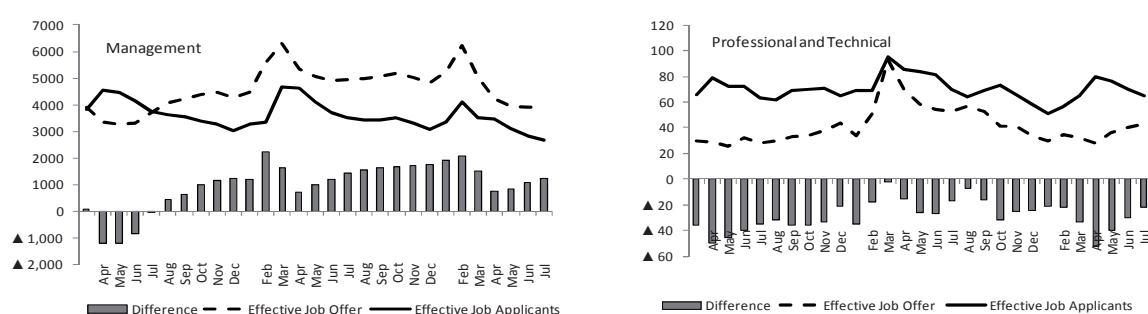
(a) Status of job offers and applicants

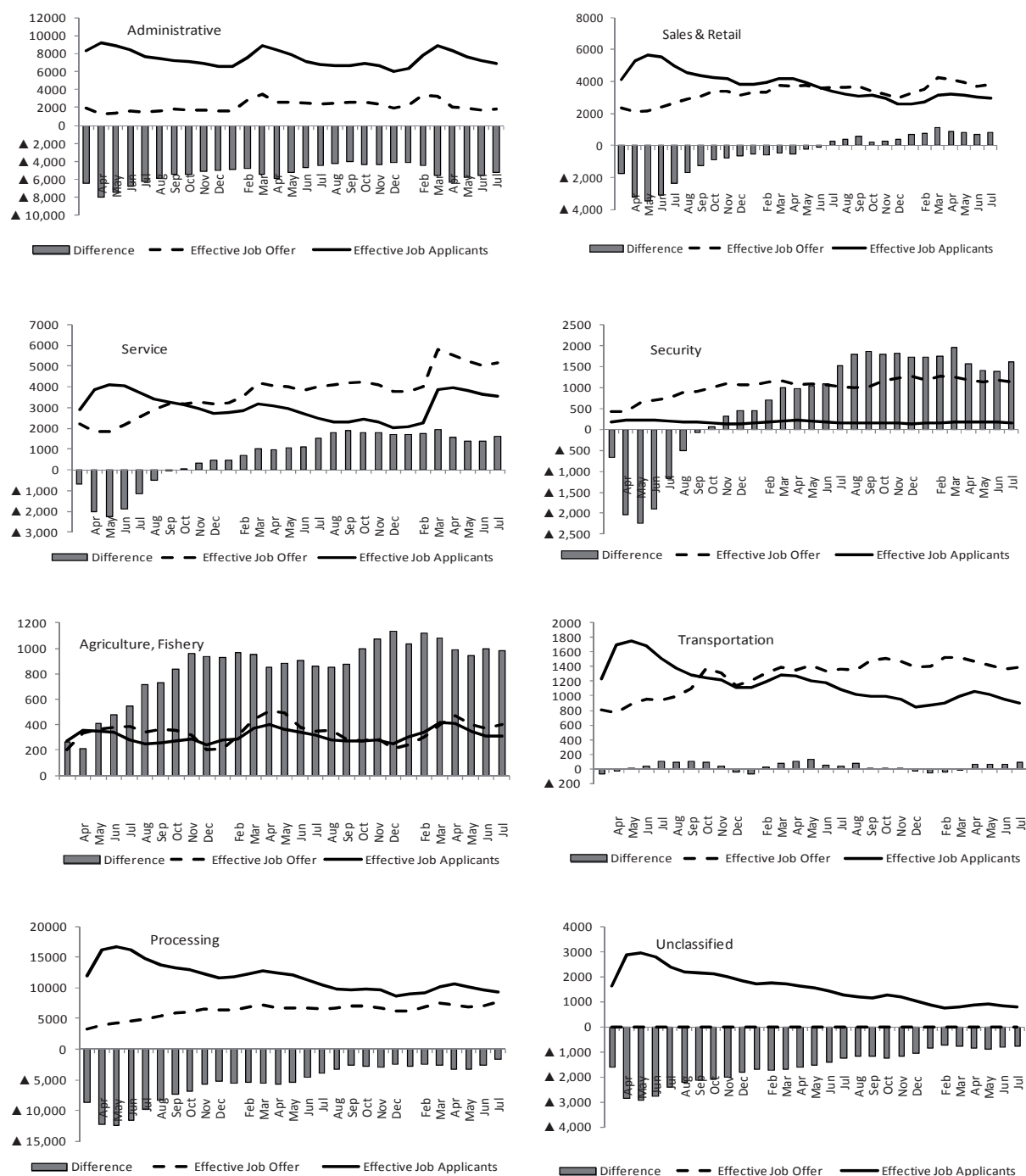
Overall, Iwate's level of effective post-disaster jobs-to-applicants ratio has been higher than before the earthquake (figure 5.21). The ratio was 0.46 in Iwate in January 2011, and exceeded one after one and a half years after the 2011 Earthquake when reconstruction projects got into full swing. The employment situation in Iwate, however, indicates a slightly different trend from Miyagi, which was the most damaged by the 2011 Earthquake. The number of effective job applicants had rapidly increased by May 2012, following this period, the number of effective job offers gradually decreased (until July 2013). After exceeding one in the effective jobs-to-applicants ratio in May 2012, the ratio was on an uptrend by July 2013. Accordingly, the number of recipients of employment insurance increased once in the aftermath of the disaster and then declined, and but have stabilized since November 2011, which was slightly earlier than Miyagi due to the termination of the reception period for insurance and promoting employment.

Figure 5.21 Effective jobs-to-applicants ratio in Iwate from 2011-13

Source: Iwate Labour Bureau website [accessed 6 Sep. 2013].

The employment situation differs by industry and time. As indicated in figure 5.22, a mismatch between job offers and applicants has arisen. There is a great demand for professional and technical workers regardless of the type of occupation. While there is a large number of job offers for people with qualifications and skills related to professional and technical jobs, construction, and civil engineering, there is a shortage of qualified applicants. Other industries with an imbalance in favour of demand for workers are security, service, telecommunications, and sales. In contrast, there are not enough job offers in the administrative and manufacturing sectors to accept all job applicants in their respective sectors.

Figure 5.22 Effective job offers and job applicants by sector in Iwate from 2011-13



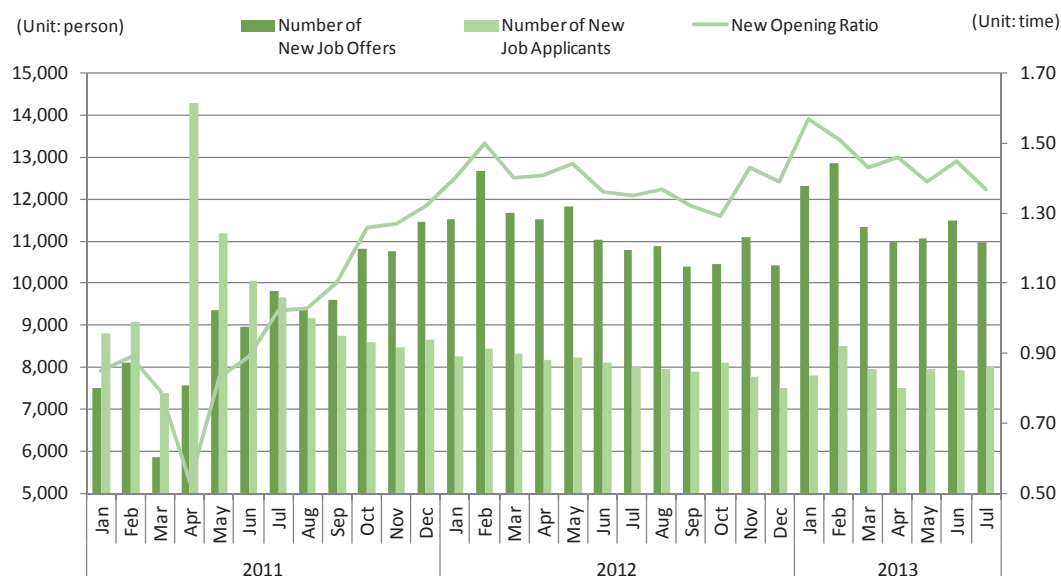
Source: Iwate Labour Bureau website [accessed 6 Sep. 2013].

(b) Status of new job offers and job applicants

The new effective jobs-to-applicants ratio is shown in figure 5.23. The trends are slightly different from Miyagi where the effective jobs-to-applicants ratio is still very high. After a record low in April 2011, the ratio has been on an uptrend. In contrast, the number of new job offers started declining in the last few months, which has contributed to lowering the effective jobs-to-applicants ratio as a whole. As mentioned earlier, new job offers through the Emergency Employment Promotion Project (e.g. administrative work in local Governments and in the disposal of disaster waste) increased in 2012 in the affected areas. Though the ratio still exceeded one, it seems a little stabilized at the higher

level. As the new effective jobs-to-applicants ratio is still above the effective jobs-to-applicants ratio, it can be viewed that the business environment is still improving.

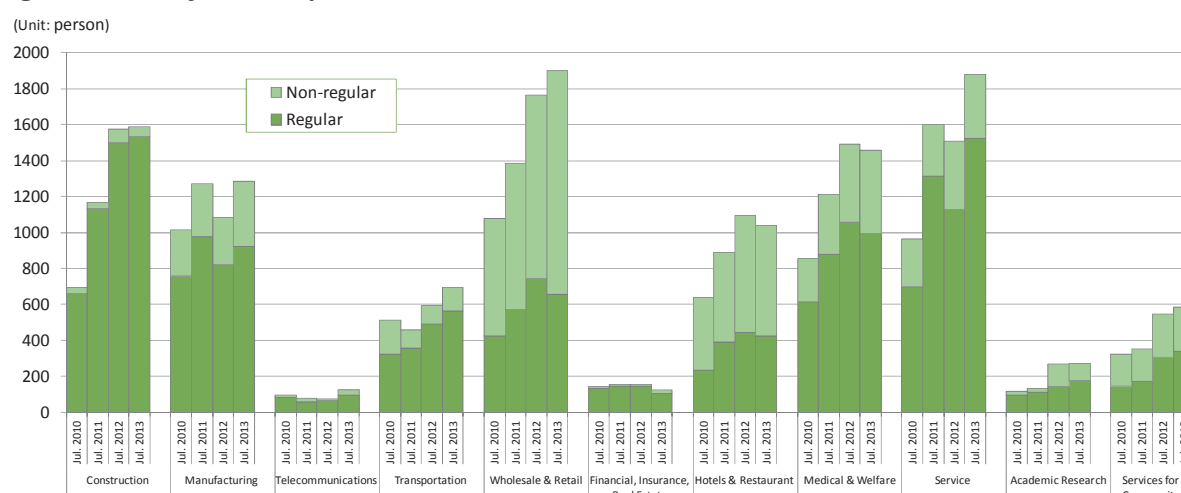
Figure 5.23 New effective jobs-to-applicants ratio in Iwate from 2011-13



Source: Iwate Labour Bureau website [accessed 6 Sep. 2013].

The details of new job offers are shown in figure 5.24. The number of new job offers increased in wholesale and retail, service, medical care and welfare, manufacturing, and the restaurant business. It is worth noting that the ratio of non-regular work to regular work is relatively high in these industries. It can also be said that women's share of work in these industries is also relatively higher, which implies that women are more engaged in non-regular work in these industries.

Figure 5.24 New job offer by sector in Iwate from 2010-2013

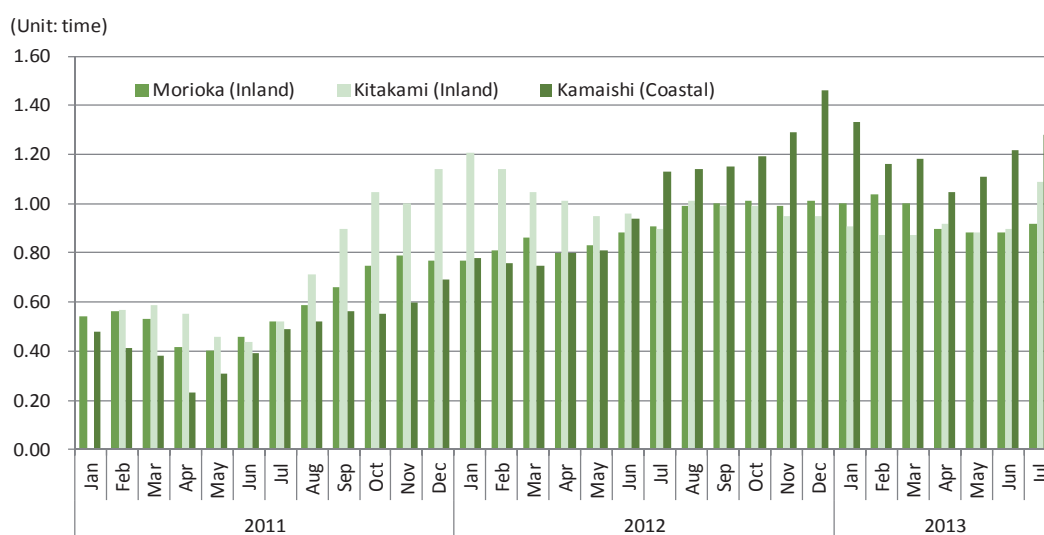


Source: Iwate Labour Bureau website [accessed 6 Sep. 2013].

(c) Regional gap in employment status

The employment situation is determined by the level of damage and the reconstruction process, and differs by region and time before and after the earthquake. In this section, Kitakami and Kamaishi are compared, two cities with different geographical and economical characteristics. Kitakami city, located inland, is known for its concentration of car manufacturing industries invested by Japanese multinational companies such as Toyota. The effective jobs-to-applicants ratio slightly dropped right after the disaster (figure 5.25). The ratio then rapidly increased until December 2012, as companies damaged by the earthquake restarted business operations. After peaking, the ratio stayed around one, which is slightly better than before the earthquake. In contrast, Kamaishi city, located on the coast, was largely damaged by the tsunami. After the effective jobs-to-applicants ratio dropped right after the earthquake in April, the ratio gradually increased by December 2012. Even after peaking in December 2012 (ratio: 1.4) when reconstruction projects got into full swing, the ratio exceeds one.

Figure 5.25 Effective jobs-to-applicants ratio in inland and coastal areas in Iwate from 2011-13

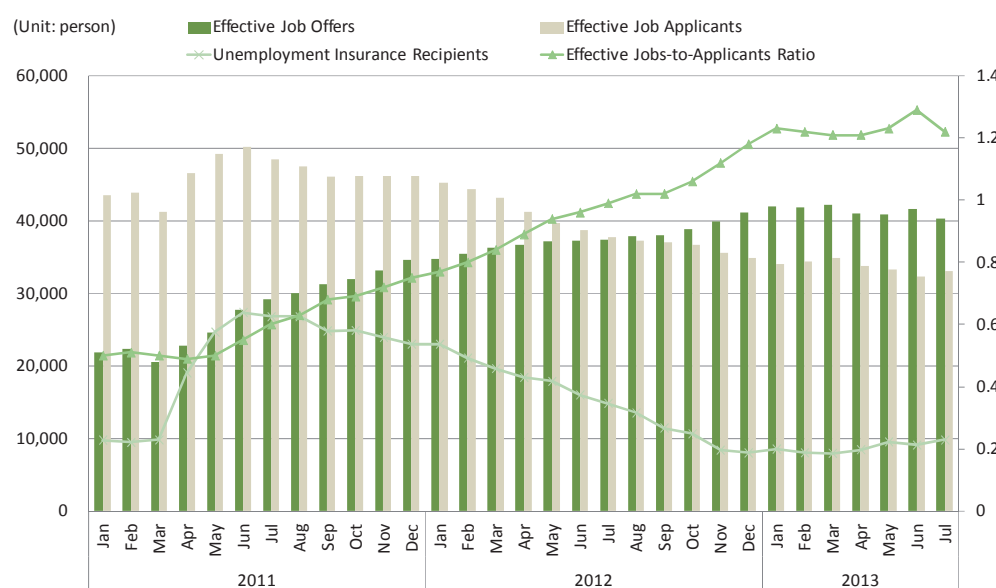


Source: Iwate Labour Bureau website [accessed 6 Sep. 2013].

5.2.4 Fukushima

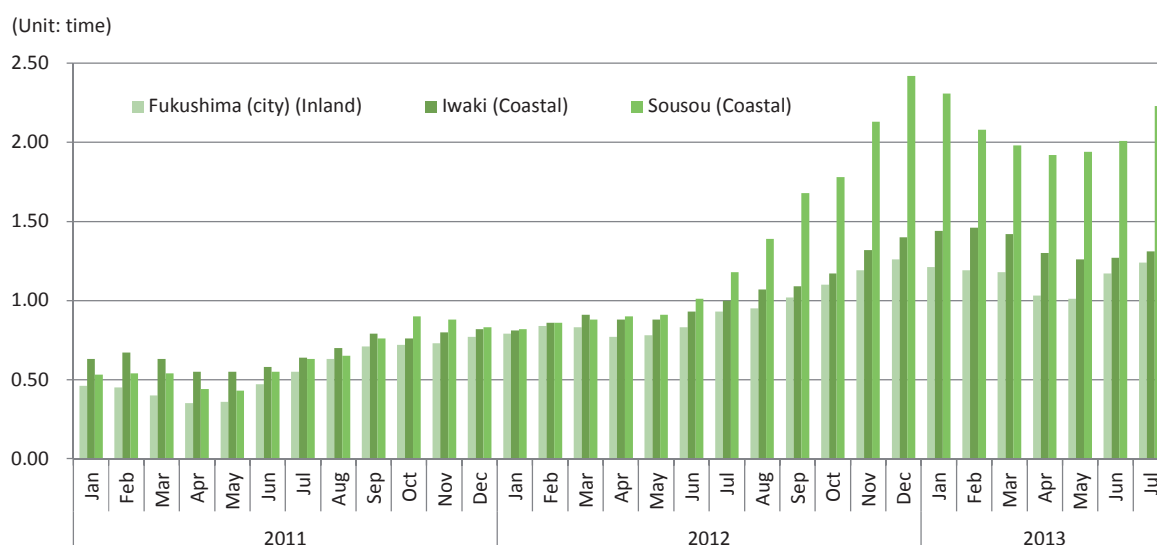
(a) Status of job offers and applicants

The employment trend in Fukushima is slightly different from the above two prefectures due to the accident at the Fukushima Daiichi Nuclear Power Plant. There are still over 30,000 emigrants as of August 2013, accounting for around 80 per cent of the total net emigration from the Tohoku region (equivalent to 1.5 per cent of the total population in Fukushima). In particular, there was a sharp increase in emigrants younger than 44 years old (Fukushima Labour Bureau website). In general, the employment situation in Fukushima has been steadily improving since the disaster. In February 2011, the effective jobs-to-applicants ratio in Fukushima was 0.49 (figure 5.26). The ratio has continuously increased until recently, exceeding one in August 2012. The number of effective job applicants increased by about 10,000 due to the unemployment caused by the accident at the Fukushima Daiichi Nuclear Power Plant as well as the earthquake disaster. However, employment is on the rise with the restoration of facilities and equipment and job creation in response to reconstruction demand. As a result, the number of effective job applicants has gradually decreased.

Figure 5.26 Effective jobs-to-applicants ratio in Fukushima from 2011-13

Source: Fukushima Labour Bureau website [accessed 6 Sep. 2013].

The following describes the status of recipients of unemployment insurance. According to a survey conducted by the MHLW, out of the 10,071 recipients of unemployment insurance in 2012, 41.1 per cent are comprised of those who have been re-employed or who are job applicants, followed by those who are not seeking a job (27.2 per cent) and others (31.0 per cent). The survey also shows that 63.5 per cent of 3,993 unemployment insurance recipients in Iwate and 78.3 per cent of 13,114 in Miyagi are those who are re-employed or who are jobseekers. It can be observed that the number of those who gave up finding a job in Fukushima is greater than the other two affected prefectures. It is thought that main reasons of not seeking a job are: (i) availability of pensions (12.7 per cent); (ii) caring for relatives (13.9 per cent); and (iii) sickness (11.2 per cent). However, the living conditions of people who have been affected by the nuclear plant accident changed dramatically. The change of living environment and uncertainty for the future has made it difficult for them to find a job.

Figure 5.27 Effective jobs-to-applicants ratio in inland and coastal areas in Fukushima from 2011-13

Source: Fukushima Labour Bureau website [accessed 6 Sep. 2013].

(b) Regional gap in employment status

Similar to Iwate and Miyagi, the mismatch between job offers and applicants is also a serious issue in Fukushima, especially near the planned evacuation areas around the nuclear power plant. For example, in Sousou region, located near to the evacuation areas, the effective jobs-to-applicants ratio has been above two in the last ten months, after exceeding one in June 2012 (figure 5.27). This resulted from the reconstruction demand for construction, sales, and retail. In particular, the massive scale decontamination of radioactivity work was accomplished through the Emergency Job Creation Fund. However, many people, mainly the young, have evacuated to outside the prefecture. The population movement caused by the accident at the nuclear power plant has worsened the situation of the employment mismatch, and also has caused a delay in reconstruction.

The status of the nuclear-affected areas in Fukushima, i.e. Futaba town, differs from other disaster-affected areas. The uncertainty of the reconstruction process, especially the ambiguity of if and when the residents can return, makes it difficult for emigrants to stabilize their lives, including employment. For example, the Namie town, which was one of the areas most affected by radioactive contamination, has begun building a temporary town in Nihonmatsu City, located inland with public housing.

5.2.5 Issues with job mismatch

This mismatch in employment in the three affected prefectures, especially in the coastal areas, has become a hindrance for restoration, recovery, and reconstruction. In particular, the shortage of workers and professionals in construction has caused delays in restoring infrastructure and has also increased labour wages. In fact, the labour market had a shortage of workers before the earthquake. In the case of Miyagi, after peaking at 6.6 million workers in 1997 on the back of public works aimed at promoting the local economy, the number of workers declined to 5 million together with a decrease in wages (Ito, 2013). In addition, the working environment, or the so-called 3K (*Kitsui, Kitanaï, Kiken*, or Hard, Dirty and Dangerous), exacerbated the situation to the point that the youth would not join the market. Monthly wages for construction related work have increased as a result. For instance, the monthly wage for regular work in construction rose by 10.4 per cent over the last 1.5 years from ¥205,021 to ¥226,360. Those areas which have significant employment mismatches have been creating a reconstruction economy driven by public investment.

Furthermore, the devastation of the manufacturing industry, (mainly marine product processing, which is widely considered to be one of the key industries in the coastal areas) has caused a serious obstacle in revitalizing local economies. According to a series of interviews,⁸² the shortage of workers became a serious constraint for full-scale operations even before the earthquake, primarily due to low wages and uncomfortable working environments in some factories with an unpleasant smell from fish. Thus, some processing companies received trainees from other Asian countries such as China, Indonesia and Viet Nam. In general, the majority of workers in the industry were middle-aged women. The recovery of marine product processing is one of the key determinants of revitalizing the local economy.

Based on the above, there has been a labour shortage in fishery and related industries, especially in the coastal areas. It can be observed that some men who lost their jobs after the earthquake found jobs in other industries, including construction. By contrast, it is likely that middle-aged women have not

⁸² The interviewees were the Marine Production Processing Cooperative, the chamber of commerce, municipal local Government, and the Public Employment Security Offices in Kamaishi City and Kesennuma City.

yet been able to find new jobs. Thus, the number of employees has been decreasing, even though the number of job offers was increasing due to more business operations being restarted. Based on interviews and literature review, the main reasons behind this can be explained as follows: first, many people, especially the younger generation, moved inland right after the earthquake to places such as Sendai city or Morioka City in order to stabilize their living conditions;⁸³ second, many elderly employees gave up searching for new jobs after they stopped receiving unemployment benefits; third, most of the victims in the coastal areas have been living in temporary housing far from the normal locations of marine product processing factories, with no means of transportation; and fourth, some victims are afraid of working in the coastal areas due to trauma. Thus, it seems difficult to fill in the labour shortage in fishery related industries in coastal areas despite their importance for the local economy.

5.3 Achievements, effect/impact and issues with recovery measures for employment

This section describes the achievement, effect/impact, and issues of Government measures: (i) maintenance of employment (Employment Adjustment Subsidy Programme and extension of employment benefits provided by the unemployment insurance); (ii) employment creation (Emergency Employment Creation Project); (iii) employment maintenance and creation through assistance in restarting business operations of the SME (SME Group Subsidy and Temporary Factories and Stores Project); (iv) other measures for employment security and promotion (job matching through the Public Employment Security Offices, capacity development programmes, and provision of subsidies for promoting employment); and (v) institutional mechanisms for implementation (for the details of specific measures, projects or programmes, refer to Annex 1).

5.3.1 Maintenance of employment

(a) Employment Adjustment Subsidy Programme

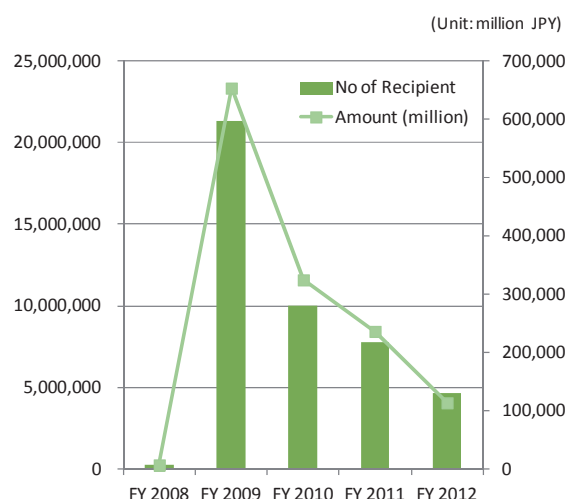
Employment adjustment subsidies are provided to employers who seek to maintain employment of workers by means such as temporary leave from work or transfers to prevent unemployment. Considering the scale of the damage in industries, the Government has relaxed necessary requirements, enabling employers to receive subsidies for up to an additional 330 days of business cessation during a one year period, irrespective of the period of their business cessation prior to the earthquake.

The achievements of the subsidy are shown in figure 5.28. The cumulative total number of recipients and the amount of the subsidy peaked in FY 2009 after the Lehman shock in late 2008. The total number of recipients (1,237 people) and the amount (¥350 billion) in FY 2011 and 2012 is much lower (about one third). It can be inferred that: (i) the scale of business establishments (employers) affected by the Lehman shock was much greater than by the 2011 Earthquake; (ii) affected business establishments, especially manufacturers, continued to operate on a smaller scale regardless of the restrictions on power consumption scheduled for the summer of 2011 within the entire TEPCO

⁸³ Local Governments have official data on population based on the resident register. However, the precise number cannot be ascertained. The residents would not report a change to the resident register, since they feel that they might go back and also because they can get necessary information related to any assistance from the local Government.

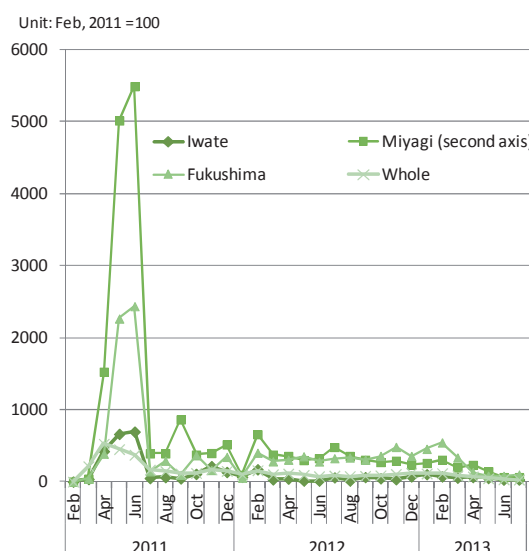
service area (Genda, 2012);⁸⁴ (iii) due to the nature of the economic structure in the most affected areas along the coast, many of those whose jobs were the most affected were self-employed workers or workers in primary industries who were not covered by the subsidy. After the earthquake disaster, the number of applicants under this subsidy has been on a downtrend in three affected prefectures after peaking in June 2011 (figure 5.29).

Figure 5.28 Number and amount of recipients of Employment Adjustment Subsidy in the country



Source: MHLW website [accessed 20 Sep. 2013].

Figure 5.29 Number of recipients of Employment Adjustment Subsidy in affected prefectures



Source: MHLW website [accessed 20 Sep. 2013].

The funds available at the time were completely inadequate to fully respond to the rapid increase in subsidy applications after the earthquake. To tackle this critical situation, the necessary funds were transferred from the funds for unemployment benefits on a temporary basis (Genda, 2012, p. 91). Professor Genda (2012, p. 92) points out that: “when the need for emergency employment measures arises, the first priority is to secure the necessary funds promptly and flexibly. Before a crisis occurs, we must study and establish a mechanism and rules for this purpose”.

(b) Extension of employment benefits provided by unemployment insurance

In response to the urgent needs of disaster victims who were not covered by the Employment Adjustment Subsidy (Genda, 2012),⁸⁵ the Government relaxed requirements on unemployment insurance thrice. After peaking at 79,340 in June 2011, the number was on a downtrend until December 2012, when the benefits were terminated for even those who were eligible to receive it for the maximum duration (330 days). At that point, the number returned to the same level as before the earthquake. As for budgeting, insurance funds were allocated from a special account for labour

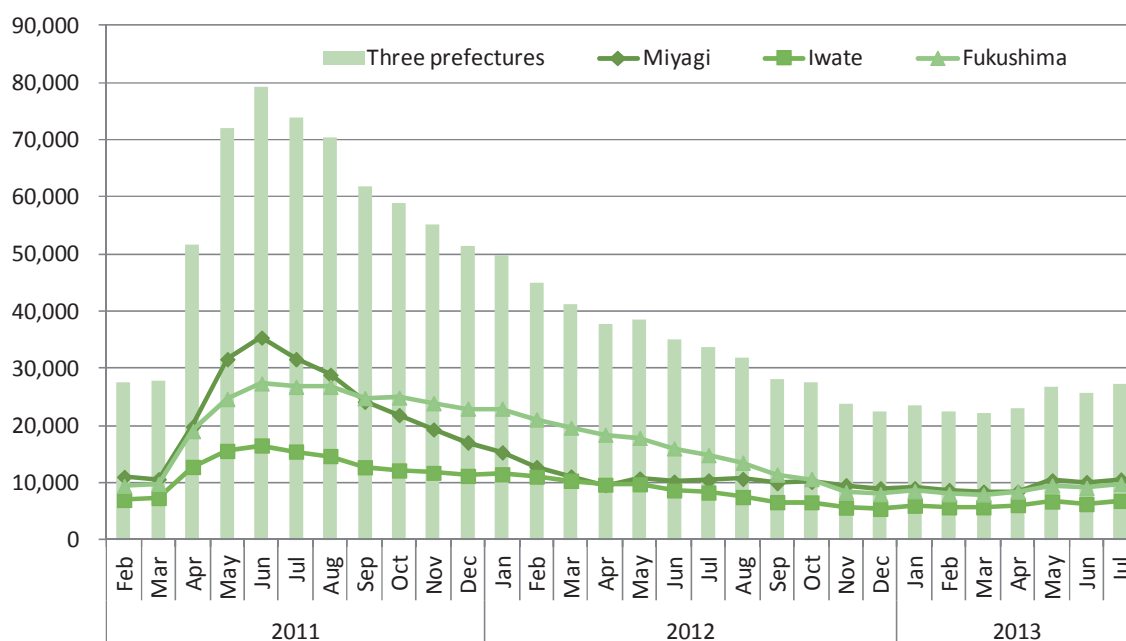
⁸⁴ TEPCO could not secure power for its service areas as expected due to the accident at the Fukushima Daiichi Nuclear Power Plant. As a result, large power consumers (business entities) were required to lower power consumption (25 per cent). Later, the amount was reduced from 25 per cent to 15 per cent. This enabled many companies to avoid having to cease operations.

⁸⁵ Under the Labour Standards Act, employers are not liable for payment of an allowance to laid-off workers if the lay-offs were due to causes not attributable to the employer, such as damage to facilities and equipment caused by an earthquake or tsunami. Thus, the subsidy was not available for lay-offs by employers who were forced to cease operations at business establishment.

insurance (¥294 billion) in the first supplementary budget, which was approved on 2 May 2011. It is thought that providing insurance benefits helped stabilize the living conditions of those who were unemployed in the short-term due to the disaster. At the same time, the extension of this provision needs to be carefully assessed to prevent crowding out, in which Government investment restrains private investment, especially when the effective jobs-to-applicants ratio exceeds one.

Figure 5.30 Number of recipients of unemployment insurance

(Unit: person)



Source: MHLW website [accessed 20 Sep. 2013].

5.3.2 Employment creation

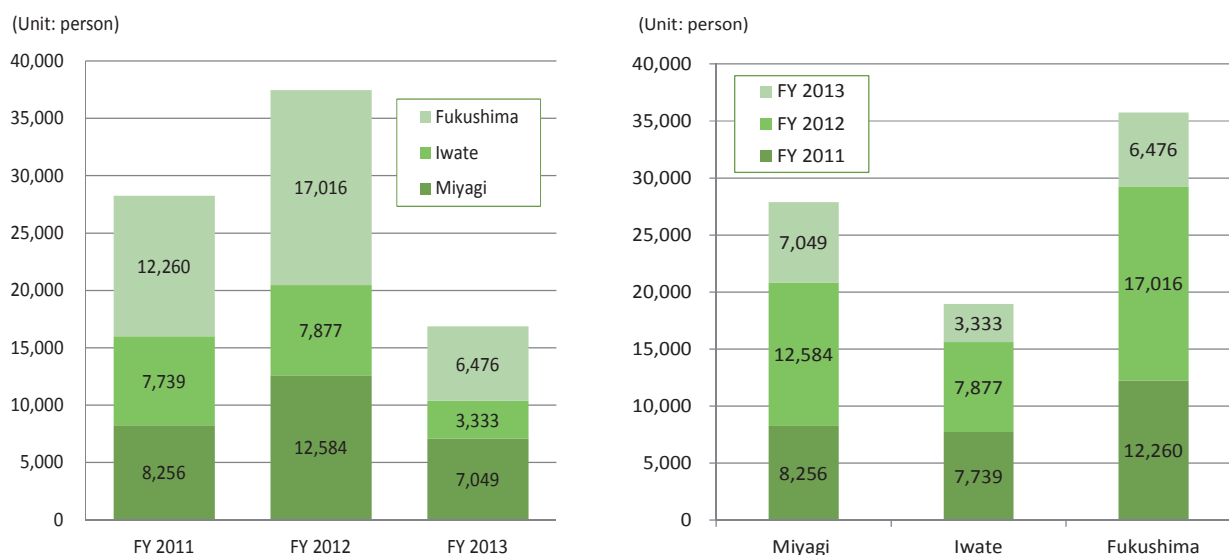
(a) Emergency Employment Creation Project

The Emergency Job Creation Project has been outsourced to private businesses, NPOs, or carried out directly by local Governments to supplement the shortage of human resources at local Governments. It covers various types of work such as: (i) clean-up work in the affected areas (i.e. removal of debris, recovery of fishing tools); (ii) supporting work at municipal Governments; and (iii) monitoring residents in temporary housing, especially the elderly who live alone. The grants were used to encourage private businesses to hire jobseekers with the objective of flexibly creating jobs without relying solely on direct job creation by local Governments. In fact, some local Governments had difficulties in responding to all the needs of disaster victims in the affected areas due to understaffing.

The following is the achievement of the Priority Areas Employment Promotion Project. According to MHLW, the total amount provided exclusively for disaster response in the three severely affected prefectures from FY 2011–2013 (expected) was ¥69.3 billion, which accounts for 39.5 per cent of the total project budget in the country. In particular, in FY 2011, 86 per cent of the total was spent to create jobs for those unemployed due to the disaster. The number of employees under the programme was 82,590 from FY 2011–2013, which accounts for 43.8 per cent of the total project budget. As indicated in figure 5.31, Fukushima was given the biggest budget allocation and the highest number of employees to cope with a serious employment situation caused by the accident at the

nuclear power plant. Aside from this programme, the Emergency Employment Promotion Project was also carried out in FY 2011 with a budget of ¥67 billion for the three prefectures (46.8 per cent of the total). As of August 2013, it is expected that 16,858 employees will be covered under the programme in FY 2013 (until the end of March 2014).

Figure 5.31 Number of recipients in the Emergency Job Creation Project in three affected prefectures



Source: MHLW website [accessed 20 Sep. 2013].

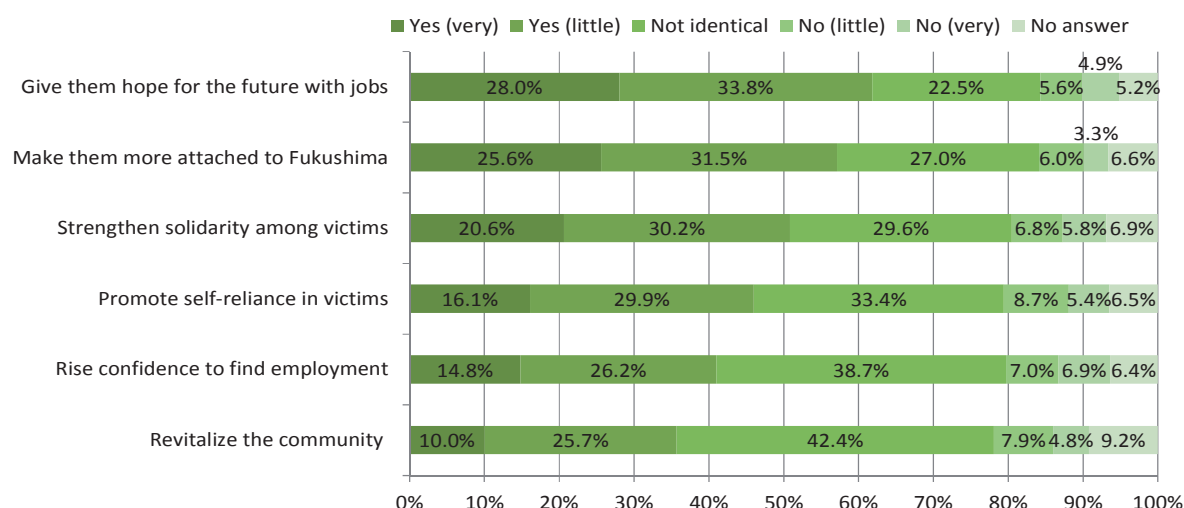
Out of the total number of new employees in Iwate, Miyagi and Fukushima between March 2011 and December 2012 (271,956), those under the programmes covered by the Employment Promotion Fund accounted for 20 per cent, which is a considerable number (Nagamatsu, 2012). Without these programmes, more unemployed people may have had an influence on the fund management of unemployment insurance. Also importantly, working not only gives people an income, but also provides satisfaction with their lives.

The effects and impact of the Emergency Employment Promotion Fund are observed in the survey results conducted by the NPO Cash for Work Japan (CFWJ, 2013). According to a questionnaire survey conducted for employees under the Fund in Fukushima, the project⁸⁶, which aims at strengthening bonds/ties (*Kizuna*) among residents in temporary housing, was effective in: (i) providing the evacuees with job opportunities; (ii) functioning as a safety net for unemployed evacuees; (iii) job matching; and (iv) giving a sense of fulfilment. More specifically, the employees responded that the project helped to: (i) give them hope for a future with jobs (61.8 per cent); (ii) make them more attached to Fukushima (57.1 per cent); (iii) strengthen solidarity among victims (50.8 per cent); (iv) promote self-reliance in victims (46.0 per cent); (v) raise confidence that they would find employment (41.0 per cent); and (vi) revitalize the community (35.7 per cent) (figure 5.32). As noted, the project had a social and psychological impact. In particular, people in

⁸⁶ This project is one of the biggest projects administered under this fund. In FY 2011, out of 52,624 new employees, 5,855 were engaged in this project. The types of work are primarily administrative tasks such as: (i) care for the elderly who live alone in temporary housing; and (ii) providing public information from local Governments. The survey was conducted in April 2012. The questionnaires were distributed to 1,133 people, out of which 894 responded (response rate of 78.9 per cent).

Fukushima in designated off-limits areas were forced to evacuate, lose their jobs, and leave the community. Thus, it is crucial that the victims were given an opportunity to rebuild their lives with social ties.

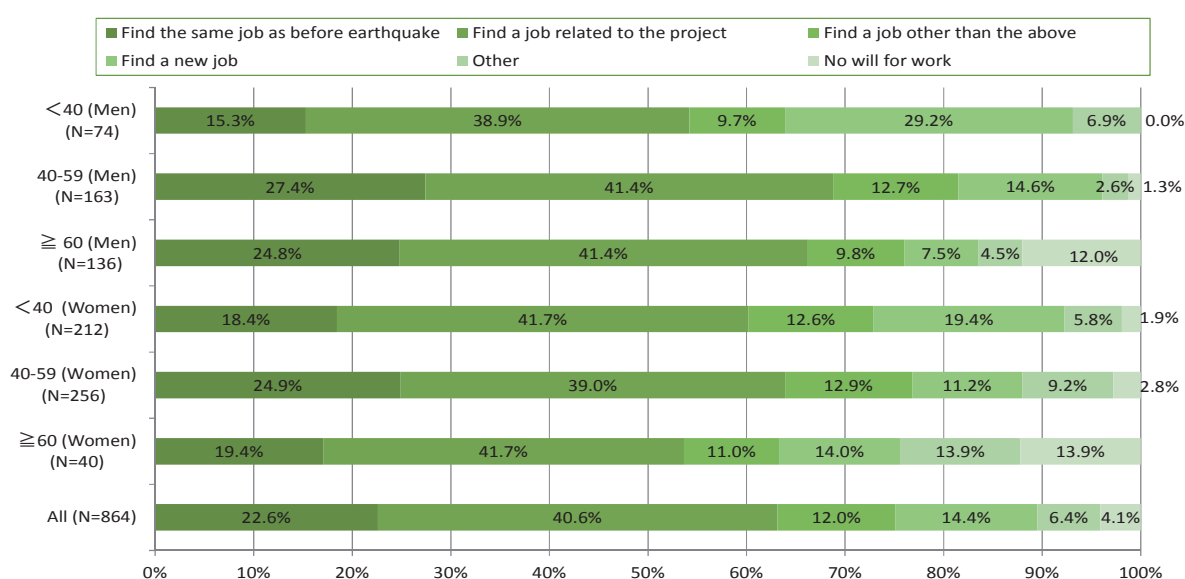
Figure 5.32 Survey results for the employees under the Job Creation Project (N=894)



Source: CFWJ, 2013.

As shown in figure 5.33, the survey finds that the project affected the employees' way of thinking about future work. Regardless of gender and age, the majority of employees (63.2 per cent) claimed that they want to find the same job that they had before the earthquake (22.6 per cent) or to find a job related to the above project under the Emergency Employment Promotion Fund (40.6 per cent). This implies that the project provided them with an opportunity to experience other types of work, which can be one of the most needed aspects of the reconstruction phase. In other words, the project is not limited to helping residents find a means of earning income.

Figure 5.33 Survey results for the employees in the Job Creation Project (N=894)



Source: CFWJ, 2013.

According to interviews with stakeholders and literature reviews,⁸⁷ it can be concluded that the project has made a significant contribution by providing those unemployed due to the earthquake disaster with immediate employment opportunities and supplementing human resources in local Governments to meet the tremendous needs of the residents in affected areas. At the same time, some issues and constraints on operation can be addressed by the following: first, the timing of terminating the scheme needs to be examined, as the project might lead to crowding out (Genda, 2012). Even in interviews with local enterprises and chambers of commerce, some complained that the project distorted labour wages because the project wages were higher than that of the market. This has had an adverse impact on local economies and industries that are key to long-term reconstruction. Second, the project risks impeding the volunteer spirit in the community in the case of work supporting residents in temporary housing and the community (Nagamatsu, 2013). Third, the work might not necessarily be of high quality, depending on the management of the implementers. Basically, employees were not necessarily motivated to improve their performance, since it is neither assessed nor linked to their future career, especially for unskilled workers. Thus, further impact assessment of the project needs to be conducted to extract applicable lessons for future improvement.

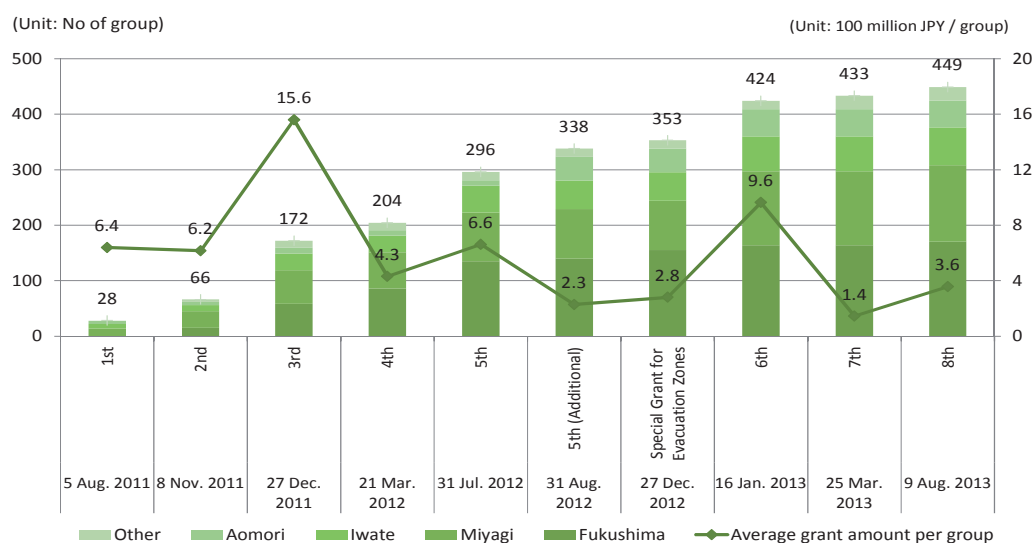
5.3.3 Employment maintenance/creation through assistance in restarting business operations

(a) A measure for rehabilitation of facilities for group use by small-medium enterprises (SME Group Subsidy)

As described above, a measure for rehabilitation of facilities for group use by small-medium enterprises (hereafter the SME Group Subsidy) introduced by METI and implemented by the Small and Medium Enterprise Agency (SMEA) aims at supporting SME groups in affected areas that form the core of the regional economy so that they can be a driving force of reconstruction.⁸⁸ The grant distributed an amount equivalent to three-fourths of the recovery investment to each member in a SME group. Given the massive scale of damage in the affected areas, this scheme was applied for restoration from the earthquake disaster for the first time, as the Government would not, in principle, provide public funds to contribute to restoring private property. Though it is named under the group subsidy, funded facilities and buildings belong to individual members. As of September 2013, the subsidy had been extended eight times, reaching a total of ¥161 billion distributed to 449 groups for FY 2011–2012 in response to great demand from affected enterprises or local Governments (figure 5.34). In this sense, the subsidy has made a significant contribution for enterprisers to restart their business operations.

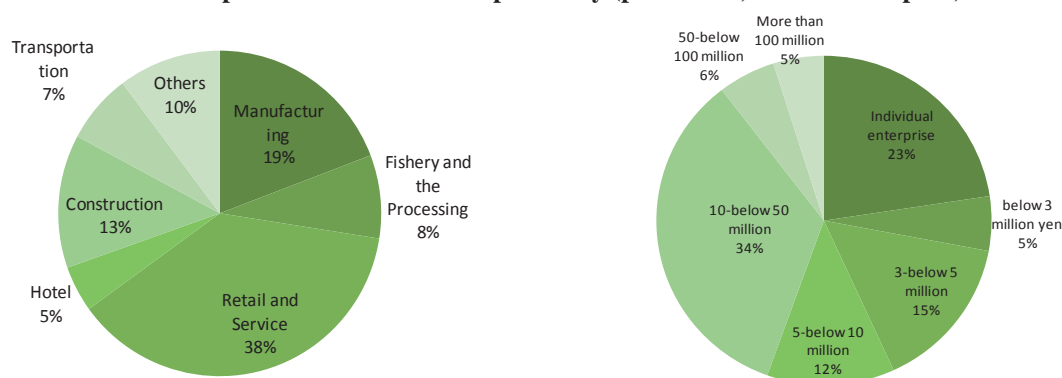
⁸⁷ They include Government officers at the national level, local Government officers, NPO workers and academics.

⁸⁸ When applying, a SME group formulates a reconstruction business plan. If the plan is approved by the prefectural local Government, the subsidy for restoration and establishment is provided. As for conditions of application, groups should be formed under one of the four categories of groups: (i) important industrial clusters in terms of the scale of trade in the regional economy; (ii) core enterprises that play an important role in maintaining employment; (iii) enterprise groups that form an important supply chain in Japan; and (iv) shopping stores that are important for the local community.

Figure 5.34 Achievement of the SME Group Subsidy

Source: SMEA website [accessed 10 Sep. 2013].

The results of a questionnaire⁸⁹ conducted in June 2013 by the SMEA are described in the following section (SMEA-Tohoku, 2013) (figure 5.35). In terms of allocation by prefecture, Miyagi has the largest share of the total (50 per cent), followed by Fukushima (33 per cent) and Iwate (15 per cent). By sector, the retail and service sector was allocated 38 per cent of the total, followed by manufacturing (19 per cent) and construction (13 per cent). The scale of enterprises in capital is more diverse. The enterprises with capital of ¥10 million to less than ¥50 million accounted for the biggest share (34 per cent), followed by individual enterprises (23 per cent) and others.

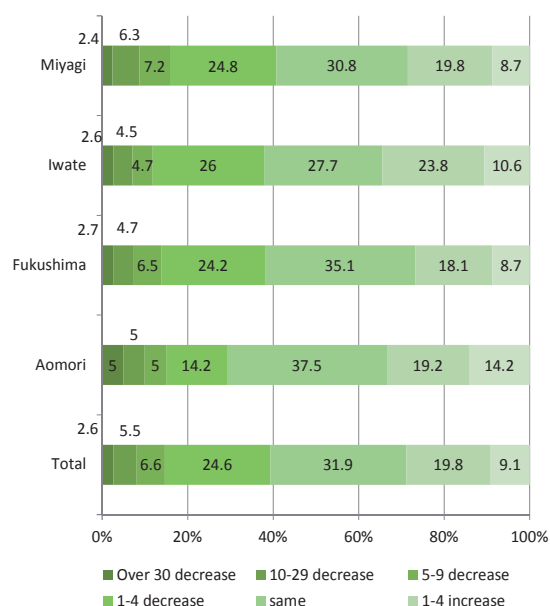
Figure 5.35 Profile of recipients of the SME Group Subsidy (prefecture, sector and capital)

Source: Small and Medium Enterprise Agency

The survey results on changes in employment situation after the resumption of business operations by SMEs are shown in the following figures. 28.9 per cent of the total respondents claimed that the number of employees reached the same level as before the earthquake (figure 5.36). By prefecture, the number of employees reached the same level as before the earthquake (34.4 per cent) in Iwate, followed by Aomori (33.4 per cent), Miyagi (28.5 per cent) and Fukushima (26.8 per cent).

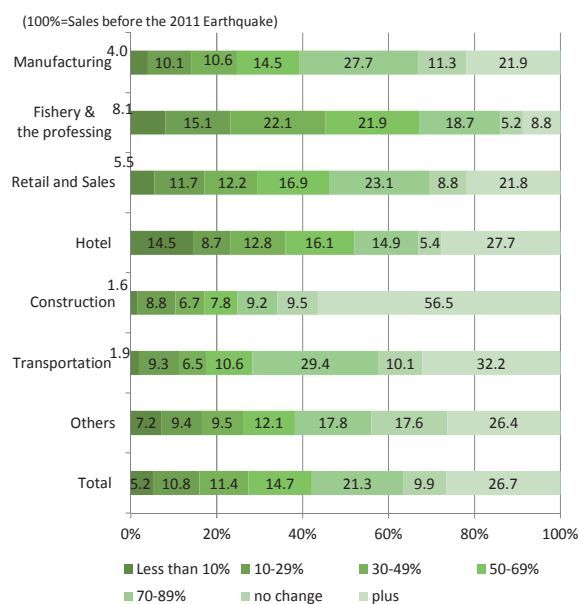
⁸⁹ The questionnaires were distributed to all 7,577 enterprises that were approved in the first to seventh subsidy grants. Out of the total, 5,445 (71.9 per cent) enterprises responded.

Figure 5.36 Change in number of employees after restarting business operations (by prefecture)



Source: SMEA-Tohoku, 2013.

Figure 5.37 Change in sales amount after restarting business operations (by industry)

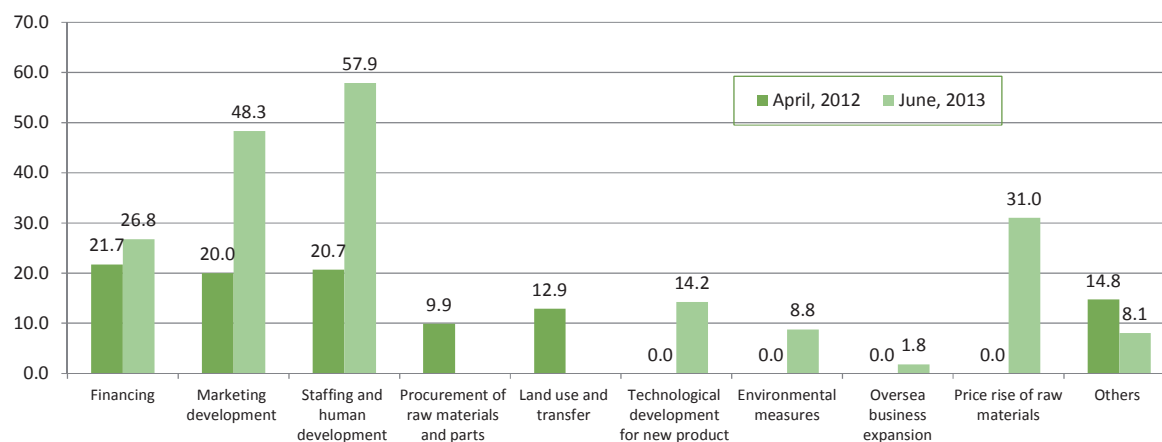


Source: SMEA-Tohoku, 2013.

Differences amongst sectors can be seen in the varying statuses of sales amounts (figure 5.37). For example, construction recovered the most, with 66.0 per cent responding that they reached the same level or higher as before the disaster due to a booming restoration or reconstruction economy. By contrast, the lowest recovery was in fishery and marine production processing (14.0 per cent of the respondents recovered the same level or more in sales amount). The recovery status in sales is much lower than employment, which implies that: (i) net benefits out of sales have not been recovered; and (ii) employment conditions or wages are not in the workers' favour.

Figure 5.38 Managerial issues for recipients of the SME Group Subsidy

(Unit: per cent)



Source: SMEA-Tohoku, 2013.

The management issues are identified by recipients of the SME Group Subsidy in figure 5.38. It is claimed that there are issues in: (i) staffing and human resource development (57.9 per cent); (ii) marketing development (48.3 per cent); (iii) price rise of raw materials (31.0 per cent); and (iv) financing. By sector, manufacturing, sales and service identified marketing development as the most serious issue, while construction and transportation have serious issues with staffing and human resource development.

Based on interviews with stakeholders⁹⁰ and literature reviews, the popularity of this project among stakeholders is very high. The reasons are as follows: first, the subsidy contributes to private asset formation with a high ratio of subsidies to total cost that requires for restarting business operations and a large amount per enterprise that was never expected by local entrepreneurs in affected areas as the Government's response to the natural disaster. Second, the subsidy was implemented at an early stage of restoration, which motivated local entrepreneurs to restart their business operations. Third, a sense of collaboration or solidarity among entrepreneurs was nurtured in the process of preparing a proposal that has led to revitalizing local economies through their own initiatives. Fourth, it is presumed that some of the enterprises would have given up on restarting their operations due to lack of access to financing or financial institutions and the transaction costs involved. Thus, it is observed that the subsidy significantly contributed to restarting their business operations.

Despite the programme's popularity, however, there are some issues and constraints on its operations. First, it has limited access particularly for small-scale businesses, as the distribution is controlled at the prefectural Government level, where the degree of contribution to the regional economy is given more priority than the degree of hardship to the affected people (Kakeko, 2013: 88).⁹¹ Second, there were no clear mechanisms for disseminating information on the subsidy, since it was a new scheme. In many cases, local chambers of commerce at the municipality level took the initiative to: (i) organize meetings; (ii) formulate groups; and (iii) support the preparation of proposals, while a strong cooperative did the same. As a result, some entrepreneurs who did not belong to local commercial networks were excluded from the scheme. Third, required groupings for applications are not realistic in severely affected areas owing to high rates of business suspension and cessation. Fourth, some applicants had to abandon their plans to restart their business operations, since they could not pay the sharing amount. Those issues and constraints mentioned above should be further examined through in-depth survey.

(b) Temporary Factories and Stores Project

Aside from the SME Group Subsidy, the Temporary Factories and Stores Project was implemented to facilitate the resumption of business operations and revitalize local economies, providing temporary factories and stores⁹² premises free of charge through the Organization for Small and Medium Enterprises and Regional Innovation, Japan (SMRJ). The project was endorsed in April 2011 and was implemented in June 2011, based on the measure adopted in response to the 1995 Earthquake. Due to a high ratio of subsidies (eight-ninths subsidy of the total cost), even small-scale individual stores or shops could also access the project. The types of business are diverse, ranging from commerce and

⁹⁰ They include Government officers at the national level, local Government officers, local chambers of commerce, the think tank of local banks in Iwate and Miyagi, and academics.

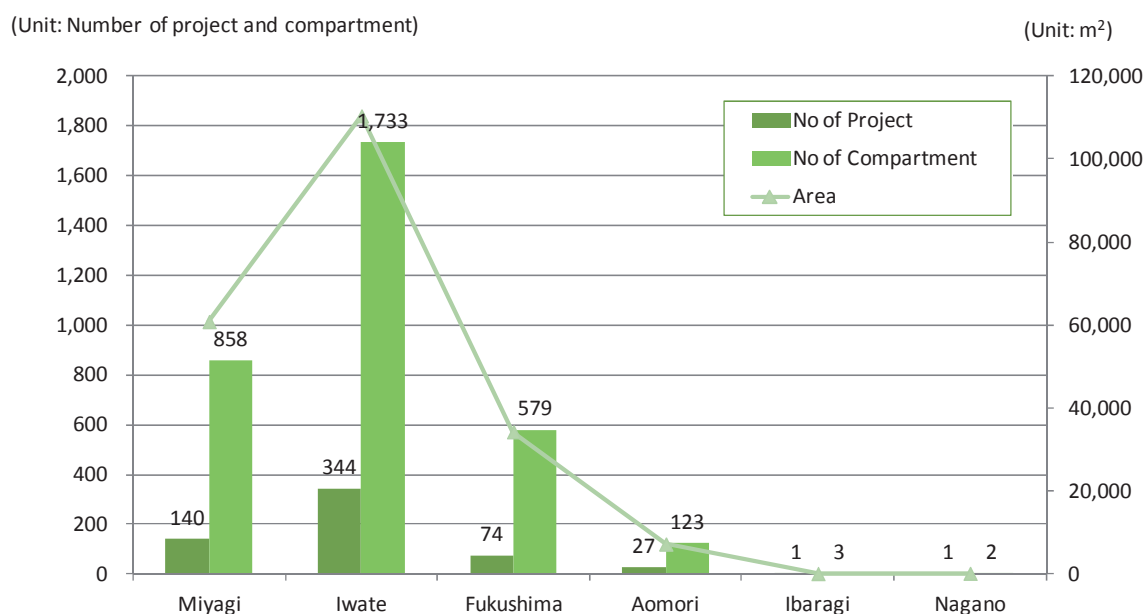
⁹¹ According to an interview with the chamber of commerce, it appears that those cases benefited from the Temporary Factories and Stores Project outlined in the following section.

⁹² These are prefabricated structures.

factories to offices.⁹³ While the facilities were provided by SMRJ, based on requests from municipal Governments, municipal Governments were responsible for determining the terms for renting and contracting with tenants. In principle, the facilities were leased for one year and then voluntarily conveyed from SMRJ to municipal Governments. After that, municipal Governments maintain the facilities and decide on the future direction in consultation with tenants.⁹⁴

The total budget allocation of the project from FY 2011—2012 was ¥35.4 billion. As of March 2013, the total number of projects was 587 (575 completed and 12 ongoing) (figure 5.39). Iwate accounted for 58.8 per cent (338 projects), followed by Miyagi (23.5 per cent) and Fukushima (12.7 per cent). There were 3,298 compartments or enterprises.

Figure 5.39 Achievement of the Temporary Factories and Stores Project



Source: SMRJ website [accessed 8 Sep. 2013].

As a symbol of recovery from the earthquake, the projects have contributed to: (i) the resumption of business activities, especially for small-scale entrepreneurs without any assets; (ii) the maintenance and promotion of employment; (iii) the revitalization of the local economy; and (iv) ensuring the convenience of local people, and thus potentially preventing a population outflow in some cases.

However, enterprises that restarted business as a ‘temporary restoration’ under the project have to move to ‘full-scale business operations’ sooner or later. Currently, municipal Governments under this project, to which the facilities were handed over by SMRJ, have been conducting an opinion survey for tenants. The results will be consolidated with the reconstruction plans.⁹⁵ The survey results are

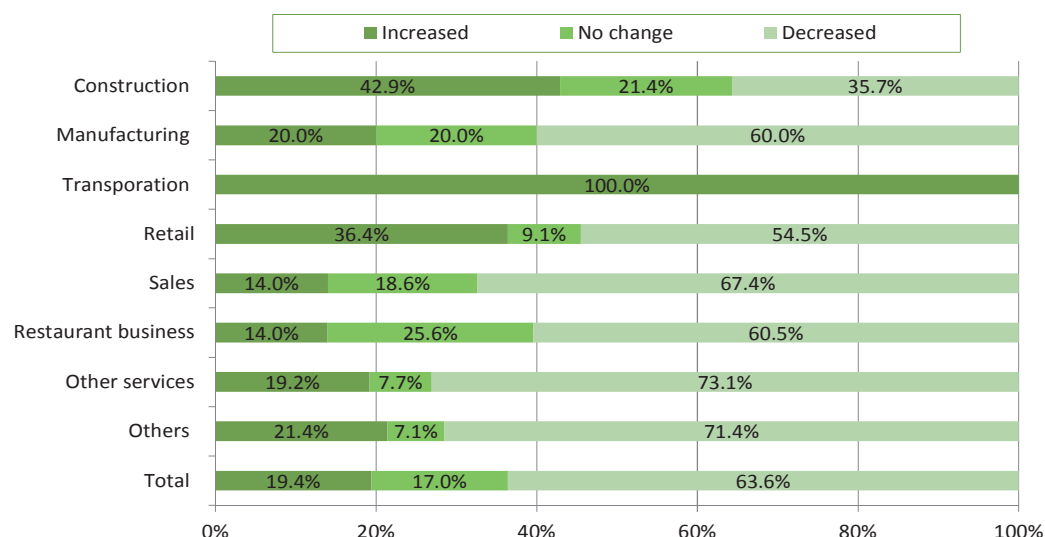
⁹³ For example, it includes a stationery shop, bakery shop, hair salon, restaurant and marine product processing factory.

⁹⁴ In the case of Kamaishi City, the duration for a lease is two years with a possible extension for up to five years. The local Government has issues with determining how to utilize the facilities after terminating the contract and the cost of abolishing the facilities. In some cases, as the land is private property, those facilities have to be abolished based on the contract with land owners.

⁹⁵ Unlike the SME Group Subsidy, there is no comprehensive survey for beneficiaries on the project conducted by SMRJ.

explained below (Kamaishi Municipal Government, 2013).⁹⁶ The status after entering temporary factories and stores is as follows (figure 5.40): in terms of the amount of sales, the majority of respondents (63.6 per cent) claimed that the amount of sales had decreased, while 19.4 per cent in construction responded that sales had increased, followed by retail (36.4 per cent). As for lease contracts, 92.6 per cent wished to extend the contract. As for the future, 43.2 per cent planned to restart business operations on a full-scale in their own buildings, while 32.1 per cent wanted to operate by renting. Regarding the time frame, out of 79 respondents, 40.0 per cent claimed a plan to restart within FY 2013, 14.0 per cent in FY 2014, 7.0 per cent in FY 2015, and 5.8 per cent after FY 2016. However, the majority (36.0 per cent) have no plans yet. Issues identified by the respondents are: (i) unclear land use plans by local Governments (51); (ii) financing to reconstruction works (50); (iii) a decrease in sales and customers (35); (iv) lack of staff (16); and (v) ageing of owners compounded by a lack of a successor (13). On the other hand, according to 36 respondents who plan to discontinue operations or have no plans, issues include: (i) a decrease in sales and customers (17); (ii) no clear land use plan by local Government (13); (iii) inadequate financing (11); (iv) ageing of owner and lack of a successor (10); and (v) staffing (5). As such, the long-term impact of the project is required to properly assess the situation.

Figure 5.40 Change in sales after the 2011 Earthquake



Source: Kamaishi Municipal Government, 2013.

Based on the above findings, it appears that tenants in temporary factories and stores prefer to use the buildings for several years or more (depending on the reconstruction process), and also have some issues regardless of different opinions towards future direction. First, unclear land use plans by local Governments have made it difficult for tenants to come up with concrete business plans. Second, the majority of them feel anxious about succeeding business operations due to a decrease in sales and customers partially because of depopulation. In particular, some tenants were not eligible for

⁹⁶ The survey was conducted from February to March 2013 with 176 respondents (response rate of 82 per cent). The profile of surveyed enterprises is as follows: out of the 164 enterprises, the types of business that the respondents are engaged in are: (i) restaurant business (26 per cent); (ii) sales (25 per cent); (iii) construction (10 per cent); (iv) retail (7 per cent); and (v) manufacturing (4 per cent). The respondents with less than five employees before and after the earthquake account for 82.3 per cent and 84.8 per cent, respectively. Out of 176 enterprises, 98.3 per cent of the respondents claimed that their store or shops were destroyed. On the ownership of property, land owners account for 47.8 per cent and 62.0 per cent before and after the earthquake, while the rest were tenants. Further, total damage suffered by 144 respondents amounted to ¥7.6 billion.

other subsidies such as the SME Group Subsidy even before the earthquake,⁹⁷ due to the lack of assets. These tenants hesitated to take a loan to restart business operations without any subsidies. This implies that aside from the issues on restarting business operations on the owner side, the status of the local economy partially influenced by population movement will also be a determining factor in sustaining businesses.

The case of a temporary shopping district in Kesennuma City is discussed below to illustrate the issues of tenants. The Kesennuma Murasaki-cho Shopping District, which is composed of various types of stores and shops such as restaurants and bakeries,⁹⁸ is planning to organize a cooperative to apply for the SME Group Subsidy under the SMRJ in coastal areas that is provided under the Land Readjustment Project by the municipal Government. Even if the formed cooperative is approved for the subsidy, actual implementation will depend upon the progress of land acquisition in planned areas by different land owners.⁹⁹

5.3.4 Other measures for employment security and promotion

Aside from the measures mentioned above, there are other measures for promoting and securing employment that have been undertaken under the name of the 'Japan as One' Work Project. These include: (i) job matching through the Public Employment Security Offices; (ii) capacity development programmes by the Public Employment Security Offices and prefectural local Governments; and (iii) provision of subsidies for promoting employment.

First, the Public Employment Security Offices consulted more than 310,000 disaster victims on job matching between April 2011 and April 2013 at the local level (Reconstruction Agency, 2013b). From the beginning, the officers have been going around evacuation centres and temporary housing to hold job consultations with temporary staff and dispatch officers from other offices. Since last year when the effective jobs-to-applicants ratio exceeded one, the type of consultation has shifted toward eliminating employment mismatches between the offers and seekers along with the demand for reconstruction. The Public Employment Security Office in Kamaishi City and Kesennuma City, for example, have been conducting a tour for jobseekers to marine product processing factories to reduce the negative perception of this working environment. Further, those offices in affected areas have been relaxing the requirements for job offers¹⁰⁰ to meet the high demand in the job market, in consideration of the lack of experienced jobseekers. However, it is pointed out that the job matching function in disaster-affected areas needs to be further enhanced through collaborations with private companies to compensate for a limitation in public offices in response to the changing needs of the job market.

Second, a total of 28,964 people in the three disaster-affected prefectures had participated in training courses as of March 2013 (Reconstruction Agency, 2013b). In response to the high demand for reconstruction in the labour market, the MHLW Central Office instructed all prefectural and local

⁹⁷ The target group of the SME Subsidy are for those who lost their assets.

⁹⁸ Some of them were tenants even before the earthquake.

⁹⁹ In the case of Kesennuma City, all types of buildings such as shops or stores, houses and factories coexisted in the coastal area. Thus, the local Government has to negotiate with many landowners who had sometimes already passed away. Furthermore, land titles had not been transferred for a few generations, indicating that there are many legal heirs per portion of land. This has become a key factor delaying the implementation of reconstruction plans.

¹⁰⁰ The offices asked the enterprise owner offering jobs to include those jobseekers who completed related job training, not only actual working experience.

Labour Bureau governors to set up special training courses. In total 1,741 people were trained, especially in the fields of construction, information technology, and electricity maintenance. However, it has been pointed out in interviews with local Labour Bureaus that a similar type of training was conducted by the Public Employment Security Offices and the prefectural local Government. Some kind of coordination mechanism must be established to avoid duplication. At the same time, one of the NPO working on job matching in Kamaishi City claimed that the training provided by the Government has not necessarily contributed to eliminating mismatches, especially for the type of jobs that require high skills and rich experiences such as CAD, construction design, and construction management (Nakagawa, 2011).

Last, as discussed above, the Business Reconstruction Employment Creation Project in affected areas handled by prefectural local Governments provided 4,492 cases (22,408 people) with ¥2.25 million by April 2013, to support employment in line with industrial policy (Reconstruction Agency, 2013b). However, several issues have been identified.¹⁰¹ The first issue relates to the targeting methods of beneficiaries. Potential beneficial enterprises were pre-determined by prefectural local Governments, since one of the requirements is that the enterprise needs to be under specific Government funded projects to bring about synergetic effects among Government support programmes. In fact, many of the beneficiaries include enterprises located inland, not in the severely affected areas along the coast. The other issue is related to the institutional set-up. The programme was formulated by MHLW with funding from the Job Creation Fund. Thus, the rationale behind the programme is to create new employees, not to re-hire former employees. In reality, many affected enterprises that were forced to dismiss employees in the aftermath of the disaster were eager to re-employ former employees who are familiar with and also committed to their previous work. As a result of a series of consultations among concerned agencies, the requirement was relaxed to enable the enterprises to get funds for up to 80 per cent of the employees. Lastly, the implementation of the project was delayed for about six months due to delays in approving the third supplementary budget. If approval had not been delayed, more enterprises might have decided to continue business operations, or the resumption of business operations could have been facilitated.

5.3.5 Institutional mechanism for implementation

As described above, all measures under the ‘Japan as One’ Work Project were implemented by concerned agencies, as those measures adopted in the disaster response were basically an expansion of existing schemes with some modification of requirements in accordance with the local context. At the same time, the project features the establishment of the ‘Japan as One’ Job Council at the prefectural level. In the cases of Iwate and Miyagi, the Council, organized and coordinated by the Prefectural Labour Bureaus, held three meetings from May 2011 to May 2012, mainly to share information on employment status and new employment measures. In particular, after the change in administration, the Council no longer conducts meetings. As for the Reconstruction Agency at the prefecture level, it functions as a coordination body in respect to employment and industry, since specific project or subsidy has been designed at the central level and implemented by either the local Government or prefectural bureau of each ministry.

¹⁰¹ Based on the interviews with the people in charge of the scheme at prefectural local Governments and the Labour Bureau.

5.4 Contributions and issues of measures for employment improvement

5.4.1 Contributions of measures for employment status

Massive efforts by the Government have achieved solid progress toward recovery, with the Tohoku economy gradually improving from its post-disaster slump. At the same time, not all of the employment measures under the ‘Japan as One’ Work Project are exclusively dedicated to improving employment, as the effect on employment measures driven by the Government have been intermingled with other public and private sector efforts. It appears that all measures contributed to improving employment status to a large extent, bringing about synergetic effects among the measures and other efforts. More specifically, it started with employment maintenance and security through the extension of unemployment insurance benefits, and provision of the subsidy for entrepreneurs to maintain employees as an emergency response. Those measures have gradually been geared toward creating new employment opportunities through the Job Creation Project.

In assessing employment status by employment indicators such as labour participation and unemployment, the indicators show significant improvement in the three affected prefectures. That is, after reaching the bottom right after the earthquake, the number of job offers has increased, while the number of job applicants has decreased. As a consequence, the effective jobs-to-applicants ratio started increasing after about one year after the earthquake. This result can be attributed mainly to the increase of new job offers, particularly in construction, service, security, transportation and management related to reconstruction. Similarly, unemployment has decreased in terms of both numbers and rates, while the labour participation has slightly improved. In particular, unemployment undercut four per cent after an interval of nearly five years, which is considered to be a significant impact, together with the country’s macroeconomic policy and economy.

5.4.2 Issues with improvements in employment status

Despite some improvement of the macroeconomy in the three disaster-affected prefectures, employment mismatches in the particular industries mentioned above have become a serious obstacle to reconstruction. Some issues with the improvement of employment status are addressed in the following section. Though the unemployment rates in three prefectures are at the same level as before the earthquake, it is estimated that there are still about 27,000 unemployed people who are expected to participate in the labour market. Among those, people whose unemployment insurance benefits have been terminated will have more potential for employment, since they had worked before the earthquake. Analysing the reasons that people are not engaged in work helps us to verify the effects of the project and to come up with measures for further improvement.

The following section analyses the results of a questionnaire survey conducted by the Public Employment Security Offices in disaster-affected municipalities in October 2012. Out of the jobseekers in disaster-affected municipalities, 56.3 per cent responded that they would not have to be employed within three years. The reasons were that: (i) there are other family members who earn enough income for their livelihood; and (ii) they have enough savings and pensions to survive. In another survey conducted on jobseekers in September 2012 (Iwate Labour Bureau website),¹⁰² priorities for employment conditions are: (i) the work place (within a commutable area) (25.4

¹⁰² The survey was conducted with job applicants who came to the Public Employment Security Offices in the coastal areas in Iwate on September 2012 by the local Government of Iwate Prefecture.

per cent); (ii) the type of work (24.7 per cent);¹⁰³ (iii) the salary (5.9 per cent); and (iv) the working hours (4.4 per cent). Additionally, the survey results by emigrants to inland areas or areas outside the original prefecture in October to November 2012 showed that 37.0 per cent would like to live outside the prefecture in the future, and 29.9 per cent living inland claimed that they would like to go back to their original municipalities, while 33.9 per cent want to resettle. The rest are undecided. The reasons are: (i) the long duration for reconstruction and community revitalisation; (ii) no assurance that they would have houses in their original location; (iii) lack of convenience and transportation for hospitalization for the elderly; and (iv) no jobs in the original places.

Based on the above findings, it appears that various physical, psychological and socio-economic factors are causing employment mismatches. Employment mismatching cannot be resolved solely with measures for employment support. The key factor causing mismatches lies in the delayed reconstruction process, which is directly linked to the uncertainty of residents regarding the future. Many of them have to commute from temporary housing located in highland areas to working places that are quite far. Without means of transportation, they hesitate to take on jobs because of lengthy and costly commutes. With high uncertainty concerning their future life, especially in Fukushima, the lengthy reconstruction process prevents evacuees from going back to their original hometowns. There are still 61,355 evacuees who live outside the three affected prefectures.¹⁰⁴ In particular, those who have children and the elderly require convenient access to medical and educational facilities.

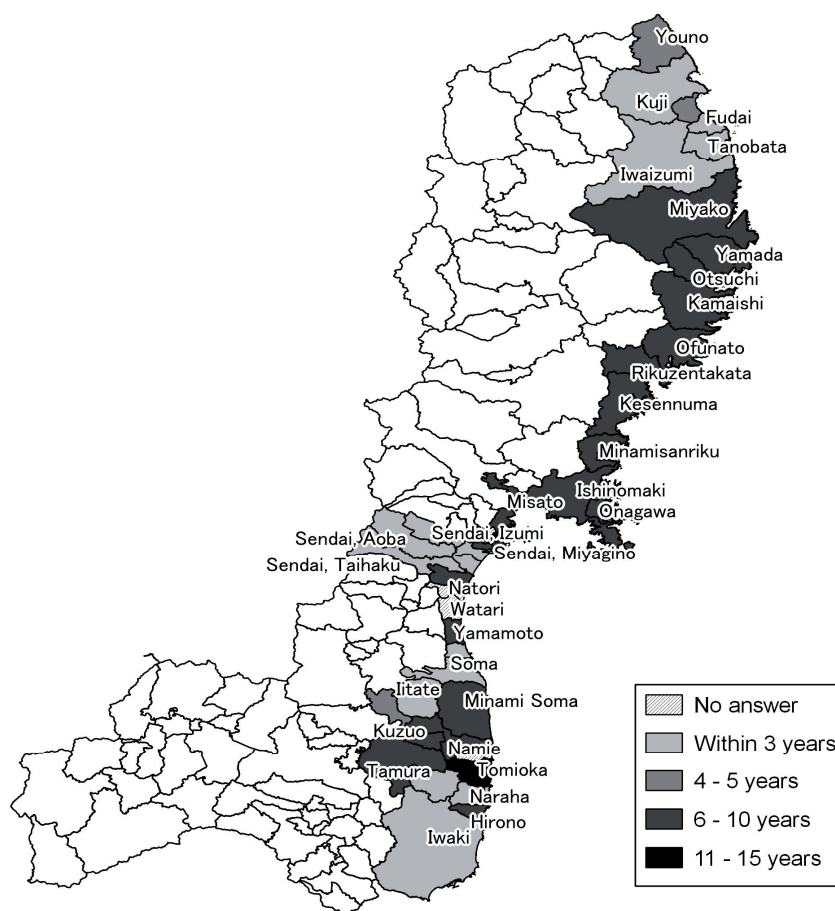
As illustrated in figure 5.41, the gap in the pace of the reconstruction in the disaster-affected municipalities has widened. A questionnaire survey on municipal Governments in early 2013 by the *Asahi Shimbun*, a daily national newspaper circulation, revealed that it may take up to three years for complete recovery and reconstruction¹⁰⁵ in and around Sendai City and some parts in the northern Iwate and in the southern Fukushima, while other parts are expected to need six to ten years. Municipalities near the Fukushima Daiichi Nuclear Power Plant claim that 11 to 15 years are needed for recovery. It is inferred that this difference results in varying levels of population movement and revitalization of local economies.

¹⁰³ Men prefer regular work, while women prefer non-regular work.

¹⁰⁴ Out of the total, the number of evacuees in Fukushima account for 85.2 per cent.

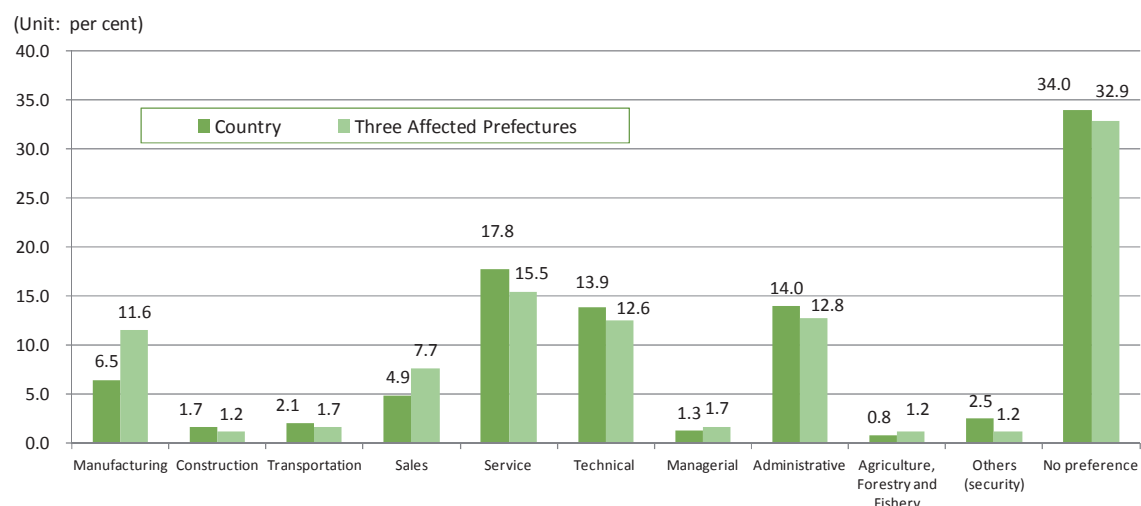
¹⁰⁵ No clear definition was identified in the survey. This is based on the perception of local Governments towards recovery and reconstruction.

Figure 5.41 Expected duration to complete recovery and reconstruction

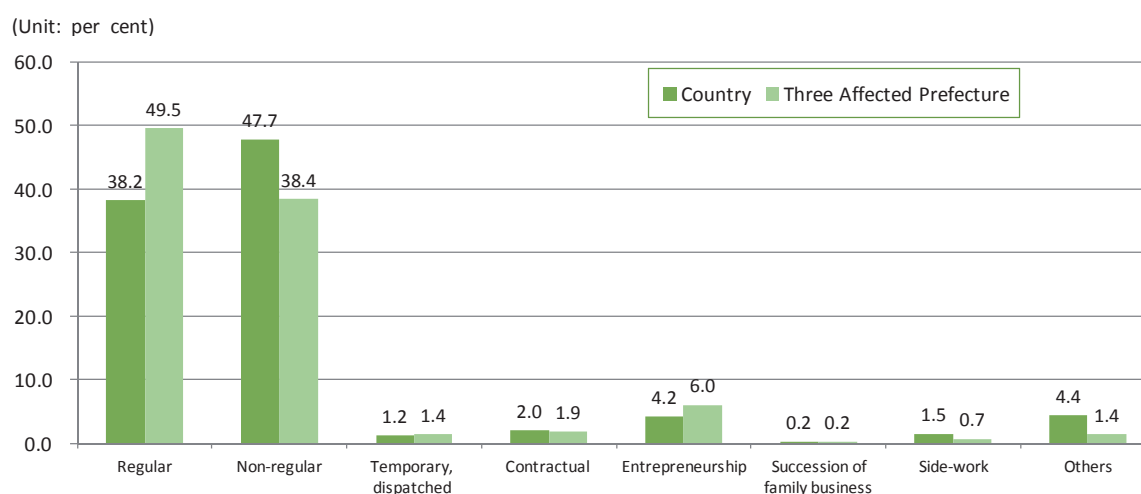


Source: Modified from Asahi Shinbun, 1 Mar. 2013.

The other factor causing employment mismatches lies in employment conditions, such as the type of work and salary. The above results can be verified with the results of the Employment Status Survey conducted by MHLW in 2012 (MHLW website). For the 41,400 who left jobs due to the earthquake disaster, the top industries that the respondents want to be engaged in were: service (15.5 per cent); administrative (12.8 per cent); technical (12.6 per cent); manufacturing (11.6 per cent); and sales (7.7 per cent) (figure 5.42). It is remarkable that 32.9 per cent of the respondents claimed no preference in the type of work. Thus, the type of work might not necessarily be a cause of employment mismatch. Some of the interviewees pointed out that there might be an effect of crowding out in which the massive inflow of public investment has distorted the labour market (e.g. especially by raising wages), and as a result, the unemployed have more choices in better conditions than before. Consequently, even former employees would not be re-employed in previous low-wage work with unfavourable working conditions such as marine product processing. In respect to the type of employment, the majority prefers regular work to non-regular work, which indicates that the majority would like to have a stable job (figure 5.43).

Figure 5.42 Industries preferred by the unemployed

Source: MIC (Employment Status Survey 2012) [accessed 2 Sep. 2013].

Figure 5.1 Preferable type of employment for the unemployed

Source: MIC (Employment Status Survey 2012) [accessed 2 Sep. 2013].

5.5 Conclusion

Economic indicators on industry and employment have recovered to a large extent especially in Miyagi and Iwate. However, the recovery in fishery, the key industry in coastal affected areas, tends to be late because of local factors such as recovery of infrastructure especially fishing ports and facilities, land elevation, land ownership, reconstruction planning, and coordination with the central Government for funds. The recovery in the fishery industry in production volume and sales has been slow and has resulted in a decrease in the working population of those aged between 15 and 44 years, thus hindering the revitalization of the local economy. Besides, the major delay in decontamination of areas affected by radioactive leaks in Fukushima casts a shadow over the return of evacuees as well as the whole reconstruction process.

Despite the improvement in employment-related indicators, employment mismatches have become apparent in all three prefectures and have negatively affected the progress of the reconstruction, especially in lack of workers in construction and transportation, both of which are generally perceived to be men's work. The status of mismatch differed by sector. For instance, there was a significant lack of job offers in administrative and sales, both of which are generally perceived to be women's work. Moreover, the uncertainty on living, especially housing caused by the delay in the reconstruction process, makes it difficult for the affected people to choose an appropriate place to work. Until recently, the unemployed disaster-affected people were able to make a living by the following means: (i) public and private contributions; (ii) personal saving; (iii) employment insurance benefits; and (iv) contractual work such as Cash for Work. However, many unemployed people will soon have to engage in work to meet their financial needs and find personal satisfaction through work. Thus, the reconstruction process is a key driving force for them to find their jobs.

Chapter 6 Case studies

This gives details ten of case studies of rehabilitation efforts from Miwate and Iwagi prefectures. The selection criteria for the cases focused on the reconstruction process, and prioritized drawing from a diversity of measures, sectors, locations, and stakeholders. The study found that: successful multiple assistance schemes enabled employers to plan recovery processes in broken-down phases; timely access to public and private assistance schemes were acquired primarily through reliable connections with resource institutions; inflexible regulation schemes within public assistance led to inefficient spending and investment by beneficiaries; innovation and business development is necessary for further economic development in affected areas; Business Continuity Planning (BCP) should be a private sector priority for future disaster preparedness; and public assistance framework schemes should work in favour of job creation for socially vulnerable groups.

6.1 Overview

The following ten case studies describe how businesses were recovered or established through Government assistance schemes such as the SME Group Subsidy, the Employment Adjustment Subsidies, and the Temporary Factories and Stores Project. The major stakeholders in these case studies included companies, cooperatives, NPOs, prefectural Government offices, and chambers of commerce. Each study contains the following elements: lessons learned and recommendations; improvement of assistance schemes and ideal assistance structures for effective recovery from disaster; and promoting and inhibiting factors for projects.

The case studies were selected to cover the primary, secondary, and tertiary sectors. More specifically, they included agriculture, aquaculture, tourism, marine product processing, and restaurant management. The major stakeholders of these case studies were companies, cooperatives, foundations, and NPOs. Section I includes six cases in Miyagi, and Section II covers four cases in Iwate. Moreover, figure 6.1 and figure 6.2 illustrate the overview of fatalities and buildings destroyed in the 2011 Earthquake.

The projects in the case studies received financial assistance from various sources such as local Government offices, commercial banks, civil funds, and local Labour Bureaus. Most of the projects accessed several sources simultaneously for assistance, while a few received assistance from only one source. A few projects addressed the needs of socially vulnerable people such as women and people with disabilities. For a summary of the case study projects, please refer to table 6.1.

The case studies were located in either Miyagi or Iwate. The damages and losses of people and buildings varied depending on the area, which led to various challenges in restorations and recovery. For instance, Rikuzentakata City was devastated by the 2011 Earthquake and the tsunami that followed. As a result, business recovery in the City was more difficult than in other areas with less damages and losses. Therefore, the reader is likely to find it easier to understand each case study if he or she has an overview of the damages and fatalities in both Miyagi and Iwate, as shown in the following pages.

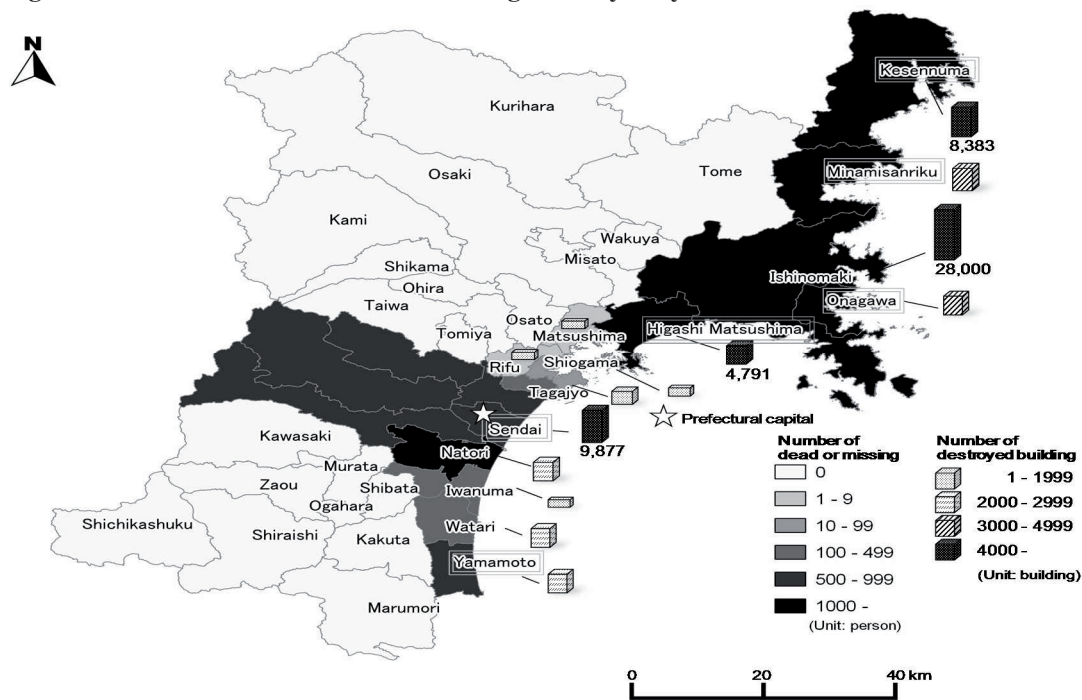
In Miyagi, fatality counts were particularly high in the following towns: Kesenuma City, Minamisanriku town, Ishinomaki City, Onagawa town, Higashi-Matsushima City, and Natori City.

The numbers of buildings destroyed were large in the following cities: Kesennuma City, Ishinomaki City, Higashi-Matsushima City and Sendai City. As mentioned before, the conditions for recovery in these towns are tougher than in other towns. In Miyagi and Iwate, the fatality count was particularly high in the following cities: Otsuchi City, Kamaishi City, and Rikuzentakata City. The destruction of buildings was serious in Miyako City.

Table 6.1 Summary of case studies: Section I: Miyagi and Section II: Iwate

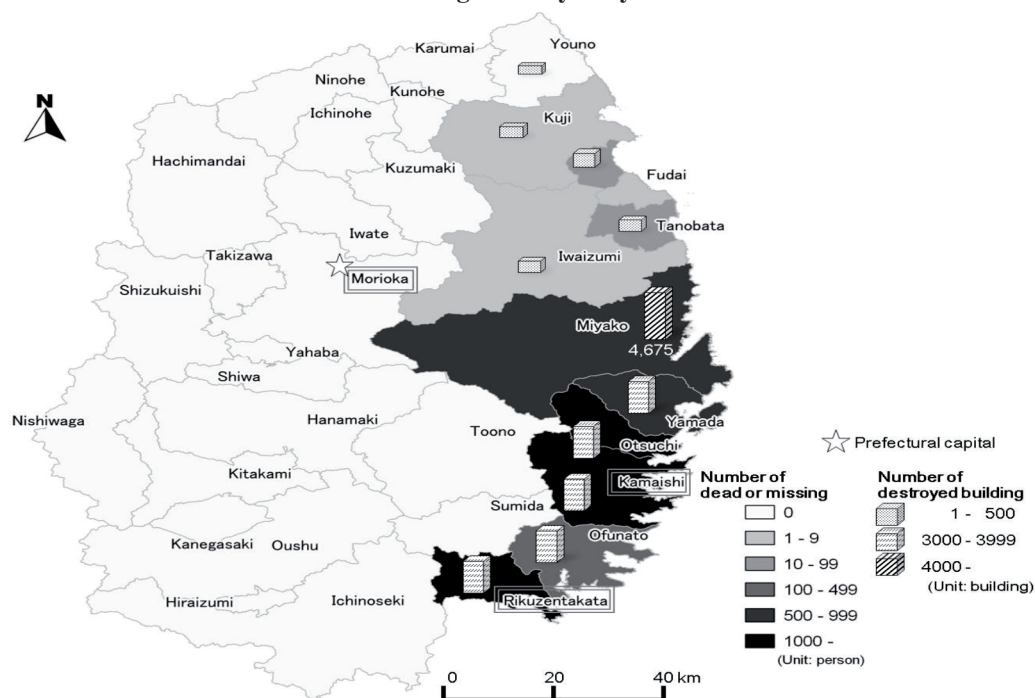
Section I: Miyagi				
	Content	Executing agency	Location	Main feature
I-1	High-tech strawberry production system	General Reconstruction Association, Inc.	Yamamoto town	Producing high-valued strawberries in a large field creating local employment
I-2	Guesthouse complex using trailer houses	Onagawa Lodging Village Cooperative	Onagawa town	Four guesthouse owners formed the cooperative and established the guesthouse complex using trailer houses.
I-3	Recovery of a small store of seaweed products	Chiba Seaweed Store	Minami-sanriku town	The small seaweed shop received four grants.
I-4	Recovery of seaweed aquaculture	Miyato Fishermen's Cooperative	Higashi - Matsushima City	The seaweed producers started group work with a monthly salary system.
I-5	A restaurant complex applying a social business and employment of people with disabilities	Tohoku Roku Project (Foundation)	Sendai City	The restaurant complex shows the new modality of social business addressing social issues.
I-6	A temporary shopping complex	Minamimachi-Murasaki Market Temporary Shopping Cooperative (NPO)	Kesennuma City	Small shop owners formulated the NPO, and rehabilitated their businesses in the temporary facilities that became major tourist spots.
Section II: Iwate				
	Content	Executing agency	Location	Main feature
II-1	Recovery of soy source and miso paste production	Yagisawa Store	Rikuzentakata City	This store received both public and private assistance grants in appropriate orders.
II-2	Basic training of mothers and unpaid care work at home to be entrepreneurs	Iwate Childcare Network	Morioka City	The training courses nurture entrepreneurship of female trainees.
II-3	Rehabilitation of a marine product processing factory	Tsuda Store	Kamaishi City	The factory relocated from neighbouring Otsuchi town, and emphasized countermeasures to harmful rumours caused by the nuclear power plant accident.
II-4	Recovery of a R&D centre and establishment of a group company	Mugen System Co. Ltd. Ginga Energy Co. Ltd.	Kamaishi City	Mugen System established Ginga Energy soon after the 2011 Earthquake. As a group company, they have both R&D and disposal management business creating jobs.

Figure 6.1 Overview of fatalities and buildings destroyed by the tsunami on 11 March 2011 in Miyagi



Note: The name of a town surrounded by a rectangle is the location of a case study.
Source: CAS, 2011.

Figure 6.2 Overview of fatalities and buildings destroyed by the tsunami on 11 March 2011 in Iwate



Note 1: The name of a town surrounded by a rectangle is the location of case studies. Note 2: Regarding the number of destroyed buildings, no town falls in the range from 501 to 2999. Thus, no relevant icon is given for that range.
Source: CAS, 2011.

Table 6.2 shows detailed statistical information of the damages in three categories: fatality, buildings destroyed, and permeability in Miyagi.

Table 6.2 Summary of fatality, damages to buildings, and permeability in Miyagi

Location	Fatality	Damages to buildings	Permeability (%) ¹⁰⁶
Rifu	3	96	1.73
Matsushima	4	493	12.84
Shiogama	22	1 603	29.15
Shichigahama	72	1 048	26.11
Iwanuma	183	1 756	25.65
Tagajyo	187	4 500	28.16
Watari	268	3 192	34.26
Yamamoto	734	3 042	40.73
Sendai	879	18 104	-
Natori	1 031	3 449	17.92
Onagawa	1 031	3 067	60.88
Minamisanriku	1 183	3 877	54.04
Higashi-Matsushima	1 236	9 201	61.66
Kesennuma	1 489	10 244	30.08
Ishinomaki	5 795	28 000	52.97

Source: (i) Lost Population and Damages to buildings: CAS, 2011.; (ii) Permeability: MILT, 2011.

Table 6.3 shows detailed numerical information of the damages in three categories: fatality, buildings destroyed, and permeability in Iwate.

Table 6.3 Summary of fatality, damages to buildings, and permeability in Iwate

Location	Fatality	Damages to buildings	Permeability (%) ¹⁰⁷
Youno	0	26	1.01
Fudai	1	0	15.83
Kuji	4	255	7.29
Iwaizumi	7	197	4.14
Tanobata	36	270	15.83
Noda	38	476	29.43
Ofunato	468	3 629	26.55
Miyako	770	4 675	24.21
Yamada	871	3 184	41.15
Kamaishi	1 305	3 723	26.24
Otsuchi	1 725	3 677	61.69
Rikuzentakata	2 149	3 341	39.58

Source: (i) Fatality and Damages to buildings: CAS, 2011. ; (ii) Permeability: MILT, 2011.

¹⁰⁶ Percentage of the areas covered by the catastrophic tsunami on 11 March 2011.

¹⁰⁷ Percentage of the areas covered by the catastrophic tsunami on 11 March 2011.

6.2 Case studies

Case I-1: High-tech strawberry production¹⁰⁸ (General Reconstruction Association Inc.¹⁰⁹)

1. Summary

Table 6.4 Summary of case I-1

Type of the project	Strawberry and tomato production
Location	Yamamoto town, Watari, Miyagi
Number of employees	20 as of Aug. 2013
Total project cost	¥500 Million
Starting date	NPO GRA established: Apr. 2011 GRA Inc. established: July 2011 Granted the fund: Jan. 2012 Operation started: Jan. 2012
Source of fund	Pioneer Technology Extension Project for Recovery Pioneer Technology Extension Project for New Food Production Centre (Both funds are from Ministry of Agriculture, Fisheries, and Forestry: MAFF)
Key words	Strawberry production with high technologies Public Assistant Schemes by MAFF Entrepreneur

2. Background of the project

Yamamoto town is a small town located in the coastal zone of Miyagi, adjacent to the Fukushima border. In Yamamoto town, strawberry was one of the major cash crops before the 2011 Earthquake, with 129 farmers producing strawberries. The tsunami that followed the earthquake, which reached up to four kilometres inland, destroyed most of these farmers' fields, about half of the houses in the town were partially or fully destroyed, and 5 per cent of the population was lost. Yamamoto town's strawberry fields suffered from salt damage and became unsuitable for strawberry production.



Inside of the strawberry plant

¹⁰⁸ The strawberry and tomato production facility applying advanced IT technologies into the production control system.

¹⁰⁹ Agricultural Production Corporation.

Soon after the 2011 Earthquake, one entrepreneur from Yamamoto town with consulting experience established an NPO called General Reconstruction Association (NPO GRA) in April 2011 to rehabilitate and redevelop the disaster-affected areas. NPO GRA started with relief and volunteer activities, with many volunteers involved. As these activities were about to end, NPO GRA recognized a massive population outflow in the town as residents were losing their jobs. The most severely affected sector was agriculture.

To stop this local population outflow, NPO GRA recognized that the community needed a competitive industry to create more local jobs. NPO GRA selected strawberry production for the following reasons: (i) strawberry was a major cash crop in Yamamoto town; (ii) strawberry has an attractive domestic market of ¥180,000 million; (iii) a profit ratio per harvest is higher than in other agricultural products; and (iv) strawberries have an attractive 'charm'. In July 2011, NPO GRA established a new company to conduct agricultural production as a business activity. This new company is called Agricultural Production Corporation, General Reconstruction Association Inc. (hereon referred to as the Company). The Company employed one skilled strawberry farmer in Yamamoto town as a technical supervisor.

3. Recovery activities and major challenges

a) The first step

When the Company started strawberry production in July 2011, it started with a very small field in Yamamoto town. 500 m² of land was rented from a local farmer. In this small farm, the Company analysed how they could make strawberry production an attractive business, and identified several important factors, for example: (i) branding and marketing value; (ii) high purchasing power by managing a big farm; and (iii) improving taste and quality as much as possible. To enhance the scale of the production based on these analyses, the Company decided to expand its farm to 10,000 m². The Company then looked for a grant scheme to mobilize a large amount of funding.

The Company eventually found that the fund scheme under MAFF, the Pioneer Technology Extension Project for Recovery, invited tenders to the public through the internet. This fund aimed at conducting a large-scale survey to rehabilitate earthquake-affected areas as agricultural production fields. Moreover, this fund particularly focused on pioneer agricultural technologies. These aims of the fund matched the Company's plan to establish new strawberry production methodologies. In order to apply for the fund, the Company prepared a detailed business plan. From mid-2011, the Company conducted a series of presentations with MAFF. Finally, the proposal was approved in January 2012. The fund covered ¥300 million out of the ¥500 million estimated in the original business plan. The remaining ¥200 million was covered by a loan from a commercial bank. By obtaining the fund and loan, the Company built three large-scale strawberry production facilities in Yamamoto town.

b) New production methods

The strawberry production in the facility is totally different from the traditional method. Traditionally in this area, strawberries are planted in soil and housed in a greenhouse. In contrast, the new production method adopted hydroponic culture that



Product of the NPO GRA

uses broth to substitute soil. The greenhouse with its IT control system maintains the proper temperature. In theory, these features enable sustainable strawberry production in terms of quantity and quality.

c) Strawberry sales

The Company recognized an important problem in the conventional strawberry production in Yamamoto town: strawberry farmers could not earn sufficient income to take care of their families even before the 2011 Earthquake. Thus, in addition to improving productivity and efficiency, the Company aimed at maximizing profits and prices through sophisticated branding and marketing. These profits can make the farmers to sustainably earn sufficient income. The Company directly sold its strawberries to department stores, fruit shops, and supermarkets, instead of through the local agricultural cooperative. As a result, the retail price reached ¥1,000 per strawberry in Tokyo. This achievement encouraged the project members' belief that strawberry production could earn a sufficient income to take care of producers' families.

d) Research and development

The Company also received a MAFF R&D fund called Pioneer Technology Extension Project for New Food Production Centre. This fund assisted in developing new technologies for strawberry and tomato production. For example, one of the projects surveyed how both can be properly managed. The Company recognized that Japanese farmers had very advanced strawberry production skills. However, these traditional skills are regarded as horticultural agricultural ones that require years of experiences to obtain. Under the current situation in which strawberry farmers face a scarcity of successors, these skills must be comprehensively standardized so that anyone can produce sufficient amount of high quality strawberries. To improve the situation, the Company plans to maintain the R&D section until such integrated methodologies are established. This fund by MAFF contributed to consolidating a foundation of R&D in the Company.

In addition, the Company addresses the scarcity of successors. Yamamoto town used to have 129 strawberry farmers before the 2011 Earthquake. After the tsunami, salt damage prevented these farmers from producing strawberries. Stopping strawberry production caused outflow of strawberry farmers as well as their future successors. These outflows disturbed the devolution of special strawberry production skills to the next generation, which was developed over the years. Therefore, NPO GRA created a database to accumulate a series of recorded skills of experienced strawberry farmers. This database enables the teaching of skills to the next generation or even newcomers who want to start strawberry farming from scratch. This database will help increase the number of successors in the long run.

e) Employment

As of August 2013, the Company created 20 jobs. These jobs contained eight regular and 12 non-regular positions. All the non-regular employees were local people, while regular positions were shared among four locals and four persons from outside the area. In total, the Company created 16 local job opportunities. The major responsibilities of the regular employees are management and administration, although a few of them are involved in teaching agricultural technologies. The non-regular employees were engaged in strawberry production. Within FY 2013, since production capacity was expanded, the Company plans to add about ten new non-regular positions and a few regular positions. It is expected that the Company will have 30 employees in total.

4. Stakeholders

There were three major players to implement this project. They are outlined in table 6.5:

Table 6.3 Summary of the stakeholders in case I-1

Major stakeholders	Roles
NPO GRA	NPO GRA is a parent non-profit organization, which established GRA Inc.
Agricultural Production Corporation, GRA Inc.	It was not appropriate for NPO GRA to conduct agriculture as a business pursuing profit. Thus, NPO GRA established GRA Inc., which can sustain the production as a business. Also, GRA Inc. conducts research and development of strawberry and tomato production technologies.
Ministry of Agriculture, Forestry and Fisheries (MAFF)	MAFF is the main donor of two funds, which construct a major part of the strawberry production facilities and contracted out the research and development of appropriate tomato and strawberry production technologies.

5. Effects and impacts

The Company experienced its first harvest at the end of 2012. The net sale in 2012 was approximately ¥20 million, which yielded no profit. The production capacity in the facility could not be fully utilized yet because it was the initial year of production. As mentioned above, the addition of ten new non-regular positions in FY 2013 indicates that the production scale will be increased.

According to an interview with the Company, the impacts of the project on the local community are not yet visible. However, local farmers visited the facility and observed the new methods of production, sales, and management, which are different from the conventional ones. Their learning process is one of the impacts on strawberry production in Yamamoto town. In the long run, the Company plans to extend their relationships with neighbouring farmers. The Company can dispatch its employees as agricultural consultants to interested farmers. Moreover, the Company plans to establish a franchise system with its partners. The Company expects to receive more inquiries on franchising from local people as the first step, but most of the inquiries came from Association of Southeast Asian Nations (ASEAN) countries, Mexico, Middle Eastern countries, and India. The Company continued to receive inquiries from overseas because foreign media broadcasted the project. As the first step in disseminating the technologies abroad, the Company started producing strawberries in India as a pilot project in 2012.¹¹⁰ Although the impacts of the project are still not visible, the Company has a strategy to produce impacts in the long run.

¹¹⁰ The project is called the South India Project funded by the Japan International Cooperation Agency (JICA) and facilitated by Japan External Trade Organization (JETRO). The project team is composed of members of three organizations: Nippon Electric Company (NEC) as a team leader, GRA Inc. as a horticulture expert, and The Institute of Cultural Affairs (ICA) as a local community development.

6. Lessons learned and recommendations

a) Aside from public assistance to the restoration of business operation, creating new industry is key to reconstruction

After the 2011 Earthquake, the Government offered many public assistance schemes. Most of these schemes, such as the SME Group Subsidy, targeted the resumption of pre-earthquake business environments rather than the creation of new businesses and employment. On the contrary, MAFF promoted establishing new businesses to create new job opportunities. Many cities, towns, and villages in the Tohoku area already experienced a local economic collapse, population outflow, and ageing, even before the 2011 Earthquake. In the agricultural sector, many farmers already faced a scarcity of successors. As a result, highly developed skills became very difficult to pass on to the next generation. There needs to be innovative agriculture and industry that attracts the younger generations to prevent them from leaving their localities, because one of the reasons for population outflow lies in lack of attractive job opportunities for the young. Also, along with preventing population outflows, the attractive jobs can also encourage those who want to return to their hometown areas. Thus, in addition to the restoration of business operations, funding for innovative agriculture and industry that create such opportunities for the youth must be developed through public and private partnership.

Case I-2: A guesthouse complex using trailers as houses (Onagawa lodging village cooperative)

1. Summary

Table 6.4 Summary of case I-2

Type of project	A guesthouse complex using 40 trailer houses at a local Government land
Location	Ojika, Onagawa town, Miyagi
Number of employees	20 (including non-regular workers)
Total project cost	¥450 million
Starting date	Organized cooperative: Apr. 2012 Applied to Group Subsidy: May 2012 Accepted to receive the subsidy: June 2012 Started operation of guesthouse: Dec. 2012
Source of funds	SME Group Subsidy
Key words	Cooperative Combination of three key stakeholders (i.e. Chamber of Commerce, Cooperative Members, and core volunteers) Guesthouse complex management

2. Background of the project

Before 11 March 2011, 12 family-owned guesthouses were in operation in Onagawa town, mostly on a relatively small-scale. For instance, Nanamiya-Inn, one of these guesthouses, had 12 rooms. The majority of guests were those who visited the public sports facility in the town or who worked for

the Onagawa nuclear power plant. Before the tsunami, the average occupancy rates for these guesthouses ranged between 70 per cent and 80 per cent on average throughout a year.

The tsunami completely destroyed eight of the guesthouses, and cost some of the owners their lives. After the tsunami, the surviving four guesthouses restarted their businesses quite soon afterward. Six months after the tsunami, four owners of destroyed guesthouses expressed their wishes to restart the business again, and came to discuss the recovery of their businesses with the Onagawa Chamber of Commerce, and in particular, with a management adviser.

3. Recovery activities and major challenges

Before recovery of these guesthouses could begin, stakeholders needed to address a series of the challenges. Thus, the guest owners' group, the Onagawa Chamber of Commerce, and a key external volunteer formed a team to address these challenges.

a) Building restrictions

After the tsunami destroyed Onagawa town, the town's local Government restricted new construction by order of the Miyagi Prefectural Government until a new town master plan could be designed.¹¹¹ This included the town centre, as well as areas where the guesthouses had previously operated. Thus, these owners could not construct new guesthouses, even on their own land. To speed up the resumption of their businesses, these owners needed to find land in neighbouring high-lying areas that were outside the restricted zones. However, Onagawa town is a relatively mountainous area, so the availability of flat high-lying land is limited. In addition, the available high lying land was primarily occupied by public facilities such as the town hall¹¹² and temporary evacuee housing.¹¹³ Thus, land where new buildings could be constructed was very limited, and the regulations of the scheme became the obstacle of receiving Government assistance.

The cooperative found a possible solution by renting local Government property rather than buying high-lying land from private landowners. At the same time, the town recognized the need for guesthouses to accommodate those who came from outside Onagawa town to aid in its recovery. For example, construction workers for rehabilitation work were in great demand, but the town could not accommodate them. Despite this situation, the Onagawa town Government still found it difficult to lease its own public properties to individual guesthouse owners. Therefore, the adviser from the Chamber advised these four owners¹¹⁴ to create the 'Onagawa Lodging Village Cooperative', which enabled them to rent property as a public entity.¹¹⁵

¹¹¹ The central area of Onagawa town was totally washed away by the tsunami. Since it is possible that another tsunami could hit the area again, the Miyagi Prefectural Government decided to overlay the lands in restricted areas so that tsunami effects can be alleviated. The instruction was given to Onagawa town, and the town determined the guideline for town reconstruction along this policy for construction.

¹¹² The town hall was located in the centre of town and was washed away by the tsunami. Therefore, a temporary hall was constructed in the high lying land belonging to the town.

¹¹³ Onagawa town provided 1,285 temporary houses for those who lost their houses from the tsunami or earthquake.

¹¹⁴ The positions and names of the members of the cooperative are as follows: (i) Chairperson: Ms Satoko Sasaki; (ii) Vice Chair: Mr Kenichi Endo; (iii) Auditor: Mr Satoshi Hoshi; and (iv) Managing Director: Mr Masanori Takahashi.

¹¹⁵ According to the explanation given by the chamber, the local society in Onagawa recognizes cooperatives as public entities for the public good. Thus, the local Government was able to explain why public properties could be leased.

b) Land elevation

After formulation, the cooperative faced another problem: land elevation. After the tsunami, the town Government decided to elevate the land in all the restricted areas. These areas were located in the centre of the town and covered 37 ha. The town's residents had to delay the construction of new buildings until this land elevation was complete.

While the cooperative was looking for a solution, a volunteer¹¹⁶ from outside Onagawa came to the Onagawa Chamber of Commerce and suggested using trailer houses as additional accommodation. The management adviser in the Chamber agreed that this would solve the problem, because a trailer house is a movable facility, not a building. Thus, the town Government permitted the installation of these trailers within the restricted areas. Due to the idea given by this one volunteer, the cooperative was able to obtain exceptional treatment by May 2012.

c) The need to apply a grant scheme

Onagawa town is located in the far north of the main island of Japan and experiences cold weather, especially during the winter. Trailer houses are normally unsuitable for cold climates because of their poor insulation. Thus, the cooperation needed to choose their trailer houses carefully to ensure that they were sufficiently insulated. Well-insulated trailer houses are more expensive than regular ones, costing approximately ¥9 million per house.¹¹⁷ The cooperative estimated that the initial costs of purchasing 40 trailers, as well as other initial operational costs, would exceed ¥400 million.¹¹⁸ In order to cover these expenses, the cooperative members needed to apply for grants rather than loans.

d) Challenge to be granted

After the Chamber of Commerce and the cooperative accepted the trailer house idea, the cooperative members, the Onagawa Chamber of Commerce, and the volunteer began preparing the application document for the SME Group Subsidy during the fifth batch of the scheme, in April 2012. By this time, it was obvious that accommodation was scarce in Onagawa, and those who were working on the reconstruction had nowhere to stay. This slowed down the reconstruction, which verified the need to apply for the subsidy for new housing accommodation. The SME Group Subsidy information was presented to the cooperative by the chamber. The chamber also provided technical guidance and advice to the group.

In order to reconstruct a lodging facility under the SME Group Subsidy, the cooperative had no choice but to win the grant, so they did not compare this grant scheme to any others. During the preparatory stage, they had several challenges to overcome. First, the scheme was intended to rehabilitate the original facilities. If the cooperative proposed to construct a new guesthouse building, the project concept would match the recovery. However, this project proposed transforming a lodging facility into a movable trailer house, which was, as pointed out by a grant inspector, not following the regulations of the scheme. Second, the inspector expressed concern that a trailer facility could be sold or moved to other areas. To address these concerns, the team explained the special situation after the 2011 Earthquake, and finally convinced the inspector that installing trailer houses was an ideal

¹¹⁶ This volunteer was looking for a place where his idea could be implemented. He visited some local Governments and presented his idea to increase accommodation, because he recognized that there was limited accommodation in all areas undergoing rehabilitation. After this project, he joined the Onagawa reconstruction committee.

¹¹⁷ According to a market survey in Japan, a regular trailer house costs between ¥2-8 million.

¹¹⁸ In the end, the total cost reached approximately ¥450 million.

solution, given that new construction in the restricted areas was not permitted until the land elevation was complete. Additionally, the team stressed that this project was for community reconstruction in Onagawa, with no intention to move or sell these houses. These points were all accepted after a series of negotiations with the inspector.

Third, this scheme was usually paid for only after a building is completed, but the cooperative had to pay the contractor before completion. Therefore, the cooperative needed to apply for a short-term loan from a local bank. From a psychological perspective, this placed a considerable burden on the cooperative members, as they needed to take the loan without a guarantee of business prospects. Nevertheless, the cooperative members supported one another, and finally convinced themselves to take the loans. Fourth, three out of four members were over 60 years old, and it was the first time they had to prepare a series of documents for a public grant. Thus, the chairperson was responsible for giving the correct instructions to its members to prepare these necessary documents.

After overcoming these challenges, the proposal was completed in April 2012, and was officially submitted in May 2012. In June 2012, the cooperative was granted the subsidy as a group of local enterprises that would have a considerable impact on local economic activities. The new guesthouse, El Faro,¹¹⁹ was officially opened in December 2012.

4. Stakeholders

Table 6.5 Summary of stakeholders in case I-2

Major stakeholders	Roles
Onagawa Lodging Village Cooperative	The cooperative prepared the proposal to obtain the grant and played a vital role in managing El Faro.
The Onagawa Chamber of Commerce	The chamber introduced the idea to formulate the cooperative to the four guesthouse owners and advised the cooperative to apply for the SME Group Subsidy.
The core volunteer	The volunteer suggested the idea of installing trailer houses as guesthouses. He also contributed to preparing the proposal and coordinating all preparation, including negotiating with the grant inspector.
Local bank	The bank provided short- and long-term loans to the cooperative members. The short-term loan was repaid after the grant was disbursed. However, the long-term loan is still being repaid.
Miyagi Prefectural Government	The local Government inspects and disburses the SME Group Subsidy.

5. Effects and impact

After its opening, the cooperative created 20 job opportunities. Four were for the cooperative members, and the other 16 were for both regular and non-regular employees. The business has performed well and the accommodation has maintained a high occupancy rate. According to El Faro,

¹¹⁹ 'El Faro' means a light house in Spanish, which indicates that this guesthouse would become a way to symbolically light up the tsunami-affected area as the whole of Japan.

the majority of customers are construction workers. Providing accommodation to these workers has helped to speed up reconstruction in the town.

The cooperative recognized that guesthouse facilities were also used by those who visited family or relatives living in the temporary housing areas. After the local residents were evacuated, there was nowhere to accommodate guests, including family members staying outside Onagawa. As a result, the guesthouse complex has also indirectly contributed to reuniting families.

6. Lessons learned and recommendations

a) The public assistant schemes need to relax regulations to adapt to the situation after the disaster

The SME Group Subsidy is aimed at rehabilitating businesses. However, this project was not a simple recovery, but rather a transformation of a business model from an ordinary guesthouse operation to a movable lodging facility. Since the business environment changed dramatically after the disaster, some businesses were required to change their business models. The subsidy scheme needs to be more flexible in recognizing that some businesses need to transform their style of business, and the support schemes need to be able to adapt to local situations, particularly in areas affected by serious disasters.

b) The appropriate local authorities need to prepare a function or a structure to connect resource people and local business people in advance

This project showed the advantages of teamwork, in this case between the chamber of commerce, the cooperative, and the core volunteer. Here, the cooperative and its members represented the voice of local businesses, and were able to contribute their years of experience of business success. The chamber contributed by enabling the cooperative to access the grant. The volunteer brought a new idea to the people in Onagawa from outside the town locality. The combination of three key stakeholders created this innovative project and subsequent job opportunities in the area. This case study shows how such a combination can have a large impact on rehabilitating businesses. Since it is difficult to quickly formulate these kinds of groups under an emergency situation, local business authorities, such as the chamber of commerce, need to have a function or structure in place to connect resource people and local business people in advance. Sufficient preparation through collaborative works would allow faster and more effective action in an emergency situation.

Case I-3: Recovery of a small store of seaweed products (Chiba Seaweed Store)

1. Summary

Table 6.6 Summary of case I-3

Type of project	The recovery of a small shop
Location	Shizugawa, Minamisanriku town, Miyagi
Number of employees	10, as of Aug. 2013
Total project cost	Not Disclosed
Starting date	Organized: May 2011 Applied to the grant 'Temporary Factories and Store Project' for a temporary factory: Nov. 2011 Accepted to receive the grant: Nov. 2011 Operation started: Dec. 2011
Source of funds	SME Group Subsidy Temporary Factories and Store Project Loan from a commercial bank Funded by National Federation of Business and Professional Women's Clubs of Japan
Key words	Recovery of a small shop Shop in a temporary shopping street

2. Background of the project

The Chiba Seaweed Store (the Store) has a history of about 100 years and spans three generations of owners from the same family. 'Chiba' comes from the family's name. The Store processes fresh seaweed into dried seaweed sheets in its own factory, which it then sells. On 11 March 2011, the shop and the factory at Minamisanriku town were washed away by the tsunami. The Store also lost its raw materials. There were five employees in the shop when it was damaged, but none were injured during the earthquake or the tsunami that followed after the earthquake.

3. Recovery activities and major challenges

a) Brief history of recovery

After the 2011 Earthquake, in the middle of July 2011, the Store rented a prefabricated shop (¥20,000 per month) using its own financial resources. The Store applied to the Temporary Factories and Store Project on November 2011 for funding, which it received in the same month. The Store used these funds to construct a new factory in a hilly area. However, this grant did not cover the interior of the factory. The Store then applied for an SME Group



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Temporary factory of Chiba Seaweed Store

Subsidy grant, also in November 2011, which it used to fund the interior of the Factory. In November 2011, the Minamisanriku town Chamber of Commerce requested the Store to join the temporary shopping complex.¹²⁰ Then, the Store accepted this offer and opened a new shop in February 2012. Table 6.7 summarizes the grants received by the Store.

Table 6.7 Details of the grants approved in case I-3

Name of facilities	Timing of construction	Financial source	Remarks
The first prefabricated shop	Mid-July 2011	Own funds	After the shop was relocated to the shopping complex, the prefabricated shop was used as storage.
The factory (building)	Nov. 2011	Grant for Temporary Facility (funded by SMRJ)	The grant covered a building, but excluded furnishing the interior.
The factory (interior)	Nov. 2011	The Group Subsidy (funded by METI, through the Miyagi Prefectural Government)	The group subsidy covered furnishing the interior.
The shop in the shopping complex	Feb. 2012	Grant for Temporary Facility (funded by SMRJ)	Minamisanriku town Tourism Association constructed the shopping complex using the SME Group Subsidy. The Store rents a facility in the complex for ¥20,000 per month.

b) SME Group Subsidy



Temporary shopping complex
'Minamisanriku Sun Sun Shopping Village'

The Store found information on the Group Subsidy in the newspaper in May 2011, when the first batch of subsidies was granted to applicants. After the 2011 Earthquake, the owner of the Store found it difficult to find information on funds or schemes supporting the restart of their business. In addition, the local chamber of commerce was not able to help because they could not or would not disseminate such information to its members. Had they done so, the owner believes that more businesses would have been able to be rehabilitated. To date, about 70 per cent of the small shops and businesses in the Shizugawa area of the Minamisanriku town are yet to recover. Thus,

the timely and efficient delivery of information to small business owners may be a key factor in determining the feasibility of business recovery.

In September 2011, Hotel Kanyo, a local large-scale hotel and head of the Minamisanriku town Tourism Association, invited the Store to apply for the subsidy. In all, a group of 15 local companies applied for the subsidy when the second batch was considered, but their application was declined. The reason given by the Group was that they were not able to see how these companies could work

¹²⁰ After the 2011 Earthquake, the small shop owners in the Minamisanriku area built a temporary shopping complex called the 'Minamisanriku Sun Sun Shopping Village'. The complex contains 19 retail shops, five restaurants, and six others, including the Minamisanriku Chamber of Commerce. In total, there are 30 tenants. The complex is only expected to continue operating for five years, beginning 25 February 2012.

together to develop tourism in the area. In their second attempt, during the third batch in November 2011, the companies hired a consultant to clarify their strategy for tourism development and to prepare a proposal. This time, their application was granted. This subsidy covered 75 per cent of the total expenditure for the interior of the factory. The building itself was funded by a separate grant from the Temporary Factories and Store Project.

c) Temporary factories and store project

The Store found out about SME support funded by the SMRJ through the Temporary Factories and Store Project. The Store and a local construction firm formulated a joint venture to apply for the grant for its new factory. The grant covered the building, but excluded the interior of the factory.

d) Employment

Table 6.8 Comparison of employment between 2011-13, for case I-3

Timing	Employed
March 2011	7 (including 1 non-regular, and 6 regular)
Aug. 2013	10 (including 1 non-regular, and 9 regular)
Gap	+3

Employment has increased since the 2011 Earthquake for several reasons. First, the new factory and the temporary shop in the complex were relatively far away from each other, so the Store needed employees for delivering materials and products. Second, some employees had to move into temporary housing,¹²¹ and the distance between the new housing and the shop became too far for them to commute every day. As a result, some employees reduced their working hours, but spent more time commuting. In fact, soon after the 2011 Earthquake, the Store had to let all five of their employees go, because they had lost everything in the disaster. However, after the facilities had been reconstructed, these five employees were reinstated to their original positions. Nevertheless, two of them resigned after one year because of the long commute. As of August 2013, the Store has hired another five employees, bringing the total to eight.

Regarding employment, the National Federation of Business and Professional Women's Clubs of Japan (BPW Japan)¹²² provided funding of ¥300,000 to encourage the employment of women in the areas affected by the 2011 Earthquake.

¹²¹ After 11 March 2011, local Governments constructed temporary housing for those affected by the earthquake. The housing was funded by the national Government. Since many people lost their houses, particularly after the tsunami, temporary housing was a high priority for these local Governments.

¹²² BPW Japan is a non-profit organization and a member of the International Federation of Business and Professional Women. BPW Japan was established in 1958. Its objectives are: (i) to promote the welfare of working women and to endeavour to raise the social status and the professional standards of women; (ii) to enhance friendship and mutual understanding among working women, at home and abroad; and (iii) to contribute to bringing peace to the world. This grant was awarded a prize by 'Job Creation for Women by Women'.

4. Stakeholders

Table 6.9 Summary of stakeholders in case I-3

Major stakeholders	Roles
Chiba Seaweed Store (The Store)	The Store processes fresh seaweed into dried sheets, which it then sells in its shop. The Store opened an online shop in collaboration with the Kamiwari Co. Ltd after the disaster.
Kamiwari Co. Ltd	The company provides a consulting service in IT technology and marketing. Their fee to create the website was small, but the Store is required to pay 15 per cent of its internet sales to Kamiwari Co. Ltd.
SMRJ	The SMRJ runs the Temporary Factories and Store Project, which funded a new factory for the Store. The Temporary Factories and Store Project also constructed the temporary shopping complex called 'Minamisanriku Sun Sun Shopping Village'.
Hotel Kanyo	Hotel Kanyo was heading the 'the Minamisanriku town Tourist Association' before the disaster. After the disaster, the hotel invited members and non-members of the Association to apply the group subsidy together. All in all, 15 local companies and shops applied for and received the subsidy at its second try.
A local contractor	The Store and the local contractor formulated the joint venture to apply for the Temporary Factories and Store Project by SMRJ. This contractor is one of two members to apply for the fund.
Iwate Prefectural Government	Iwate Prefectural Government was a counterpart for the group subsidy at both first and third batches.
Minamisanriku Chamber of Commerce	The chamber of commerce invited the Store to join the shopping complex.

5. Effects and impacts

Table 6.12 shows the sales figures for the Store for the period FY 2010-2012.

Table 6.10 Annual sales flow for case I-3

Fiscal Year (FY)	Sales (¥ Million)
2010*	110
2011	60
2012	125

Note: FY 2010 shows the average sales of the Store before the 2011 Earthquake

Source: Research Team

The sales volume decreased after the 2011 Earthquake from ¥110 million in FY 2010 to 60 million in FY 2011. In FY 2011, after the Store lost its facilities, it was not able to produce any products for

two to three months. This meant it was not able to supply their products to its long-term customers, who had also suspended their businesses after the Earthquake. In FY 2012, sales recovered and exceeded the level of FY 2010. Nevertheless, the Store's profits decreased as production costs increased because of the need to transport raw materials and products between the shop and the factory. Prior to the 2011 Earthquake, the shop and the factory were located in the same place. Thus, the net profit in FY 2012 did not reach the FY 2010 level.

In addition, the Store's customer portfolio changed after the 2011 Earthquake. First, the population in Minamisanriku decreased by about 16 per cent¹²³ after the Earthquake, and thus the number of customers also decreased. Second, the new shopping complex now attracts tourists, which boosted sales. Third, to supplement the decrease in the number of local customers, the Store began selling its products through the internet in cooperation with a venture company called Kamiwari Co. Ltd. With regards to employment, the Store hired three additional employees after the 2011 Earthquake. This was mainly due to two reasons: (i) the working hours decreased per employee; and (ii) additional expenses were incurred after the disaster. Since some employees were not able to work as they had before, and the working hours per employee had decreased accordingly. The additional expenses were largely due to the prefabricated shop and the new factory being located in different places after the disaster, whereas previously, they had been on the same premises. Therefore, the Store needed to allocate additional employees to deliver materials and products between the shop and factory.

6. Lessons learned and recommendations

a) Information sharing on public assistance schemes needs to be provided more quickly and appropriately to owners of local SMEs

As the owner of the Store mentioned, local small shop owners and business people could not quickly obtain information on public assistance schemes¹²⁴ after the 2011 Earthquake. This lack of information caused the following: i) the discontinuance of businesses; ii) loss of customers; and iii) loss of employees, especially because their unemployment periods were too long. These conditions, particularly for local SMEs, were an important inhibiting factor to the recovery of their businesses. To access relevant information on restarting business operations, local entrepreneurs needed to keep track of multiple contacts at all times. In this case, entrepreneurs suffered from the poor functioning of the local chamber of commerce, which was their only source of information. To respond to this kind of emergency, a mechanism to facilitate information sharing in the business sector needs to be set-up and shared among local enterprises owners. The mechanism and its functions could be attached to a municipality, local Government office, a local branch of the National Conference Association of Small Business Entrepreneurs, and local cooperative members within relevant sectors.

¹²³ Its population was 17,666 in February 2011 (a month before the 2011 Earthquake), but decreased to 14,839 in August 2013 (Minamisanriku town website, <http://www.town.minamisanriku.miyagi.jp/index.cfm/10,794,56,239.html>, [accessed 8 July 2015]).

¹²⁴ The delay of the information sharing was also observed in Kesennuma City. A surf shop in Koizumi beach located in nearby Kesennuma City could not access the SME Group Subsidy while the shop owner was residing in a temporary evacuation centre. However, after the owner left the centre and received the contact from its local tourism association, the owner could not access to the subsidy to rehabilitate the shop. Thus, the owner regretted that the local business sectors did not disseminate such information of subsidies to those who were evacuated in the centre. Nevertheless, it should also be noted that, especially in Minamisanriku (the location of this case study) and Kesennuma City, this might have been the result of the massive scale of the damage by the disaster to the local Government and the business sector.

b) The change of working environment and conditions caused by relocation and resettlement needs to be considered when devising a reconstruction plan and employment measures

This case study showed how the commuting distance can disturb working conditions, having an adverse effect on income and time spent for commuting. In particular, victims of the tsunami were forced to relocate to temporary housing that was often far away from their original home and workplace. Therefore, when a disaster causes the relocation of residents in affected areas, particularly when the scale of the relocation becomes large, the Government needs to be aware of the possible disturbances to the work environment, in addition to other concerns. The working conditions of disaster victims may cause a mismatch between job offers and jobseekers.

c) A combination of different sources of external assistance is effective in restarting business operations

The Store received assistance from several sources, in both the public and private sectors. Public assistance provided a factory and a shop. In addition, the public support provided the Store with a suitable commercial space in the temporary shopping complex. Furthermore, the newly opened online store enhanced their marketing channels, providing access to new customers and wholesalers. The combination of different external sources of assistance contributed to the Store's recovery. The SMEs in the affected areas had more access to these external inputs by both public and private sectors than they did before the Earthquake, so these opportunities need to be utilized as much as possible.

Case I-4: Recovery of seaweed aquaculture (Miyato Fishermen's Cooperative – The seaweed culture group in Miyato, Miyagi)

1. Summary

Table 6.11 Summary of case I-4

Type of project	Recovery of seaweed culture
Location	Miyato, Higashi-Matsushima City, Miyagi, Japan
Number of employees	19 as of Aug. 2013
Total project cost	Not disclosed
Starting date	Operation restarted by own fund and salvaged production facilities: September 2011
Source of funds	Aquaculture Reconstruction Support Project Fishery Common Facility Reconstruction Project Common Fishing Boat Reconstruction Project
Keywords	Fishermen's aquaculture cooperatives Seaweed culture Special assistance for aquaculture

2. Background of the project

Before the 2011 Earthquake, Miyato had 33 seaweed¹²⁵ producers, all of whom were members of the Miyato Fishermen's Aquaculture Cooperative. The tsunami destroyed most of the seaweed-producing facilities. Only three members managed to save their land facilities – though all of their rafts were destroyed. The salvaged facilities, such as seaweed dryers, were located on relatively elevated terrain. When seaweed producers discussed whether they wanted to rehabilitate and continue with production after the 2011 Earthquake, the three producers in



House for processing seaweed

question offered up their intact facilities for use by other members. This offer was key to the continuation of seaweed production at that location because these facilities were essential for the processing of fresh seaweed. This was the first experience they had sharing the facilities, because seaweed production was normally done on a family basis, and not as a group. After a series of discussions, 18 out of the initial 33 producers agreed to re-establish seaweed production using these now shared facilities. At that time, they undertook production using only these facilities until further grants were received. The remaining 17 producers abandoned seaweed production altogether. Some retired because of old age, whereas others left the business because of a harmful rumour regarding the environmental fallout from the damaged nuclear power plant in Fukushima.¹²⁶ These producers were particularly afraid of being unable to repay their debts after resuming seaweed production.

3. Recovery activities and major challenges

a) Production facilities

Seaweed production requires an elaborate infrastructure: production facilities,¹²⁷ processing houses, a set of seaweed driers,¹²⁸ and boats. Since most of these facilities were destroyed by the tsunami, the remaining producers purchased new facilities with help from several organizations. The Aquaculture Reconstruction Support Project helped the group procure 1,101 production facilities; the Fishery Common Facility Reconstruction Project aimed at purchasing seven processing houses and five seaweed driers; and the Common Fishing Boat Reconstruction Project enabled the purchase of 34 boats. The following table provides a summary.

¹²⁵ The Japanese have traditionally cultured seaweed using sea-faring rafts. Once harvested, the seaweed is washed to remove contaminants. After producers dry fresh seaweed, it is stored like sheets of papers. As a result, we call the final product 'seaweed paper'. In case of Miyato, the seaweed producers also processed the final product.

¹²⁶ On 11 March 2011, the Great East Japan Earthquake, its epicentre located off the coast of Japan, caused a 15-meter high tsunami to hit the Fukushima Prefecture, causing severe damage to the Fukushima Daiichi Nuclear Power Plant. The damaged nuclear reactors leaked radioactive materials into the neighbouring seas, contaminating the water and the marine life in the surrounding regions. This situation bred a harmful rumour that all the seafood products originating in this region may be contaminated by radioactive materials, despite the fact that some products were tested and certified as free of radioactive contamination.

¹²⁷ These facilities include seaweed rafts, nets, and ropes.

¹²⁸ These include, for instance, production houses, seaweed cleaners, seaweed driers, and water purifiers.

Table 6.12 Status of available facilities before and after the 2011 Earthquake, related to case I-4

Type of facility/equipment	Before the earthquake	Fund/owner	After procurement
Sets of production facilities (e.g. rafts, nets, and ropes)	1 502	Aquaculture Reconstruction Support Project Private property (own funds)	1 101 189
Processing houses	18	Fishery Common Facility Reconstruction Project Private property (own funds)	7 4
Seaweed driers	18	Fishery Common Facility Reconstruction Project Private Property (own funds)	5 6
Boats	108	Common Fishing Boat Reconstruction Project ¹²⁹ Private property (own funds)	34 46

b) Group formation



Seaweed processing equipment

To apply for the Aquaculture Reconstruction Support Project, these 18 seaweed producers formed subgroups with devoted assistance from the Fishermen's cooperative. The cooperative introduced the scheme to its members, and guided them in the formulation of a proposal. This was because a group of 18 members was too large for effective management.¹³⁰ This sub-grouping was also necessary because the number of groups affected how many proposals could be submitted for facilities and equipment. The cooperative is the parent body of these seaweed producing groups in Miyato. In terms of institutional structure, these 18 producers are categorized under the cooperative's seaweed division. The leader of the seaweed division took the initiative of the grouping. Since he knew that members are very fussy about the selection of partners, he allowed

them to freely choose their partners. Because one producer – the successor of a member – joined the group during the subgroup formulation period, the total number of members rose to 19. After the grouping process, four subgroups were established and four sets of facilities were proposed. The summary is provided below in table 6.15.

¹²⁹ These schemes assist in the replacement of the boats lost in the tsunami on 11 March 2011.

¹³⁰ Although this case formulated four sub-groups among local producers, the other case formed only one group. The scallops producers' group in Yoshihama, Iwate Prefecture, also applied to the Aquaculture Reconstruction Support Project. In order to simplify the group management by an influential group leader as well as the local fishers' cooperative, all 25 scallops producers in Yoshihama formulated a team as one group.

Table 6.13: Results of the subgroup formation process for case I-4

Subgroup designation	Number of members
Subgroup A	3
Subgroup B	3
Subgroup C	5
Subgroup D	8

After the subgroups were established, each one selected a group leader. These leaders then guided members through the successive stages of seaweed business, from production to processing. Each group was provided with a set of facilities and equipment. Each of these leaders possesses extensive skills and years of experience. They also compete with each other in terms of production.

c) Introduction of the fund

The items covered by the three major funds are shown in table 6.14, but the exact amounts granted were undisclosed. According to discussions with cooperative members, the Aquaculture Reconstruction Support Project had a large impact on the re-establishment of production. This assistance scheme was vital in terms of recovering production, since 90 per cent of the initial production costs were covered. Additionally, this fund required the establishment of a new production model: a group work model with a monthly payment scheme. Under the new model, the producers who received these funds were paid monthly salaries by the cooperative, regardless of the quality and quantity of product they produced. In the past, seaweed producers' income was based on the production output; their revenue thus fluctuated in accordance with productivity and market prices. The new system brought income stability to aquaculture producers. Nevertheless, according to interviews with these producers, the monthly salary system was not so attractive because the annual income (¥6 million per member) amounted to less than the annual income they earned before the 2011 Earthquake (net income was approximately ¥30 million per family before extracting expenses related to fishery). Because of this, these groups expected to abandon the support scheme in 2014, though the project can technically be maintained until 2015.

d) Introduction of other funds

The coverage rate of other funds affected the decision of the local seaweed producers to continue their productions or not after the 2011 Earthquake. To purchase replacements for facilities and boats lost in the tsunami, seaweed producers applied to both the Fishery Common Facility Reconstruction Project and the Common Fishing Boat Reconstruction Project, funded by the Fisheries Agency. These grant schemes initially limited their coverage to 66 per cent of relevant expenditure. In the initial stages, some fishers abandoned seaweed production because they could not afford the associated costs, even with the coverage provided by these grants. However, in the case of the municipal Government of Higashi-Matsushima City, the coverage was extended to 90 per cent of costs, the Government having decided to provide the rest in October 2012. According to the seaweed producers in Miyato, more producers would have resumed seaweed production after the earthquake had it been indicated from the beginning that the coverage offered would be 90 per cent.

4. Stakeholders

Table 6.14 Summary of stakeholders in case I-4

Major stakeholders	Roles
Miyagi Prefecture Fishermen's Cooperative, Miyato Branch	The branch played a role in granting producers access to assistance schemes. A parent organization, the Miyagi Prefecture Fishermen's Cooperative, shared the information on these schemes, and the branch office disseminated it among its local members.
Seaweed Department at Miyato Branch	This is the group of 19 seaweed producers in the area covered by the Miyato branch. Four small groups produce seaweed under the department.
Miyagi Prefecture Fishermen's Cooperative	The prefectural cooperative is the parent organization of all the smaller branches. It has three regional branches in large cities: Kesennuma, Ishinomaki, and Shiogama. These regional branches supervise 28 smaller branches in total. The Miyato branch operates under the Shiogama regional branch.
The Fishing Industry/Communities Promotion Organization	The Government Fisheries Agency established this non-profit organization in June 2009. It supports the implementation of various assistance activities, such as the Fishery Reconstruction Support Project and the Aquaculture Reconstruction Support Project (ARSP) for fishers and aquamarine products. In this case study, the organization guided the cooperative in applying and implementing ARSP.
Fisheries Agency under the MAFF	The Fisheries Agency is the donor of the three grants received by the seaweed producers in Miyato branch.

5. Effects and impacts

It is difficult to compare production levels in 2012 to those in 2010, since the number of producers differs between those years. According to the data obtained by the survey team, annual production in 2010 was 59.368 million sheets for 18 producers, and total sales amounted to ¥497.411 million. In 2013, production decreased to 51.13 million sheets for 19 producers.¹³¹ If the number of producers is disregarded, the production level in Miyato has decreased by about 14 per cent. Given that one producer was added to the group in 2013, it can be assumed that the productivity per producer has decreased. In 2010, before the tsunami, 33 producers annually produced 110 million sheets of seaweed, making up the total regional production of seaweed in Miyato Branch. In 2013, by comparison, the total production has decreased to about 51 million sheets, albeit with the loss of 14 producers. This demonstrates the extent of the decrease in the seaweed production in Miyato. Regarding the farm gate prices of seaweed, the price in 2011 was relatively higher than usual because the seaweed sheets from Miyagi were not available in the market. Although detailed information has not been made available, the price in 2012 was also relatively high, though not as high as in 2011. Due to different conditions between 2010 and 2012 (as well as a general lack of information), it is difficult to compare the production levels in these years.

Regarding the new model of group production, these producers prefer the new system as it has contributed to increasing individual sales. However, these groups do not prefer the monthly payment system because their pre-disaster production and sales amounted to more than their new monthly

¹³¹ Total sales for 2013 have not been disclosed.

salaries. As a result, these groups expect to eventually quit the Aquaculture Reconstruction Support Project, while still keeping the group production system in place.¹³²

6. Lessons learned and recommendations

a) Public assistance schemes are necessary for these fishers, whose financial condition was greatly affected by the 2011 Earthquake

After these individuals lost their fishing or aquaculture facilities, each had to consider whether or not to continue pursuing seaweed production. When the Government started offering public assistance schemes, some conditions, such as the coverage rate by funds, proved to be tough hurdles for some. The relatively low coverage rate led some fishers and producers to abandon fisheries or aquaculture altogether. The important fact here was that the financial capacities of fishers were greatly diminished after the 2011 Earthquake. Even in the areas not affected by the tsunami, fishers often had difficulty finding successors.¹³³ These schemes were thus a key in preventing fishers from leaving their businesses behind. Their need was especially acute because they cannot join unemployment insurance systems as employees, since they are categorized as being self-employed. The coverage rates of funds must be determined by on surveying potential beneficiaries.

b) Governments need to consider how assistance schemes are applied to respective fishers' cooperatives by observing their different characteristics

The combination of several assistance schemes made this case study very successful. Some schemes supported the purchase of facilities and equipment, whereas others guaranteed stable incomes. The latter required some regulation, such as the establishment of group production and monthly salary models among beneficiaries. The combination resulted in a firm recovery of seaweed production, especially during its initial stages. Thus, in this case study, the grouping system proved to be advantageous to producers, and they expect to continue maintaining this model. However, these producers did not favour the monthly salary system, which guarantees income regardless of productivity levels and the farm gate price of products. They expect to abandon this assistance scheme. The group work model also presents advantages in terms of production efficiency in general. However, it is important noting that some groups in other areas, such as scallop producers groups in Yoshihama, Iwate, did not prefer this new system since it was not suitable to their working environments.¹³⁴ Although the implementation of group work deserves consideration in the long-term,

¹³² The aforementioned Yoshihama scallops producers' group also expect to quit the monthly salary system in the year that the project officially completed. The group expects to abandon the monthly salary system and dismiss a production team at the end of the project period due to the difficulty of managing group work. The group noticed that each member wants to produce scallops at their favouring scales. For example, one family wants to make the production at relatively small-scale since the labourers are only a father and a mother. While, the other group wants to expand its scale since their labourers are a father, a mother, and a child. Under the group production, all the members are paid the same amount of salaries, and thus the scheme regulated each member decides their favouring production scale. In short, one member cannot produce more than the other since their salaries are the same. Thus, the group will be dismissed and resumed to individual productions.

¹³³ Among the aforementioned Yoshihama scallops producers, a lack of successors is a major phenomenon. To tackle this problem, their successors receive access to a public scheme called the Assistant Project to Acquire the Successors of Fishermen. This is a grant to subsidize a part of the salary. In Yoshihama, this scheme is currently a vital for young successors to remain in the fishery industry. This is because their production scales are currently regulated by the grant scheme. Nevertheless, this assistance scheme is expected to be complete at FY 2013, and thus these recipients are worried.

¹³⁴ As aforementioned, the scallops group expect to dismiss its production group due to mismatch of their production styles.

the Governments need to carefully consider how the system is applied in different fishers' cooperatives.

Case I-5: A restaurant complex applying a social business model, and employing people with disabilities (Tohoku Roku Project)

1. Summary

Table 6.15: Summary of case I-5

Type of project	Managing two restaurants, one bakery, and one community hall with a kitchen facility, and hiring people with disabilities
Location	Mori-Sekinoshita, Natori City, Miyagi
Number of employees	80 (including about 60 physically people with disabilities)
Total project cost	¥600 million
Starting date	Organized: May 2011 Applied for loan: June 2011 Granted loan: Aug. 2011 Operation started: Sep. 2013
Source of funds	Bank loan by the Sendai Bank
Key words	Private sector project by bank loan Employments for people with disabilities Six industrialization ¹³⁵

2. Background of the project

a) Identifying weaknesses of people

After the 2011 Earthquake, people realized their limited abilities to cook raw foods. A variety of raw foods, such as flour and buckwheat, were delivered to those affected by the 2011 Earthquake as relief supplies. Unfortunately, since many people did not know how to bake bread and make noodles, these raw foods were not used properly. To assist people in learning these skills, the Tohoku Roku Project opened the Roku farm ATALATA¹³⁶ in September 2013, complete with



Outlook of the Roku farm ATALATA

¹³⁵ 'Sixth industrialization' is the concept that producers in the primary sector, such as, farmers and fisherman, also process (secondary sector) and sell (tertiary sector) their products. The 'sixth' comes from the equation: 1 (primary) × 2 (secondary) × 3 (tertiary).

¹³⁶ The foundation manages a group of restaurants and a community hall with a kitchen facility under the sixth industrialization concept and the active employment of people with disabilities.

two restaurants and one bakery.¹³⁷ Here, people can observe how dishes are prepared, and take cooking classes in a community hall with a kitchen facility.

3. Recovery activities and major challenges

a) Project formulation

After the 2011 Earthquake, the project members established a voluntary organization and started the Tohoku Roku Project to conduct a social business to apply the sixth industrialization concept, including employment of people with disabilities.¹³⁸ Originally, there were six board members who covered five professional sectors: construction, real estate, consulting, restaurant management, and social welfare. These members used their professional skills to design and implement the project. For example, the design and construction work was led by a board member who owned a construction company. Restaurant owners were in charge of the restaurant management. Employing people with disabilities was made possible by virtue of one of the members having professional experience in the social welfare sector. Finally, one of the board members managed the overall project.

b) Finance

As the first step to obtain necessary funding for this facility, the members designed a blueprint to ensure that they shared a common understanding of the project. They then began looking for grant schemes offered by the national or local Governments. However, these grants only applied to projects that were aimed at restoring facilities or services that were lost as a direct result of the 2011 Earthquake. For example, if a facility was destroyed by the disaster, a grant scheme could be applied to reconstruct the facility. However, since ATALATA was a new facility, the project was not eligible for these grants. As a result, the team started negotiating with a local bank for a loan arrangement in June 2011. After a series of negotiations, the loan was granted in August 2011.

The bank had accumulated knowledge in the agribusiness sector through prior experiences, which enabled them to invest smartly in sixth industrialization development. In 2006, the bank started investing in the agribusiness sector. Initially, the bank aimed to financially support agricultural production. It even developed its financial product especially for agribusiness, and its employees were able to obtain a licence as an adviser of agricultural management in 2006.¹³⁹

c) Major challenges

After the loan was granted, another challenge appeared. After the 2011 Earthquake, the prices of construction materials in Tohoku increased significantly, and materials became very scarce. For instance, when the project team started constructing their facility, concrete materials had doubled in price from before the 2011 Earthquake. In addition, the materials were primarily supplied to public work projects for restoration, which included the restoration of highways and temporary housing for those who had lost their houses. These projects were initiated by the Government, so they had priority over private projects in terms of receiving supplies. This high demand caused a temporary scarcity of concrete for private projects. As a result, the project was delayed. Although the project team had

¹³⁷ The two restaurants are: (i) a traditional Japanese soba noodle shop; and (ii) a western-style restaurant. In addition, the complex includes a bakery that owns a charcoal kiln.

¹³⁸ Tohoku Roku Project literally means that sixth project in north-east Japan. The number six indicates multiple meanings, including six board members, the six prefectures in the north-east region, and the sixth industrialization development.

¹³⁹ The Japan Finance Cooperation (JFC) has hosted this licence since 2006. A non-profit organization, the Japan Professional Agriculture Total Support Organization, examine and issue licences on behalf of the JCF.

initially estimated that their facility would open in January 2012, the opening was postponed to September 2013.

d) Two unique features of the project

Roku farm ATALATA is a model that implements the sixth industrialization development concept. In this case, the sixth industrialization development advocates that food producers in the primary sector also cover processing (secondary sector) and sales (tertiary sector). Roku farm ATALATA owns two agricultural farms, so the foundation itself acts as the producer (the primary sector). Since the producers' group manages restaurants as well, which enables processing and the sales of final products, this project implements sixth industrialization development.

The project aimed at supporting people with disabilities by allowing them to enjoy self-reliant lives within the community. Roku farm ATALATA hired both people with disabilities and people without any physical handicaps. After the 2011 Earthquake, it was frequently observed that people with disabilities received insufficient quantities of rescue goods. Thus, the project team recognized the need to improve the ability of people with disabilities to access sufficient amount of rescue goods in case of emergency. As a result, the project decided to include these socially vulnerable people in the creation of ATALATA. Before the project began, the supply of job opportunities for people with disabilities was less than the demand. Therefore, the project contributed to increasing the number of such job opportunities with a suitable working environment.

4. Stakeholders

Table 6.16 Summary of stakeholders in case I-5

Major stakeholders	Roles
Tohoku Roku Project	The project team designed and implemented the project. In addition, the team managed the restaurant complex.
Local bank	Since the newly constructed projects were not able to apply for public funds for restoration, a local commercial bank offered a loan of ¥600 million. The bank had experience and knowledge of agricultural businesses. As a result, they decided to offer the project a loan.
Neighbouring farmers	The restaurants and the bakery plan to procure vegetables and other ingredients from organic farmers in Natori City and neighbouring towns.
Project partners	Both a well-known actor and a comedian came to know about the activities of the project after it was advertised in the media. They contacted the project and committed themselves to supporting the project. For instance, the actor raised funds by conducting an event in which people write letters and that are then sent back to themselves in the future.

5. Effects and impact

This project aimed to employ 100 people, 60 of whom would be people with disabilities. As of August 2013, 80 have been already employed. ATALATA officially opened their facilities at the end of September 2013.¹⁴⁰ The project estimated the monthly sales for the complex as a whole to reach

¹⁴⁰ The field survey for this report was conducted between July and early September in 2013. At that stage, the complex had not yet made any sales. Therefore, the team was not able to obtain actual sales figures.

¥25 million with 11,000 customers per month. These customers are both local residents and tourists. Since the media has often broadcasted this facility, the Foundation expects to attract tourists.

This restaurant complex offers educational benefits as well. The project team designed the system to show people how to prepare the food served in the restaurants. Visitors can observe the kitchens from their seats, and so can learn how to prepare these foods. The project also offers cooking lessons. The complex includes a community hall with a kitchen facility, which is primarily used for these lessons.

6. Lessons learned and recommendations

a) The Government needs to support the project with an inclusive approach for the socially vulnerable

The Tohoku Roku Project's plan clearly shows a policy of employing people with disabilities. However, public assistance schemes did not necessarily focus on people with disabilities, so this project was not able to benefit from these schemes, despite its socially inclusiveness. If local Governments aim to design a community development plan with an inclusive approach of people with disabilities, public assistance schemes would be able to support this kind of project.

b) The application of public assistance schemes needs to be flexible to support new projects

Under the 'Japan as One' Work Project, many grant schemes focus primarily on restoration rather than constructing new facilities with new concepts. Such new facilities do not fall into the category of recovery, since they are newly constructed facilities aiming to create job opportunities for people with disabilities. Despite the fact that the 'Japan as One' Work Project aims to create new employment opportunities, this project was not able to apply for any of these schemes. Job opportunities for people with disabilities in Miyagi were insufficient even before the 2011 Earthquake. Thus, these new facilities, using new approaches, were necessary to increase job opportunities for socially vulnerable groups. It is ironic that many Government agencies visit ATALATA as a model case of job creation for people with disabilities. If there is a need to create such job opportunities, local Governments need to participate in other similar pioneering projects by providing them with financial support.

c) Commercial banks need to pay attention to the sixth industrialization concept as a positive investment outlet

This project was one of the first sixth industrialization projects backed by a local commercial bank. The Government and media paid particular attention to the sixth industrialization concept, although it had existed before the 2011 Earthquake. Although the Government funded some projects under this concept, investment by commercial banks in this sector was rare. If this project becomes a successful model and performs well, other sixth industrialization projects or businesses could attract more entrepreneurs and commercial banks. Commercial banks need to carefully assess the potential of the sixth industrialization projects as an investment opportunity.

Case I-6: A temporary shopping complex (Minamimachi-Murasaki market temporary shopping cooperative)

Kesennuma Minamimachi Reconstruction Shopping Complex, was the result of a request to the Government made by a group of 54 local shop owners, for the construction of a temporary shopping complex to aid the recovery of their businesses, in Minami town in Kesennuma City.

1. Summary

Table 6.17 Summary of case I-6

Type of project	The recovery of a group of small shops
Location	Mimami town, Kesennuma, Miyagi
Number of employees	Approximately 120 as of Aug. 2013
Total project cost	Not disclosed
Starting date	Informal group started: Mar. 2011 Established NPO: July 2011 Temporary Factories and Store Project granted: July 2011 Operation (shopping complex) opened: Dec. 2011
Source of funds	The Temporary Factories and Store Project Loan from a commercial bank The SME Group Subsidy (to be applied)
Key words	Temporary shopping complex Recovery of small shops in local shopping streets

2. Background of the project

Kesennuma experienced one of the most severe degrees of damage from the 2011 Earthquake and tsunami on 11 March 2011. There had been 160 shops in seven different shopping complex cooperatives in the coastal areas in Kesennuma. Most of these shops were washed away. After the 2011 Earthquake, only one cooperative remained operational but was dissolved by July 2013. As a result, all seven cooperatives were dissolved. Soon after the 2011 Earthquake, a few of these shop owners started selling croquettes and underwear to neighbours who also had lost all their properties. This business was successful, and in April 2011 these business owners formulated a small group to start selling groceries on the street near the original location in the coastal areas. This was the origin of the temporary shopping complex.

From the beginning, the group expected to have its own building facility for temporary shops and came to know the scheme of the Temporary Factories and Store Project from the municipal



Entrance of the Kesennuma Minamimachi
Reconstruction Shopping Complex

Government and the local chamber of commerce. The local Government introduced the group to the SMRJ,¹⁴¹ and they started negotiating about the grant for the temporary facility in May 2011. The project features a high ratio of subsidy in which only one ninth of the building cost is shared by the recipient. Along with the negotiation, the group consulted with shop owners in the area, and 20 shop owners initially helped prepare the master plan of this temporary shopping complex.

3. Recovery activities and major challenges

a) The master plan of the project and its extension

A group of 20 shop owners prepared the first proposal for the Temporary Factories and Store Project, which was funded by SMRJ. The proposal requested a building to accommodate their temporary shops. Although the group was not officially registered at the time of their first proposal, they registered as an NPO named 'Shopping Complex for Recovery in Kesennuma'¹⁴² in July 2011. The negotiation began in May 2011, and the grant was approved in July 2011 under the condition that they clean the rubble left by the tsunami on the proposed land. Thus, the group collected some funds and donations from NPOs¹⁴³ to clear the rubble from the proposed land. By using the fund, the municipal Government helped to clean the rubble. The municipal Government rented land for public use from local private owners in the area. Thus, the NPO made a two-year contract with the Government. This contract is expected to be extended in 2014 at its expiration. A small portion of the land belonged to a local commercial bank. While the bank does not charge the NPO any fees, it does not allow the construction of any buildings. Thus, this land is used for local residents or an event space in the complex.

As the project made progress, the group started receiving more inquiries from other shop owners who had lost their stores in Kesennuma. Through a series of discussions, 52 owners determined to open their shops in this temporary shopping facility. When the group modified its proposal to accommodate these 52 shops, SMRJ agreed to construct a building with sufficient space for all the members. In addition, two shop owners had already reconstructed their shops using their own financial resources, and their locations were close to this temporary shopping facility. As these two owners requested to join the shopping complex, the complex started with a total of 54 shops in December 2012, two months later than outlined in the original plan, because of a delay in the construction.

b) The SMRJ constraints during construction

The inflexibility of SMRJ caused additional costs to the shop owners. SMRJ was only responsible for constructing the building; every shop owner had to be in charge of interior elements such as kitchenware, tables, shelves, and plumbing. In a normal construction process, a contractor simultaneously constructs both exterior and interior portions to minimize cost. For instance, plumbing and electrical wires are buried in the wall as the user (shop owner in this case) determines how these outlets will be used. However, SMRJ did not allow any interventions by these shop owners until

¹⁴¹ SMRJ is the public organization supervised by the Ministry of Economy, Trade, and Industry. The organization provides comprehensive tailored support according to the individual needs of SMEs in collaboration with government agencies, other SME support organizations, financial institutions, and research institutions.

¹⁴² This NPO does not have its title available in English. The Japanese title is *Kesennuma Fukko Shoutengai*, which literally means 'Shopping Complex for Recovery in Kesennuma City' in English.

¹⁴³ An NPO called Catholic Relief Society (CRS) looked for a beneficiary organization in Kesennuma City. In April or May 2011, CRS found and approached the group about the temporary shopping complex. After discussion between these organizations, CRS offered to clean the rubble at the bank.

the project was complete, despite the fact that the group repeatedly requested to relax the regulations. As a result, after the exterior construction was complete, the owners had to break part of the walls and floorboards to modify the designs as they prepared the set-up of the interior. This process required shop owners to spend extra expenditure, time, and labour.

c) Employment

Most of the shops in the complex follow a family business style with a mother and a father as the major employers. Only a few of the shops use non-regular workers in addition to the shop owners. Since 54 shops joined the complex, at least 108 jobs were made available. The NPO of the complex does not have employment data, but estimates no more than 120 jobs in total.

d) Future prospects

Since this shopping complex facility is limited to temporary use, the shop owners need to construct a facility for permanent use. Currently, the NPO has made preparations for the construction of a new shopping complex, by applying for the SME Group Subsidy. The NPO plans to finish operations at the temporary facility and shift to the new facility within two years. The NPO has already started looking for an appropriate property for this new facility. The NPO recognized that the tenant shop owners will face difficulties in receiving a bank loan, which will need to cover 25 per cent of the construction costs.¹⁴⁴ Thus, the NPO planned to apply for a loan on behalf of all the tenants. The new tenants will pay a monthly fee as a tenant to the NPO, and the NPO will repay the loan. However, the reconstruction plan in Kesennuma City has been delayed, and the NPO has faced the challenge of finding a new location. Until the plan is finalized, the complex could not identify the new commercial area in the plan. The blueprint of this new complex shows capacity to accommodate nearly 100 tenants. The NPO estimated that about 75 per cent of the shops in the temporary facility would continue their shops in the new facility while the rest would abandon their businesses because the shop owners were of an advanced age. This means that roughly 40 shops would occupy the slots as tenants while the NPO must invite 60 new tenants. Many shop owners outside the temporary shopping complex have already inquired if they can join as tenants in the new complex. These inquiries made the NPO confident in inviting 60 new tenants. As mentioned above, the NPO has made definite progress to set up a new shopping facility for permanent use.

¹⁴⁴ The SME Group Subsidy requires a recipient to cover 25 per cent of the total cost.

4. Stakeholders

Table 6.18 Summary of stakeholders in case I-6

Major stakeholders	Roles
The group of shop owners (NPO: Shopping Complex for Recovery in Kesennuma)	The shopping complex designs the master plan to rehabilitate business operations for small shop owners in Kesennuma. There are 54 members as of Aug. 2013.
Organization for Small and Medium Enterprises and Regional Innovation (SMRJ)	SMRJ provided the Temporary Factories and Store Project to construct a temporary shopping complex called Minami-Machi Murasaki Market.
Miyagi Prefectural Government	Currently, the shopping complex plans to apply the SME Group Subsidy to move from the present temporary facility to a new one for a permanent use. The NPO already started discussing the scheme with the prefectural Government.
Kesennuma City Government	Kesennuma City Government introduced the NPO to SMRJ in order to apply the grant. Also, the Government owns the property where the temporary shopping complex is located, and rents it to the NPO. Moreover, the Government helped in cleaning rubble at the property of the complex before its construction, but the NPO bared its cost.

5. Effects and impacts

The NPO has no detailed information on sales of member shops in the complex. However, according to an interview with the NPO, most shops have experienced more sales than before. Before these owners opened their temporary shops, their shops were scattered and located in shopping streets with few customers. Now their shops are located in the same facility, which is more convenient for customers. In addition, this shopping complex became one of the tourist attractions in the affected areas, and masses of tourists repeatedly visited the complex via tour buses. Therefore, the volume of customers increased dramatically. The NPO estimates that this increase will result in more than double the sales they earned before the 2011 Earthquake. According to the estimate of the NPO, the customer ratio between local residents and tourists is as follows:

Table 6.19 Comparison of customers in case I-6

	Local Residents (%)	Tourists (%)
Restaurants	50	50
Commodity shops	40	60

Table 6.21 shows how the shopping complex is dependent on tourists for its sales. The NPO recognized that good sales in the complex continue only as long as tourists repeatedly visit the earthquake-affected areas. Therefore, the NPO keeps warning shop owners to consider how sales will become sustainable even after the tourist boom ends. In short, the complex needs to increase its local customer base because locals will become the regular customers of the complex in the long run.

Regarding employment, the NPO estimated that there are approximately 120 employers and employees in the complex. Most of the shops only had employers since the parents were the shop owners, while a few of them had employees.

6. Lessons learned and recommendations

a) The temporary shopping complexes in the affected areas should consider how they can attract local customers as a countermeasure to decreasing tourism

The local shopping complex was rehabilitated by aggregating local shops into one facility. The aggregation made the facility a major tourist destination, contributing to increasing sales of all the shops. The temporary shopping complex boosted the local economy by increasing cash flow from outside the local community. The complex also became a symbol of local economic recovery. However, the present local economic boom was created by tourists, and these tourists are expected to decrease as these affected areas are rehabilitated from disasters. Therefore, the shop owners need to consider how they can attract local residents who will continue to visit the complex even after the temporary tourist boom is finished. If a shopping complex can propose a bigger shopping complex facility for permanent use, the new complex, which can lead further aggregation, may be a potential solution to attract more local customers.

b) The public assistance schemes should relax their regulations

In this case, the NPO suffered from tight construction regulations. This regulation caused additional cost, construction time, and labour for local shop owners. The Government agency needs to relax its assistance scheme regulations to adjust to real situations on the ground. In the affected areas, local shop owners faced a serious catastrophe and lost all measures to earn income. The longer the recovery processes took, the longer they had to wait to rehabilitate their livelihoods. Making the regulation more flexible directly helps their lives by recovering their livelihoods. Therefore, as far as smooth operations are not disturbed by the relaxation, the Government agency needs to consider how they can relax the regulations for the convenience of the disaster victims.

c) Seamless support by assistance schemes is effective for small shop owners in their business recovery if regional reconstruction plans are endorsed on time

Seamless support by two assistance schemes, the Temporary Factories and Store Project and the SME Group Subsidy, is vital for small shop owners. Since these owners were out of the scope of unemployment insurance, business recovery was a key factor in recovering their livelihoods. The reopening of shops also improved their quality of life by normalizing their daily lives and work schedules. After shop owners rehabilitated their businesses at a temporary facility, they started planning a new facility for permanent use. Thus, two assistance schemes do not disturb their businesses during the transitional period moving from the temporary facility to a permanent one. As mentioned, these shop owners cannot have a non-working period between these phases since the shops are their only source of income. Thus, the combination of the public schemes is very effective for these owners. However, the delay of city reconstruction plans often disturbed the recovery effort since the plan guided a new commercial area where those shopping facilities must be relocated. This delay also affected business and financial planning. In conclusion, the vast public assistance eased the burden of shop owners in rehabilitating their businesses, and the seamless support by the Government had a large impact on recovery. A regional reconstruction plan must not be unnecessarily delayed in order to avoid slowing down recovery processes.

Case II-1: Recovery of soy source and miso paste production (Yagisawa Store)

1. Summary

Table 6.20 Summary of case II-1

Type of project	The reconstruction of the business
Location	Yahagi, Rikuzentakata City, Iwate
Number of employees	31 as of Aug. 2013
Total project cost	¥450 Million
Starting date	Established: 1807 Operation resumed by the own fund: May 2011
Source of funds	Privately funded by an investment agency SME Group Subsidy Employment Adjustment Subsidies A loan from a commercial bank
Key words	Small business recovery Combinations of public and private funds Private shop reconstruction

2. Background of the project

Yagisawa Store has produced and sold soy sauce, soybean paste, and processed sauces since 1807. On 11 March 2011, one employee lost his life, and the store lost all its facilities, including its factories and shop as a result of the tsunami. The total loss to the store was about ¥420 million, including the facilities, raw materials, and final products that were ready to sell.

3. Recovery activities and major challenges

a) Facility

After the 2011 Earthquake, Yagisawa Store needed to restart production. Since the store lost all its production facilities, it planned to outsource its production to neighbouring factories by disclosing its original recipes as the first step towards recovery. This idea came from the president of the store. In order to outsource production, the store needed to choose which recipes it would disclose. Although the major products of the store were soy sauce and soybean paste, these products must be fermented for months, and require relatively large-scale facilities. In contrast, processed soy sauce requires only a simple facility for its production as long as raw soy sauce can be procured from other producers, and production takes only about a week. The store decided to initially outsource the production of four items on May 2011, using its own funds. By the following October, the store began renting vacant production facilities from neighbouring producers in Hanaizumi City, which is about 50 km away from the store, and started producing several items itself.

On December 2011, the store decided to reconstruct a factory in Ohigashi town in Ichinoseki City, which is approximately 12 km away from the store and located further inland. The factory

successfully started producing the original major products (soy sauce, soybean paste, and processed soy sauce) in March 2013, although the store expected to ship the first products in the autumn of 2013.

b) Finance

First, in April 2011, Music Security Inc. approached the store. Music Security Inc. is an investment company that attracts individual investors through its website. Since the major information source is the internet, these investors have a high level of internet literacy. In addition, these investors had a strong incentive to support these companies, because one loan unit contained a 50 per cent grant. This meant that an investment of ¥5,000 included a grant of ¥5,000, if an investor bought a loan unit equivalent to ¥10,000. This company initially contacted the Iwate Prefectural Government, and the store was introduced. This was because the store was very old in the region and was active in developing the local economy as a member of the National Conference of Association of Small Business Entrepreneurs. Music Securities Inc. approached the store and discussed establishing a fundraising scheme to support companies that were severely damaged by the 2011 Earthquake. This scheme had three unique features. First, the fund was partly loan and partly grant, as mentioned above. Second, the investment specified how the funds were to be used. For instance, the store specified that the invested funds would be used to furnish its production facility for processed soy sauce. Third, investors would periodically receive progress reports on business operations. By September 2011, the store succeeded in raising ¥50 million through the fund, which it used to procure production facilities.¹⁴⁵

While approaching this private fund, the store also approached the SME Group Subsidy in May 2011. Ono Food in Kamaishi City and the store had known each other through a previous business transaction. Ono Food asked if the store was interested in collaboratively forming a group to propose the subsidy since this subsidy requires applicants to be a group. Although the store did not expect the Government to subsidize the reconstruction of private property until the SME Group Subsidy was offered, they agreed to the plan. The group proposed the first batch of the subsidy on May 2011 as a sub group called 'new supply chain model group', under a parent group called 'distribution and processing group of seafood products in Kamaishi Region'. Of the ¥350 million, the subsidy was supposed to cover 75 per cent of the recovery cost, amounting to ¥262.5 million. However, the grant approved only 25 per cent of this cost described in the business plan, which was prepared by the group itself without any external advisers. The amount disbursed to the store was ¥87.5 million in the first batch, mainly because of the limited budget allocation in the prefectural Government. However, the store received the opportunity to receive the left amount, which could not be obtained at the first batch, at the third batch. This batch, in the Iwate, allowed recipients of the first batch to receive an additional fund. Since the third batch granted 50 per cent of the original business plan on December 2011, the group subsidy now covered 75 per cent of the store's business plan, which was equivalent to ¥262.5 million.

Despite the size of the group subsidy, the store faced a shortfall of ¥100 million to complete the plan. This was largely caused by a sharp increase in prices of construction materials. The store tried to raise these funds through Music Securities Inc. through its second batch. However, the store had already

¹⁴⁵ The return period is eight years and 10 months (106 months). The first 36 months do not produce any return to investors, while the remaining 70 months provide 1 per cent of net sales.

estimated that this fund would not reach the target by its deadline,¹⁴⁶ so they applied for and received a loan of ¥100 million as the Loan for Upgrading Project for SMEs by SMRJ.

c) Employment issues

Yagisawa Store recognized the importance of its employees, as it would not be able to rehabilitate itself without them. When the store stopped operating after the 2011 Earthquake, they met with the Iwate Labour Bureau to discuss how its employees could receive any income, given that the company could no longer produce any profit. The Bureau's answer was that income subsidy could be accepted if the Store applied for the Employment Adjustment Subsidy. Following this suggestion, the store applied for the said subsidy and held onto all its employees. In the end, the business was rehabilitated, and most of the employees remained with the company. As of August 2013, the company employed 31 people: 26 of who worked for the company before the 2011 Earthquake, and five who were newly hired. Although there were 38 employees in March 2011, some left the area and others stopped working altogether as a result of the trauma caused by the catastrophe. The store has not yet reached the number of employees it had before the 2011 Earthquake.

4. Stakeholders

Table 6.21 Summary of stakeholders in case II-1

Major stakeholders	Roles
Yagisawa Store	The store designed the revival business plan, and implemented recovery of the store while resuming employee allocation.
Music Securities Inc.	The private investment fund who delivered ¥50 million as the first fund to the store after the 2011 Earthquake.
Iwate Prefectural Government	The SME Group Subsidy was approved and disbursed through the local Government. The subsidy covered the largest portion of its reconstruction.
The local commercial bank	The store negotiated with a local bank to obtain a loan of ¥100 million.
Iwate Labour Bureau	The Bureau helped employees to apply the Employment Adjustment Subsidy after the 2011 Earthquake destroyed all the company's properties.

5. Effects and impacts

As mentioned above, by August 2013, Yagisawa Store had re-employed 31 people. Their salary levels and working conditions had not changed much even after the 2011 Earthquake. The new factory started production in March 2013. The new factory was constructed about 15 km from the coastline, and the new location did not have any special regulations restricting construction. The store estimated that it would ship its first products by the end of 2013. The major products in the new factory are soy sauce and soybean fermented pastes. These products must be fermented for months, hence the delay in shipping the first products. As of August 2013, the production capacity had recovered to 60

¹⁴⁶ This second batch fund collected 84.7 per cent of the ¥100 million as of 10 September 2013. The deadline for the investment was 30 September 2013.

per cent of the 2011 production level. After the new factory in Ichinoseki City begins shipping its major products in 2014, the capacity will increase to 80 per cent.

The variety of products has now increased to 16 since the reconstruction. Before the 2011 Earthquake destroyed the facilities, 58.2 per cent of the sales were made by wholesalers in local processing factories. However, since many of these customers have not resumed their operations, the store lost a large portion of its market. Therefore, the store had to increase sales to retailers and individual customers. After the 2011 Earthquake, the store was often highlighted by the media, and became very popular. The increased media presence helped the company gain access to new customers. In addition, a number of companies, including a TV game company and a bakery in Tokyo, offered to develop new products together with the store. As a result, a cookie using Yagisawa's original product as a key ingredient contributes part of its sales to the store's recovery efforts.

6. Lesson learned and recommendations

a) Approaches to multiple financial institutions in parallel are highly recommended

The store approached several public and private financial institutions at the same time to ask for a grant or loan. This enabled them to hedge their financial risks and increase their options. For instance, the store requested funding from the civil fund twice. The first fund successfully collected the requested amount from investors. However, since the second fund was estimated not to reach the requested amount, the store had already discussed applying for a loan from a commercial bank. The loan condition in the civil fund is better than a bank loan. By having more than one option, business operators such as farmers, companies, and fishers can choose the secondary option in case the first choice is not granted. Therefore, businesses need to approach multiple financial institutions at the same time.

b) Local business people need to develop good relationships with nationwide SME associations

Soon after the 2011 Earthquake, the store started working for the community as a member of a nationwide SME association. This association helped the store access a partner for a grant, receive cash or in-kind relief products from neighbouring communities, find a temporary office, and establish a new association for local business development. As a result of the company's long-term membership, the association became a reliable resource of support during this emergency situation. Through its nationwide network, it was able to collect and share useful information with its members, such as the availability of public grants for business recovery. Thus, if the Government recognizes these associations, including local chambers of commerce, and actively shares information on assistance schemes with them, these associations can be a primary source of information for their members. Under the situation in which the local authority (such as a city or town hall) suspended its functions as an executive institution because of a disaster, these network organizations can be reliable sources of necessary information for fast business recovery.

c) Business recovery plans need to be prepared soon after a disaster

The store built up a brief business recovery plan, which began by outsourcing its production and ended with it restarting production at its own factory. The store started producing its own products within two years after the disaster. The succeeding factor in this case was a feasible plan. Thus, it is important that companies or farmers prepare a business recovery plan for emergencies. Since it is difficult to prepare a precise plan without determining levels of damages caused by a given disaster,

the plan needs to be simple. It is recommended that they undertake training to learn how to prepare such plans if the companies or farmers do not have prior experience or know-how.

Case II-2: Basic training of mothers and unpaid care work at home to be entrepreneurs (Iwate Kosodate Net¹⁴⁷)

1. Summary

Table 6.22 Summary of case II-2

Type of project	Provide four kinds of preparatory training programmes for women, especially mothers who care for small children
Location	Morioka City, Iwate
Number of employees	38 trainees participated in the programme
Total project cost	Not disclosed
Starting date	Organized: Apr. 2002 Joined the project: Apr. 2012 Started operation: Apr. 2012
Source of funds	Business Reconstruction Employment Creation Project ¹⁴⁸
Key words	Non-profit organization Vocational training Women

2. Background of the project

Iwate Kosodate Net (IKN) was established in April 2002, conducting various activities related to childcare. These include, for example, operating a childcare centre, teaching parents to play effectively with children, and conducting events focused on mothers who look after children. In addition to these activities, IKN observed that many mothers and unpaid care work at home needed assistance in order to nurture entrepreneurship. Through its activities, IKN recognized that many women were interested in starting new businesses or providing social services. However, one of their challenges is a lack of sufficient entrepreneurial skills and the confidence to use the skills they have learned. Therefore, IKN realized that their project '*Arata-na-Ippo*' (the first step) could contribute to helping these women fulfil their dreams.

¹⁴⁷ This organization does not have an English name, but the name literally means 'Iwate Childcare Network'. It provides entrepreneur training for mothers and unpaid care work at home on different topics, such as, childcare, managing small shops, and playing outside with children.

¹⁴⁸ This scheme aims to encourage entrepreneurs and to create new job opportunities. In particular, it prefers promoting social business enterprises and training those who are interested in being involved in such enterprises.

'Arata-na-Ippo' was funded by a public assistance scheme called the Business Reconstruction Employment Creation Project. The Hokkaido Intellect Tank (HIT), a non-profit organization based in Hokkaido Prefecture¹⁴⁹ granted the fund. The HIT subcontracted the regional operation of this project to IKN. The project consisted of two major components: (i) an incubation project for social businesses;¹⁵⁰ and (ii) an internship project to create human resources for social businesses.¹⁵¹ IKN was responsible for the operation of the internship project in Iwate.



View of a training course

3. Recovery activities and major challenges

a) Major activities

IKN designed the four training programmes under the theme of 'Let's challenge the jobs contributing to your community!' Each training programme requires participating in a course for five days a week, six hours a day. The training contents are shown in table 6.25.

Table 6.23 Training contents for case II-1

Training title	Target trainee	Main content
Assistance for childcare	This training is suitable for those who are interested in obtaining childcare jobs or establishing small childcare centres at home.	Style of childcare, games for children, playing outside, how to use information technology in a business
Challenge shops	This training assists participants who are interested in studying the basics of establishing their own small businesses, selling crafts on a website, and providing social services to their community.	Studying case studies, basic advertising, basic services for customers, preparing a business plan, and explaining how to pilot a business operation at local shopping centres.
Mental care	This training is for those who are interested in improving their childcare skills, especially the mental health aspects of children, establishing a non-profit organization with mental care, and learning about mental care.	Hearing and growth through play, brain and mental growth, the benefits to a child's growth of playing outside.
Playing outside	This training is for those who are interested in facilitating parents and children playing outside, with or without toys and tools, and establishing a non-profit organization to this end.	Introduction to playing outside, being a girl scout, risk management for playing outside, how to play in the woods.

¹⁴⁹ For details, refer to the Hokkaido Intellect Tank website, <http://www.hit-north.or.jp/english/index.html>. [accessed 8 July 2015].

¹⁵⁰ This scheme aims at establishing new social businesses in the areas affected by the 2011 Earthquake by providing up to ¥3 million to the winners of their business competition.

¹⁵¹ The internship programme trains human resources for social businesses in the affected areas by providing training and internship opportunities.

In addition to the training described in the table, IKN conducted four follow-up workshops that were facilitated by the trainees under the same grant. Each workshop was a one-day programme. The workshops are described in table 6.26.

Table 6.24 Follow-up workshops for case II-1

Training title	Target trainee	Main contents
Workshops on how to play in winter	Parents and children who are interested in learning how they can enjoy playing in winter.	How to play with children in the natural environment, using snow, and preparing 'a peanut ring' ¹⁵²
Let's play together, between parents and children, in English	Parents and children who are interested in learning English through play.	Reading picture books and playing hand games in English
Smooth communication using praise	Those who want to learn better communication skills by applying the praising skills.	Facilitating the practical use of praise in communication.
Aromatherapy for beginners	Those who are interested in learning about aromatherapy.	Introductory lecture on aromatherapy, and practical training on how to prepare a hand cream.

b) Major challenges

(i) 180 hours required for training

The main training course requires 180 hours of training per course over six weeks as a regulation of the donor agency. It was a considerable challenge for IKN to design training content for qualified instructors. Although IKN already had some lecturers and workshop facilitators, they were not sufficient to fulfil the requirements of the course. Therefore, IKN needed to find other lecturers and facilitators to take over some of the sessions in the course. This was particularly difficult because they only had a few weeks to prepare. However, the additional people they hired may help IKN again in the future, so their efforts will be repaid.

(ii) Difficulty in finding trainees

Along with designing the training content, IKN needed to invite participants. However, it was difficult to find sufficient participants, with each training programme being able to accommodate up to ten trainees. According to their analysis, one of the major challenges for trainees was participating in the required 180 hours, including lectures, practical on-the-job training, and a concluding session. The long hours made trainee candidates think twice about whether or not they should register for the training. If the required time could be shortened, IKN believes they would be able to attract more trainees.

Nevertheless, IKN also recognizes that the 180 hours made the training particularly worthwhile. According to IKN, most of the training courses in the past could not cover sufficient material because

¹⁵² A peanut ring attracts small birds in backyards for bird watching.

of temporal and financial constraints, so this training with HIT enabled IKN to prepare highly qualified resource persons given sufficient time. Therefore, the long hours had both pros and cons.

4. Effects and impacts

a) Effects for trainees

This project provides the opportunity to nurture entrepreneurship. The majority of participants were either mothers or unpaid care work at home interested in starting a new business. Rather than renting an office and hiring other people, they preferred to run their business from their home. By participating in the lessons, they gained practical experience in promoting a home business and learned about different business styles as entrepreneurs.



View of a training play outside

Although many of the trainees are still preparing a business plan, some have already begun running a business. One trainee conducts aromatherapy lessons for her neighbours. By participating in the course, she hoped to grow her business by renting a shop on a commercial street. Through the course, she obtained advice from lecturers, and in the end, decided instead to increase her client base without renting a shop space. She called her neighbours, friends, and acquaintances, and advertised trial classes on her website in which beginners could first try her lessons before committing to training. She is satisfied with her decision and the results, having managed to increase her client base by 50 per cent. This example illustrates the conservative nature of most trainees, and how the training and advice from the lecturers impact their business. Another trainee started a non-profit organization to preserve a local copse of trees as a play area for local people, particularly small children, in the neighbourhood. In an interview with the founder, she mentioned that the IKN training course on 'playing outside' encouraged her to start this new business.

Since the effect of the course was different for each trainee, it is difficult to quantitatively measure the impact of the training programme. Nevertheless, the training programme did plant a seed for budding entrepreneurs.

5. Stakeholders

Table 6.25 Summary of stakeholders in case II-1

Major stakeholders	Roles
Iwate Kosodate Net (IKN)	The HIT subcontracted the regional operation of the project to IKN. IKN was responsible for designing and implementing training courses in the Iwate.
Hokkaido Intellect Tank (HIT)	The HIT is the prime contractor of the 'Arata-na-Ippo' project, which was funded by the Business Reconstruction Employment Creation Project. The HIT subcontracted part of the project operation in Iwate to IKN.

6. Lessons learned and recommendations

a) The regulation of the scheme needs to be relaxed to consider the time allocation/restriction for female participants

One of the significant constraints of this grant scheme was the time required of participants. Although this requirement made the training programme worthwhile, it also discouraged some potential trainees who could not afford to invest so much time. Additional flexibility would allow organizations to design appropriate periods for each programme. A lack of flexibility in the assistance scheme prevents the gathering of appropriate beneficiaries and limits a proper training period. The definition of what an appropriate period differs for each programme and trainee. For instance, an unmarried woman would have different time constraints compared to a married woman with children. Therefore, rather than making a scheme with predetermined regulations regardless of the needs of target trainees, it would be better if agencies could flexibly design appropriate training contents and periods based on participant needs, assessment, and feasibility study of the target groups.

b) A group of non-working mothers and unpaid care work at home needs to be one of the target groups for Government assistance to create new employment in areas affected by disasters

This training course primarily targets those who want to learn new business skills. The trainees are typically relatively new at being self-employed. The ‘Japan as One’ Work Project advocates the importance of job creation. This project reminds us that mothers and unpaid care work at home can also be good entrepreneurs if given the proper training. However, these candidates usually have some way to go before becoming successful entrepreneurs, and need to start by nurturing their entrepreneurial ideas rather than jumping into a seminar to learn practical business skills. They need to learn how to transform their dreams into a business. However, a series of business training courses does not ensure success in a business. There needs to be some sort of follow-up activity, such as business consultation or on-the-job training by experienced advisers or other female entrepreneurs. These non-working mothers and unpaid care work at home represent a considerable percentage of populations in disaster-affected areas. Thus, nurturing entrepreneurship in this group needs to be enhanced and continued by Government schemes.

Case II-3: Recovery of a marine product processing factory (Tsuda store¹⁵³)

1. Summary

Table 6.26 Summary of case II-3

Type of project	The recovery of a marine product processing factory
Location	Tonosumai, Kamaishi City, Iwate, Japan
Number of employees	172 as of July 2013
Total cost of project	Not disclosed
Starting date	Established: 1925 Applied for SME Group Subsidy (first batch): Apr. 2011

¹⁵³ This store is a recovered marine product processing factory in Kamaishi City.

	Granted SME Group Subsidy: May 2011
	Operation resumed: Apr. 2012
Source of funds	SME group subsidy Employment adjustment subsidies Employment insurance system Recovery project for the fishery industry in Kamaishi City
Keywords	Recovery of marine product processing industry Transformation of labour structure Building insurance

2. Background of the project

Tsuda Store (the Store) was established in 1925 and obtained stock corporation status in 1956. The Store capitalized at ¥99 million. Compared to other locally based companies in Kamaishi City, the Store is relatively large-scale in terms of sales and the number of people it employs. Its headquarters were located in Kamaishi City while the factories were in Otsuchi town, about 10 km away. Because of the tsunami caused by the 2011 Earthquake, the Store lost three factories in Otsuchi, as well as stocks of raw materials and final products worth a total of ¥500 million. After the tsunami, the Store fired 162 employees, although it also promised to call them back when it was ready to accept them once again. This was because unemployment insurance can only be provided if employees lose their working status. Since the Store lost all revenue opportunities, this was the only way to maintain some income for the employees. As a result, the Store began re-establishing its business from scratch.



Inside of the factory of Tsuda Store

3. Recovery activities and major challenges

a) Insurance

First, the Store set up a temporary office in Kamaishi City to develop a recovery plan. The Store then contacted an accounting firm in Tokyo with which it had maintained a long-term business contract. The accounting firm kept vital management data such as the accounting books. Thus the Store was able to immediately start discussing the feasibility of a recovery. Furthermore, the accounting firm has a communication system with a television link between Tokyo and Morioka City, the prefectural capital in Iwate. The owner thus did not need to travel to Tokyo for meetings, saving money and time. The most important factor for the Store's recovery, however, was the private accident insurance it had for the loss of buildings and facilities. The insurance payment amounted to ¥800 million; this funded the initial stage of the Store's recovery.

b) SME Group Subsidy

The Store obtained the information on the SME Group Subsidy from its first batch of beneficiaries. The Store formed a group with two neighbouring companies¹⁵⁴ in April 2011. They submitted their proposal to the Iwate Prefectural Government office later that same month, and the proposal was accepted in May 2011. However, the Store realized that the coverage provided by the subsidy had shrunk to 25 per cent down from the 75 per cent ratio of the original business plan. Although this was discouraging, the company did not give up on its recovery plan. After a few months, the



Outlook of Tsuda Store

Store received additional information that the first cohort of beneficiaries could re-apply a second time as a follow-up, when the third batch proposal was accepted.¹⁵⁵ This was because the beneficiaries in the first cohort could only receive 25 per cent of the amounts put forth in their original business plans because of a lock placed on the original fund, despite the fact that SME Group Subsidy showed 75 per cent of the coverage rate to the total business recovery plan. When the third batch was released, the Store received an additional 50 per cent of the proposed amount put forth in the original business plan requests. In the end, the Group Subsidy covered 75 per cent¹⁵⁶ of the proposed total amount.

The challenge for the Store occurred before it received the subsidy as part of the first batch. The Store had to prepare the proposal with very limited information, since it had little time to write the proposal. Additionally, the Store had to collect necessary estimates within limited time and administrative capacity. Hence, it became apparent that the budget estimate of the business plan was insufficient.¹⁵⁷ The Store regretted to learn that it was possible to prepare a more precise business plan if it knew the SME Group Subsidy scheme were to continue for the next couple of years. When the information of the first batch came to the Store, there was no clear schedule indicating whether it would be continued or not. In the end, the budget shortfall was covered by a loan from a commercial bank.

c) Recovery project for the fishery industry in Kamaishi City

Recently, the marine product processing industry has faced a shortage of labour. The Store has kept offering vacant positions to new employees, but they find themselves unable to fill these positions yet. The work is labour-intensive, and includes tasks such as washing and slicing fish. Besides, the salaries are relatively lower than other kinds of work, such as administration and sales. In fact, in the case of

¹⁵⁴ These companies are Sojitz Foods Corporation and the Cooperative of Seafood Processing Businesses in Otsuchi. Although this case just formed the group with neighbouring companies, the other case formed the group by members of the industrial cooperative already existed at the 2011 Earthquake. For example, Morishita Suisan (Morishita Marine Product Processing) in Ofunato formulated the group to apply the subsidy through the cooperative for marine product processing companies in Ofunato. This local industrial cooperative was linked to a good information source to the local Government office as well as relevant economic groups. The membership of the cooperative made the company smoothly join the group for the grant.

¹⁵⁵ The first batch had a specially favoured arrangement for the beneficiaries. At the third batch, the beneficiaries at the first batch were allowed to receive the additional fund that the first batch winners could not obtain because of lack of the original funds.

¹⁵⁶ This amounted to 25 per cent of the business plan at the first batch and 50 per cent of it at the third batch.

¹⁵⁷ This issue was observed in the other company. As aforementioned, Morishita Suisan also could not accurately calculate the proposing amount to the SME Group Subsidy due to a lack of information and limited availability of time soon after the disaster.

the Store, most workers were women, and ranged from middle-aged to around 60 years of age. Kamaishi City faced excess demand for labour, as reconstruction projects in the city required labourers too. Therefore, even the Kamaishi branch of Iwate Labour Bureau was not optimistic about being able to fill the labour shortage in the local labour market within the short-term. As a result, the Store shifted its production approach towards further mechanization of its production processes. This mechanization allowed production levels to be maintained, and in some cases even increased, with a smaller number of machine operators. For example, the Store applied to the Recovery Project for the Fishery Industry in Kamaishi City¹⁵⁸ to procure new machines for seafood processing. This new machine can operate the production line with fewer operators than before. The old processing machine required 20 operators, whereas this new machine could achieve the same output with ten.

d) Employment

Table 6.27 Comparison of employment numbers between 2011 and 2013 at the Store (case II-3)

Timing	Employees
March 2011	232
July 2013	172
Gap	-60

Table 6.28 Employment status at the Store as of July 2013 (case II-3)

Status	Number of employees
Employment contract started before the 2011 Earthquake	70
Employment was intervened on March 2011, but resumed later	71
Newly employed after the earthquake	31
Total	172

Currently, the Store has 141 employees who either remained employed or resumed their employment status after temporary contract termination due to the 2011 Earthquake. Since there were 232 employees available before the 2011 Earthquake, 91 did not resume work at the Store. This is because: (i) their place of residence was too far from the new factory location; (ii) they had to take care of their family instead of working outside; and (iii) they received some kind of compensation. As briefly mentioned above, the Store tried recruiting new employees, since the new factory still had a need for additional employees to increase its production. However, the labour market in Kamaishi City was

¹⁵⁸ Kamaishi City recognizes that marine product industries faced a serious problem of scarce availability of local labour, a harmful rumour, and necessary expansion of marketing channels after the 2011 Earthquake. Thus, the city Government offers a subsidy for companies in the relevant industry to procure new machines. These machines must be inclusive of one of the following categories: i) improving productivity or reduce necessary labour forces; ii) improving a quality of food processing; iii) to promote value added in target products; (iv) improving sanitary environment in factories; v) to guarantee safety of foods by checking its radioactive levels; and vi) any other equipment to recover a fully scaled rehabilitation. The coverage is either 50 per cent of the cost or no more than ¥25 million per case.

facing a general shortage, and the labour gap could not be fulfilled.¹⁵⁹ This is mainly due to a large demand for labour in public works and related sectors. Additionally, many people lost their houses and were required to relocate to new places of residence (sometimes these were temporary). For these people, their place of work became too far away from their home. As a result, some of them gave up resuming business operations. The big advantage for the Store is that about 50 per cent of the employees still commute from Otsuchi town, where the factories were originally located. About 80 employees commute, travelling the 10 km distance from Otsuchi to Kamaishi by microbus (a service provided by the Store).

4. Stakeholders

Table 6.29 Summary of stakeholders in case II-3

Major stakeholders	Roles
Tsuda Store (The Store)	The Store plays a vital role in designing and implementing business recovery after the disaster.
The accounting firm in Tokyo	The accounting firm keeps management information, such as accounting data, even after the Store lost all of its own in Kamaishi. These data contributed to a quick recovery of the business.
Kamaishi Branch of Iwate Labour Bureau	The branch advised employees on how to receive the insurance for unemployment. Additionally, the branch is the key window to fulfilling the employment needs of the Store.
Iwate Prefectural Government	The SME Group Subsidy was funded by METI, but the proposal was inspected and granted through Iwate Prefectural Government in the case of both first and third batches.
Kamaishi City Government	The City offered the new scheme to subsidize a part of the expenditure related to mechanization.

5. Effects and impacts

According to the Store, if the production level in 2011 were set at 100 per cent, the levels were recovered to approximately 60 per cent in 2012 and 80 per cent by 2013. In order to reach higher levels, the Store needs either additional workers or further mechanization of the production process. After the Store fired 162 out of 232 staff members in March 2011, it re-employed 141 of them, while 91 did not return. This situation created job vacancies; specifically, it created 31 new job openings. Nevertheless, these new employees for the Store tended to resign, while the employees who had been employed since before the 2011 Earthquake rarely left.

¹⁵⁹ The excess demand of labour also affects other industries. For example, Yuwate Yoshida Industry has a factory to produce mobile phone cases in Ofunato City, Iwate Prefecture. After the factory was washed away by the tsunami on 11 March 2011, the factory was rehabilitated in a nearby location by the SME Group Subsidy. However, this company also faced labour shortage problems. Thus, a corporate recruiter often visits local high schools to recruit its students after their graduation. Also, the company accepted some high school students as interns to let them experience working in the manufacturing sector. Through these measures to increase employees, the company tries to fill the gap.

6. Lessons learned and recommendations

a) Companies need to be well prepared for business continuity in the event of a disaster or emergency

It would be effective for companies to make preparations to continue business operations in such events by formulating a plan and storing management information, such as accounting data, regardless of the size of companies. In the case of the Store, part of its vital data and information was kept with an accounting firm in Tokyo. This duplicated data enabled a quick recovery of the business after the tsunami washed away all the data locally stored in factories in Otsuchi. This case shows that these companies can quickly recover business operations with access to vital management information. Furthermore, in a more comprehensive way, it is recommendable that companies come up with a Business Continuity Planning to show how they plan to continue business, stay in touch with employees, and minimize the damage to assets until recovery is completed.¹⁶⁰ For this purpose, training courses offered by the Small and Medium Enterprises Agency under METI can be utilized.¹⁶¹

b) Under the conditions of a labour shortage, mechanization is one strategy for operation recovery

In order to alleviate a labour shortage, the Government can consider encouraging further mechanization to SMEs. Kamaishi, and many other areas affected by the 2011 Earthquake, faced an excess demand of labour. Under the given situation, where low population areas could provide limited labour, both the private and public sectors need to consider an alternative strategy. Mechanization is one of these alternative strategies aimed at quickly addressing the issue of a lack of labourers. In the public sector, at least in Kamaishi City, a part of their costs are subsidized as a solution to solve this issue. Public works in construction will be completed within years. If locally based companies have not survived, the regional economy will be impoverished, which can in turn lead to a vicious cycle of further population outflow and ageing. Mechanization is a feasible solution to prevent this vicious cycle.

c) Companies need to develop and maintain good relations with local authorities in order to ensure to access to information about public assistance schemes in emergency situations

This case shows that the Store has had a network from which to obtain information on several assistance measures: private disaster insurance, unemployment insurance, the SME Group Subsidy, the Business Reconstruction Employment Creation Project, and the subsidy for new machines. When companies affected by the earthquake can properly arrange these assistance schemes with an appropriate degree of order and can apply them at the proper time, these companies need to be able to quickly rehabilitate their businesses. One factor of success is good access to information resources. Since these public stakeholders deal with different offices, such as prefectural Governments and the local labour office, the companies need to develop and maintain good relations with these stakeholders through periodical communication and information exchanges.

¹⁶⁰ METI, *Guideline on formulation of BCP in 2006*, www.meti.go.jp/policy/netsecurity/.../6_bcpguide.pdf [accessed 8 July 2015].

¹⁶¹ See METI website, <http://www.chusho.meti.go.jp/bcp/index.html> [accessed 8 July 2015].

Case II-4: Recovery of a Research and Development (R&D) centre and establishment of a group company (Mugen System Co. Ltd.¹⁶² and Ginga Energy Co. Ltd.¹⁶³)

1. Summary

Table 6.30 Summary of case II-4

Type of project	The recovery of the technology centre for industrial waste
Location	Kamaishi, Iwate
Number of employees	62 as of Aug. 2013
Total Project Cost	Not disclosed
Starting Date	Mugen System Co. Ltd Established: 1993 Proposed to SME Group Subsidy: Feb. 2012 Grant Granted: Mar. 2012 Ginga Energy Co. Ltd Established: June 2011 Operation started: July 2011
Source of Fund	The Employment Development Subsidies for Disaster Victims The SME Group Subsidy The Loan for Upgrading Project for SMEs Funds by New Energy and Industrial Technology Development Organization (NEDO)
Key words	Recovery of a technical centre for industrial waste Collaboration with the Kamaishi City Government

2. Background of the project

Ginga Energy Co. Ltd was started in May 2011 with five employees. Before it was established, its parent company, Mugen System Co. Ltd, established the Environmental Technology Centre in Kamaishi in 2005, which was washed away by the tsunami in March 2011. This centre was rehabilitated with the use of Government grants. Since the company president is native to Kamaishi City, the company had long hoped to create job opportunities for those who were affected by the earthquake and tsunami there. As a result, Mugen System Co. Ltd established Ginga Energy Co. Ltd by its 100 per cent direct investment.

3. Recovery activities and major challenges

3.1 Mugen System Co. Ltd

a) Recovery of the environment technology centre in Kamaishi

Mugen System Co. Ltd based its environmental technology centre in Kamaishi even before the disaster. Following the tsunami, the company received the Employment Development Subsidies

¹⁶² This company addresses research and development of new technologies related to industrial waste disposal.

¹⁶³ This company researches how to create renewable energy from rubble.

for Disaster Victims to secure the employment of all six employees in the centre. In either October or November 2011, the Director General of the Kamaishi/Otsuchi Industrial Training Centre informed the president of an application of the SME Group Subsidy. The company and other neighbouring companies formed the Kamaishi Industrial Restoration Group. Nippon Steel Corporation¹⁶⁴ led the group. The group submitted the proposal in February 2012 for the third batch of the group subsidy in Iwate and received approval in March 2012. The grant was for ¥138 million. Since the group subsidy covered 75 per cent of the business restoration plan, the company took a loan of ¥42 million under a special arrangement called Loan for Upgrading Project for SMEs¹⁶⁵ in May or June 2012 by SMRJ. The special arrangement offered a return period of 20 years with no interest. Through these three grant schemes, the company reconstructed the technical centre.

b) Project funded by NEDO

While the technical centre was being rehabilitated, it was involved in a project funded by New Energy and Industrial Technology Development Organization (NEDO). The fund contributed to recovering the business in the centre, and project aimed to survey the detoxification of asbestos from industrial waste contained in the rubble left after the tsunami. In some cases, this rubble contained harmful asbestos. Since it is not technically feasible to manually remove asbestos from rubble, it was necessary to develop the new technology to detoxify asbestos in the process of rubble disposal. Street Design Corporation subcontracted the work to Mugen System Co. Ltd. The subcontract required the venue to set up the facility and the operators for necessary machinery.¹⁶⁶

3.2 Ginga Energy Co. Ltd

a) Disposal management business funded by Kamaishi City Government

After establishing Ginga Energy Co. Ltd. the company applied to obtain permission for collection and transportation of rubble in Kamaishi.¹⁶⁷ In June 2011, the company was permitted to join a project called Trial Project on Disaster Waste Management. This project was a trial to examine the operational capacity of Ginga Energy Co. Ltd. The contract instantly created five job opportunities in the form of two-year contracts, and the company hired 30 employees during the trial phase alone. After April 2012, the project moved to the next step: implementation. In the time between the trial and implementation phases, the staff became idle as the project was suspended for several months. As a result, nine of the original 30 had to be discharged. However, after the implementation phase started, the company recovered its number of employees again, even reaching 62 as of August 2013. This implementation phase is expected to be completed in March 2014.

¹⁶⁴ Nippon Steel merged with Sumitomo Metal Corporation and is presently called Nippon Steel and Sumitomo Metal Corporation.

¹⁶⁵ Loan for Upgrading Project for SMEs is offered by SMRJ through any form of local Governments, such as city and prefectural levels. The main targets for the loans are accumulation of factories in order to reorganize residential, industrial and commercial areas for their further promotions. The loan recipients can also receive advisory services, which can adjust appropriate shapes of loans for each project.

¹⁶⁶ After the project, the facility was not granted to any public or private institutions where similar surveys were conducted. As a result, the facility was scrapped, and the developed technology has not yet been utilized. This project aimed at confirming technical feasibility to detoxify asbestos while the implementation and extension phases were not yet planned.

¹⁶⁷ Due to the tsunami on 11 March 2011, the whole city was covered by rubble. Therefore, the city was very keen to remove this rubble.

b) Future prospective

The disposal management of rubble in Kamaishi City will be complete by March 2014. Most of the employees have two-year contracts. After completion, the company expects to transfer these employees to reconstruction work in neighbouring areas and for some of them to become operators for the facilities in Mugen System Co. Ltd.¹⁶⁸ These employees have already gained the necessary skills to deal with rubble disposal. Some even had the opportunity to earn a licence to operate heavy vehicles, such as trucks, cranes, and diggers, through the Emergency Job Creation Project. At the time they originally obtained the licence, their practical experience was insufficient. However, they have now accumulated enough operational experience to adapt their skills in any relevant construction sites.

4. Stakeholders

Table 6.31 Summary of stakeholders in case II-4

Major stakeholders	Roles
Mugen System Co. Ltd	Mugen System has the environmental technology development centre, which was rehabilitated after being washed away by the tsunami.
Ginga Energy Co. Ltd	Ginga Energy was established after the 2011 Earthquake. The Kamaishi City Government contracted the company to collect and transport the rubble to disposal sites.
Kamaishi Branch of Iwate Labour Bureau	The branch advised Mugen System Co. Ltd on how to receive Employment Development Subsidies for Disaster Victims. The branch also contributed to fulfilling the employment needs of Ginga Energy.
Iwate Prefectural Government	The Iwate Prefectural Government disbursed the SME Group Subsidy for Mugen System Co. Ltd at its third batch.
Kamaishi City Government	The City contracted the Trial Project on Disaster Waste Management with Ginga Energy Co. Ltd.
New Energy and Industrial Technology Development Organization (NEDO)	NEDO contracted the project to develop the technology for detoxification of asbestos-contaminated rubble. The project was subcontracted by Street Design Corporation.
Street Design Corporation	Street Design Corporation was directly contracted with the NEDO project mentioned above.

5. Effects and impacts

Mugen System Co. Ltd had operated its technology centre even before the 2011 Earthquake. The company mainly develops new technologies that can attract new business opportunities. However, Mugen System Co. itself has not yet created any jobs following the 2011 Earthquake. Ginga Energy Co. Ltd created 62 new jobs as of August 2013. The majority of these 62 workers are contracted for only two years. Nevertheless, they accumulated work experience in rubble management. According to an interview with Ginga Energy Co. Ltd, these skills can be applied to any reconstruction projects in

¹⁶⁸ Mugen System Co. Ltd has an environmental technical centre which works mainly on research and development of new environmental technologies.

neighbouring areas for the next ten years or more. The demand for construction workers is very high in Kamaishi City. In fact, Ginga Energy Co. Ltd has already prepared a proposal for a public works license. Therefore, it is fair to say that these workers can either extend their contracts or easily access relevant job opportunities at construction sites after the termination of their present contract with Kamaishi municipal Government for rubble management in March 2014.

6. Lessons learned and recommendations

a) The combination of technical developments and technical application boosts job creation in the field of industrial waste disposal

As mentioned above, this case study shows a beneficial combination between technical development and job creation. Technical development can create new businesses that significantly contribute to reconstruction in disaster-affected areas. Mugen System Co. does not develop the new technologies to create jobs yet, but this business model containing both technical R&D and its operations makes such a goal possible in the future. This combination is made possible by having academic institutions provide R&D functions to the private sector enabling the latter to create job opportunities by using the developed technologies. The government can support these linkages by initiating R&D projects. Alternately, the government can specially provide public assistance schemes to these companies.

b) Fast actions after disasters can aid in a quick recovery

This case study suggests that a series of fast actions in the initial stage contributed to rapid business recovery. Mugen System Co. established its group company in June 2011, only three months after the disaster. This quick action led to added job opportunities by the city Government. While this new group company increased its employment capacity, Mugen System Co. recovered its function of technology development through public assistance in December 2011. These quick actions succeeded in restarting the business operation. Only a few companies operated public works soon after the disaster, and limited availability of operational capacity to conduct public works in emergency situations attracted other business opportunities. Therefore, faster actions after disasters can aid in a quick recovery.

c) New technologies need seamless business application

When new technology is applied to new business, stakeholders need to consider how this technology can actually be used in a business operation. Immediately after establishing new technologies, surveys need to be conducted on enhancing the applicability of developed technologies in their businesses. By establishing business applications for new technologies, companies can hire employees to materialize related business operations. In this case study, NEDO created an opportunity for technical development, though it did not get involved in the next phase. Unlike normal conditions, companies affected by the earthquake were already financially weakened and could not afford to bear the cost during the preparation phase. Therefore, under the totally devastating circumstances following natural disasters, governments need to consider how public assistance can support the industrialization of these new technologies – in particular, those technologies that can contribute to hastening the reconstruction process in disaster-affected areas.

6.3 Conclusion: Lessons learned and recommendations

6.3.1 Lessons learned

- Companies can hedge financial risks to access sufficient funds if they can have access to multiple financial resources. This risk hedging makes the recovery of business operations smooth and fast. Good combinations of these assistance schemes also enabled employers to design the whole recovery process in several phases.
- Groups of employers with good connections to resource institutions quickly acquired access to public and private assistance schemes. These resource organizations are, for example, local chambers of commerce, local branches of nationwide economic organizations, municipal city governments, banks, and local labour bureaus. These organizations serve as effective resources for assistance schemes in emergency situations.
- After the 2011 Earthquake, R&D under PPP was highlighted as a new trend of recovery and reconstruction. The concept itself was not new, but has recently entered the mainstream. Some assistance schemes support R&D, while others promote business recovery. However, there is still a gap between R&D and business application. Between the two processes, companies normally conduct feasibility studies to confirm if new technologies can be applied to practical businesses by using their own funds. The affected companies are still recovering after the 2011 Earthquake, and cannot afford to invest in feasibility studies yet. The financial constraints form an impediment to the application of new technology to business.
- Many beneficiaries suffered from the rigidity of the operations of public assistance schemes. The operations of these schemes are sometimes too regulated to adapt to the new realities brought about by the 2011 Earthquake. Because of this inflexibility, the beneficiary often had to spend extra time and money at the proposal and implementation stages. The disasters caused a variety of damages and losses, causing beneficiaries to adjust project proposals to reflect the present realities at their localities. However, these adjustments sometimes clashed against the regulations of assistance schemes. Such gaps between adjustments and regulations were problematic for the beneficiary.
- In the tsunami-affected areas, a regional reconstruction plan is a master plan to rehabilitate communities. The plan shows how the affected regions will be reorganized. For example, it determines and distinguishes between residential, industrial, and commercial areas. However, because the planning phase involves many local stakeholders, some of these plans were considerably delayed to make a consensus among these stakeholders. Since the plan guides many projects in terms of determining their locations and regulations, the delays caused considerable negative impacts on relevant projects.
- Two and a half years after the 2011 Earthquake, restoration and recovery efforts are now fully operational in the earthquake-affected areas. Businesses are also in the process of being recovered. There is therefore a large demand for labour. On the contrary, during this two and a half-year period, the affected areas experienced serious population outflows. As a result,

the local labour market faces an excess of demand, which formerly used to be an excess in supply. Thus, the lack of labour impedes recovery processes.

6.3.2 Recommendations

- The coordination of public, private, and academic institutions can help create employment. The basic idea is to utilize all available local resources. In particular, local academic institutions often have small business incubators and useful technologies in sectors such as aquaculture. These technologies need to be fully utilized to create job opportunities for those who have lost their properties as a result of disasters. To utilize technology completely, financial assistance is critical. In the case of Japan, a civil fund, although limited, worked for some beneficiaries. In developing countries, instead of civil funds, microfinance schemes may be appropriate in such situations. If government agencies have the capacity for facilitation, they can coordinate stakeholders, beneficiaries, and academic and financial institutions, as teams.
- Unpaid care work at home has high potential to be good entrepreneurs. As learned in the case of Japan, their way of engaging in business tends to be more conservative than with males. Thus, training needs to be provided in several steps for beginners as well as for more seasoned entrepreneurs. If public or private institutions can subsidize a part of their nominal income in the initial stage of business development, these women can start their businesses without fear of failure. In particular, within communities in developing countries that need to be rehabilitated from disasters, it would be difficult for any institution to provide training for these women. Thus, nominal subsidies can encourage them to act with reducing hesitations and dependences on training programmes, and push them in their roles as local entrepreneurs in incubating small businesses.
- The BCP can be applied to companies, cooperatives, and even public sector in developing countries. It is not practical to expect that stakeholders prepare precise BCPs suiting various disaster situations, since they would not be familiar with the concept of BCP yet. However, if stakeholders can prepare a list of resource organizations to ask for assistance during disaster emergencies, it would be very helpful in quickly and efficiently rehabilitating livelihoods.

Chapter 7 Lessons learned and recommendations

Based on the analysis in the previous chapters, lessons learned are addressed and recommendations put forward. It is hoped that the lessons and recommendations can be used to take action to enhance disaster readiness as well as recovery and reconstruction processes in present and future disasters.

7.1 Lessons learned from Japan

7.1.1 Overall policy framework

- Acquiring data and information on disaster damage by area and estimating the damage to industry and employment early during a disaster allowed policy-makers to formulate effective and efficient policies and programmes. As shown in two mega-disaster cases in Japan, i.e. the 1995 Earthquake and the 2011 Earthquake, Government employment measures in response to disaster differ in accordance with type of damage, economic structure, and demographic trend. In the latter disaster, employment security and job creation by the Government were more important because the majority of affected people lost not only their residences but their jobs too because of the tsunami. Thus, employment stability and job creation are key determinants of successful reconstruction in disaster-affected areas.
- Japan's example proves that it is important to set up the overall framework of employment measures, divided by phase, in order to meet the changing needs of disaster-affected people in the initial stage of disaster response. The phases could be seamless from emergency to recovery and reconstruction. At the initial stage, existing schemes, programmes, and implementation mechanisms including schemes for emergency response on employment (i.e. unemployment insurance and job creation programmes) can be utilized and expanded for smooth and quick implementation, with some adjustments, as emergency responses. Programmes that contribute to long-term reconstruction can be drawn along the way, clarifying the economic structure and damage to industry and employment in disaster-affected areas.
- Fast information disclosure and dissemination of policy direction and overall framework by the government, paired with concrete programmes, enables disaster-affected enterprises to determine whether they need to restart or terminate business operations. The speed of restarting business operations is one of the most important factors in determining the degree of recovery. Delayed restarting directly results in the loss of market share and, consequently, loss of employment. If enterprises are well informed of the overall framework and a series of programmes by phase, they can make a strategically efficient business plan, and outsource in the most effective way by combining different schemes.
- The Employment Insurance System in Japan functions as a social protection mechanism and safeguard to secure the incomes of those affected by the disaster, especially for the most socially vulnerable people, though it does not cover self-employed workers and those who run private enterprises.

7.1.2 Operation and management

- One significant adverse impact of tsunami disasters is the relocation of residences and workplaces. In the Sanriku region in Japan, most commercial enterprises are located in the coastal areas. As the tsunami hit and devastated the coastal areas, a large-scale relocation was undertaken based on the city and/or town reconstruction plan and the land use plan. This relocation forced disaster-affected people to frequently change their living environments and workplaces, from the evacuation centre to temporary housing and then to permanent housing. Sometimes, the physical distance between a residence and a workplace makes it difficult to commute, especially for those who are not able to afford to purchase a vehicle.
- Statistical analysis of employment status and time-series patterns by different attributes such as area (i.e. coastal vs. inland), gender, and age are effective indicators for identifying specific issues and countermeasures. In accordance with the employment needs of disaster victims affected by the reconstruction process, the effects of measures differ. Thus, specific measures reflecting local situations need to be formulated at the municipality level through collaborative efforts between the public employment security offices and municipal Governments.
- The experience of the Japanese Government response to employment shows how existing schemes and past disaster responses have been effectively utilized. At the same time, along the way, the Government has flexibly relaxed the requirements of Government-funded programmes and projects to more effectively and efficiently implement them based on a proposal from local branches of employment, industry-related ministries (i.e. MHLW and METI), and the local branch offices of the respective ministries. Flexible Government responses are required to effectively complete the recovery in response to massive-scale damage.
- The emergency job creation programme proved to be effective in providing those affected with: (i) the means for living; (ii) capacity development for new job opportunities; and (iii) increased self-esteem among disaster-affected people. In the aftermath of a mega-disaster, victims tend to be deeply depressed about the losses of family and friends, physical assets, and workplaces. Under these conditions, it is important for them to get involved in the recovery and reconstruction process to realize their stable living conditions and to gain something to live for.
- Ensuring a social safety net for disaster-affected people who are not entitled to employment insurance by other measures is important in ensuring the equity of public service in disaster response. For instance, fishery workers and self-employed workers who are not eligible to participate in the system were provided with a means of living through the emergency employment creation programmes, the SME Group Subsidy, and the Temporary Factories and Stores Project. Furthermore, other programmes such as the Support System for Job Seekers attempted to provide jobseekers with training to obtain new skills for different careers. The diverse measures for beneficiaries categorized under differing employment statuses helped not with earning incomes, but with being able to contribute to recovery and reconstruction in disaster-affected areas.

- In spite of the effectiveness of the employment insurance as a safeguard in Japan, prolonged assistance may have prevented the jobless from getting permanent jobs. If available jobs exceed jobseekers (applicants), it may have been appropriate to terminate assistance to give the jobless more incentive to work.
- As recovery and reconstruction proceeds, emergency job creation programmes from either public or private funds sometimes crowded out permanent job creation when labour demand exceeded labour supply. In some cases, these programmes may have had adverse effects on local industry and ultimately on reconstruction. Emergency job creation was designed primarily to provide a smooth transition to long-term jobs to discourage affected people from moving to urban areas. In contrast, the effect could be reversed if the programme was not implemented in a timely manner.

7.1.3 Reconstruction

- The status of land titles in disaster-affected areas is one of the key factors in determining the speed of reconstruction processes in inundated areas. In the case of Kesennuma City, where land titles belong to public and private landowners, the land titles of private owners were not transferred for several generations, resulting in a long negotiating process with many legal heirs for land expropriation to implement the land readjustment project. Simplifying administrative procedures is necessary to move forward with the reconstruction process at an early stage, especially in disaster-affected areas that will be the bases of industrial development.
- A speedy response to budgetary appropriations in industrial development is a key prerequisite to successful recovery and reconstruction in local economies and job creation schemes. One of the significant reasons for delayed industrial reconstruction stemmed from the delayed approval of Government supplementary budgets. For example, reconstruction, especially in the fishery sector – a key industry – in the industrial areas, was not fully undertaken in Kesennuma City for an entire year after the 2011 Earthquake owing to a budget deficiency for land elevation. The delay severely impacted industry recovery, causing relatively low recovery in industrial production and employment as compared with other disaster-affected areas.
- In the above context, the setting up of special zones for reconstruction, which aims at quickening the reconstruction process through prioritized budget allocations and deregulations, may be effective in industrial reconstruction and job creation. Furthermore, the zone is expected to play a role in inducing promising industry and ensuring permanent job creation. Industrial reconstruction in disaster-affected areas can prevent population outflows that cause the further deterioration of local economies. As a result, massive public investment in reconstruction would not be fully utilized to bring about expected benefits for the disaster-affected. To maximize the effect, setting up a special zone for reconstruction can be considered in the recovery stage.

- Past experiences of disaster response need to be effectively used for disaster prevention. For instance, in Japan, the case of Rishiri Island,¹⁶⁹ located in the northern part of Hokkaido, shows that recovery of infrastructure does not ensure long-term reconstruction without sustainable industrial development. Similar to the coastal areas in the Tohoku region, prior to the earthquake, the key industry on Rishiri Island was its primary industry, and the ageing population was a serious issue for local governance. The policy for recovery and reconstruction in response to the disaster was based on the principle of recovery prior to the earthquake, not on promoting new industrial development. In the fishery sector, local fishery cooperatives, which hold the fishing rights, did not allow new entrants to be engaged in fishing (Ito, 2013). This exclusive attitude resulted in their integration with other cooperatives, owing to the decrease in fishery workers caused by ageing and a lack of new entrants. Thus, population in terms of trends in age, employment composition and movement is a key factor in reconstruction. Accordingly, structural changes in industry are required to succeed in reconstruction.

7.1.4 New modalities

- The experience of the 2011 Earthquake has proven the effectiveness of PPP and PFI. In particular, in the case of a mega-disaster, collaborative efforts through PPP or PFI are effective in promoting reconstruction by complementing strengths and weaknesses. In a society in which the private sector is actively engaged in formal economic activity, the private sector can take on part of the public role by contract to be more efficient and effective. For example, social enterprise exclusively for reconstruction, funded by local Government and the private sector, functions as think tanks, supplementing the roles and responsibilities of local Government for reconstruction. This can be applicable especially to disaster-affected areas where municipal Governments are devastated by the disaster, and a consequent lack of officials who can handle reconstruction-related work.
- Civil funding (or crowd-funding) through social media has been an innovative approach in linking disaster-affected enterprises that want to restart business operations with individual investors. In contrast to public funds or donations, the PFI funds feature high accountability and transparency between donors and recipients while developing closer ties. The funds can be used to supplement public funds and other financial resources because the government requires that the cost of subsidies to restart business operations be shared with recipients. In addition, the funds are socially important because they may function to fill in the gap between those who succeed in receiving public funds or financial assistance and those who do not. When a mega-disaster occurs in a country with limited financial capacity in its government and financial institutions, but social media prevails among the nationals, civil funds are an alternative measure for affected enterprises to acquire financial capital to restart business operations after a disaster.
- The experiences of responses to mega-disasters in Japan over the past 20 years clearly show the evolution of the way civil society and the private sector have been involved in disaster response, transforming the principles from voluntarism to corporate social responsibility (CSR) progressively to creating shared value (CSV). Some companies have centred CSV as

¹⁶⁹ The earthquake occurred in 1993, and the completion of recovery was officially declared in 1998.

a core corporate philosophy of being actively involved in resolving social issues for coexistence and co-prosperity with strong leadership. The effectiveness of this approach needs to be carefully evaluated in social, economic, and financial terms. Nonetheless, the new business model and mechanism can be applied as a private sector disaster response.

- Collaborations between public-private-academia have been innovative, though it is still too early to assess the effectiveness of these efforts. In particular, the fishery industry has needed to be upgraded and structurally changed because the industry has been in decline in recent decades.

7.1.5 Private efforts

- The experience of the private sector's response to the 2011 Earthquake shows how disaster prevention measures are crucial to quickly and smoothly recovering business operations. The effectiveness of the BCP following the 2011 Earthquake has been proven by various surveys as mentioned in the previous chapters. The continuity of business operation is a key factor in maintaining a market and recovering production volume, sales, and employment because it is difficult to recover them later on.
- In areas with low to medium impact, early recovery of business operations in key industries leads to economic recovery, which allows the government to reduce public expenditure on employment (i.e. employment insurance, job creation related projects, and job training) and reallocate to severely disaster-affected areas. In the case of the recovery process after the 2011 Earthquake, manufacturing – especially the automobile and electronics industries located inland in Iwate – recovered production levels within a few months after the earthquake, whereas the fishery industry in the coastal areas has not yet fully recovered even after two and a half years after the 2011 Earthquake. The recovery in the inland areas became a driving force for recovery of industrial production of the region. In contrast, the delay of recovery in key industries in the disaster-affected areas may trigger a nationwide economic crisis, leading to further prolonging of the recovery, because the manufacturing sector in Japan consists of a series of supply chains in production processes.
- In any reconstruction process, ownership of disaster-affected people and cultural sensitivity must be respected. There is a need for facilitators who can help draw-out issues from the residents, and help them address those issues and reach a consensus among stakeholders. Unless the disaster-affected people are convinced and committed to the direction of a reconstruction plan that covers employment and industry, it is quite likely that it will end up accelerating the outflows of population from the disaster-affected areas.

7.1.6 Socially vulnerable groups

- The experiences of recent mega-earthquakes in Japan have shown that socially vulnerable groups such as the elderly, people with disabilities, and women have been more negatively affected by the disasters. Moreover, the socio-economic gaps have widened because of existing distorted social structure and orders. In post-disaster society, socially vulnerable

groups tend to be unable to voice their needs. As a result, such groups are increasingly excluded from the reconstruction process.

7.2 Recommendations

Japan's recovery from the 2011 Earthquake is likely to continue for years to come. So too will other lessons from Japan's recovery and reconstruction efforts. This section provides recommendations generated from the lessons from Japan's reconstruction process so far.

7.2.1 Building a response mechanism

- Placing a labour ministry or agency in charge of the employment strategy allowed it to champion a job-based recovery, with important inputs from the intra-sectoral committee established to allow line ministries' participation.
- Social safety mechanisms such as employment insurance and employment adjustment subsidies were proven to be effective and useful to secure jobs for disaster-affected workers in Japan. Developing a comprehensive social security system leads to building a disaster resilient society.

7.2.2 Designing a response strategy

- Detailed data and information on damage, economic structure and demographic trends needs to be quickly collected and analysed to formulate effective measures. It is indispensable to collect data disaggregated by gender and to access data on people with disabilities so that interventions can attend to the specific needs of various social groups.
- Understanding an area's socio-economic conditions prior to a disaster is an important determinant of what kind of policies should be pursued post-disaster. If the area has suffered from an economic decline pre-disaster, as it was the case in some areas in Japan, recovery policies may need to explore ways to revitalize local economy.
- The overall framework and concrete measures on employment need to be formulated in phases to meet the changing needs of disaster-affected people. A phased approach is recommended so that employment recovery strategies can attend different needs emerging at response, recovery and reconstruction phases in post-disaster society.
- The timing of terminating public assistance schemes, such as unemployment insurance, needs to be properly assessed to avoid discouraging the jobless from looking for jobs.
- People affected by the disaster need easy access to their workplace if they are to resume their jobs. This consideration needs to be factored into recovery and reconstruction plans.
- It is important to address the needs of self-employed and part-time workers that are not captured under formal employment schemes.

- Measures for disaster-affected people with disabilities need to be integrated into the overall recovery framework in order to avoid further distancing them from the mainstream society.
- In disaster-affected areas where local key industry consists of a series of supply chains in different industries, it is necessary to formulate a comprehensive reconstruction plan at the planning stage and to effectively implement this plan with a far-sighted vision to complete the recovery process from the first to the last supply chains of industry, and to bring about synergic effects among those industries. In other words, if one industry is not operational, the positive effects on all of the other industries within the chain will be minimized. For example, the fishery sector is composed of a series of supply chains (i.e. fishery, marine product processing, transportation, packing, sales and retail, service, tourism). Accordingly, assistance includes: (i) provision of fishing boats, equipment, and facilities; (ii) rehabilitation of infrastructure (i.e. roads, ports, land elevation); (iii) establishment of markets with refrigerators and freezers; and (iv) restarting business operations. Because each industry contributes to the whole industry that consists of a series of supply chains, the delay of recovery in one industry would have an effect on the whole process of recovery in production and employment.

7.2.3 Employment measures

- Wage setting in emergency job creation programmes is a key determinant for labour mobility. If wages for unskilled manual labour funded by the government or donors exceed prevailing market wages, wage inflation and labour shortages in public employment may occur as a side effect. As a consequence, public or donor-driven intervention in the labour market may lead to the delay of reconstruction. Thus, local governments and donors engaged in this type of programme have to be careful in determining wages, and understand the side effects. It is recommended that developing countries establish wages that are lower than prevailing rates so that the most vulnerable people can acquire jobs.

7.2.4 Public-private partnership

- In the case where disaster-affected areas have a serious constraint in the shortage of human resources, especially during the reconstruction process, it is advisable to set up a mechanism and system to dispatch experts from both public and private sectors in the country. In the case of Japan, the Government launched the human resource dispatch system to meet demand in the disaster-affected areas. Although the effectiveness of the system needs to be examined through periodic evaluations and modifications if necessary, the system is expected to take on a significant role in overcoming the difficulties that the disaster-affected areas have confronted through 'Japan as One' Work Project efforts.

7.2.5 Rebuilding businesses

- Quick information dissemination on policy direction, overall framework and measures by the government is a key factor for employers or self-employed to determine how best to restart their business operations.

- A speedy response to budgetary appropriations in industrial development is vital to successful reconstruction of the local economy and job creation.
- Early recovery of business operation in key industries in neighbouring but not severely disaster-affected areas can become a driving force for recovering the local economy.
- Rapid disclosure of information by the government on the types of support, schedule for implementation and modalities will allow businesses to quickly decide whether or not to restart or discontinue operations in disaster-affected areas.
- Helping business resume is one of the most effective contributions to economic recovery. This underscores the importance of BCP, disaster insurance and strategic sectoral support by government, as well as support for enterprise development, especially for micro-enterprises.
- The experience of the private sector's response to the 2011 Earthquake shows that disaster prevention measures are critical to recover business operations quickly and smoothly. Thus it is advisable that private companies introduce BCP.

7.2.6 Social vulnerability and inclusiveness

- The experiences of recent mega-earthquakes in Japan have shown that socially vulnerable groups such as the elderly, people with disabilities, and women have been more negatively affected by the disasters. Moreover, the socio-economic gaps have widened because of existing distorted social structure and orders. In post-disaster society, socially vulnerable groups tend to be unable to voice their needs. As a result, such groups are increasingly excluded from the reconstruction process.
- The concept of social inclusion¹⁷⁰ needs to be applied in all measures on employment in the reconstruction process. With respect to employment measures in a disaster response, measures for all disaster-affected people including people with disabilities, the elderly and women, need to be integrated into the overall framework, accompanied with budget allocation from the planning stage, rather than segregated from the mainstream framework under special programmes and budget lines. For this purpose, it is necessary to collect and analyze detailed data using different variables such as gender, age, disability, type of employment (regular or non-regular), sectors, and areas to visualize and identify particular vulnerable people in a disaster. Furthermore, efforts need to be made to ensure decent work¹⁷¹ in which everyone can work not just earning income but finding contentment in light of their special needs and circumstances.

¹⁷⁰ The goal of social integration is to create “a more stable, safe and just society for all”, in which every individual, each with rights and responsibilities, has an active role to play. Such an inclusive society must be based on the principles of embracing – not coercing or forcing – diversity and using participatory processes that involve all stakeholders in the decision-making that affects their lives (UN DESA).

¹⁷¹ According to the International Labour Organization (ILO), decent work involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.

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Annexes

Annex 1: List of major employment measures by the Japanese Government

	Name of Measure			Name of Project			Japan as One Work Project		Target Area	Competent Authority	Implementation Organization	Period
	Japanese	Roman Alphabet	English	Japanese	Roman Alphabet	English	Phase	Sector				
1	避難所へのきめ細かな出張相談		On-site counselling service at the Evacuation Site	-	-	-	1	Setting-Up of a System to Match the Disaster Victims and Jobs	Affected Prefectures	Ministry of Health, Labour and Welfare	Public Employment Security Office	March 2011 – Present
2	「日本はひとつ」ハローワーク特別相談窓口の設置		Establishment of Special Desk at Hello Works	-	-	-	1	Setting-Up of a System to Match the Disaster Victims and Jobs	Whole Country	Ministry of Health, Labour and Welfare	Public Employment Security Office	March 2011 – Present
3	職業訓練の機動的拡充・実施		Expansion and Implementation of Occupational Training	求職者支援制度の拡充	Kyusyokusya Shien Seido no Kakujū	Expansion of Support for Jobseekers	1	Setting-Up of a System to Match the Disaster Victims and Jobs	Prefectures where displaced workers devastated by The Great East Japan Earthquake live	Ministry of Health, Labour and Welfare	Employment Security Bureau, Human Resources Development Bureau	
4	雇用調整助成金の拡充		Expansion of Employment Adjustment Subsidies	-	-	-	1,2	Maintaining and Securing the Employment of Disaster Victims	Aomori, Iwate, Miyagi, Fukushima, Ibaraki	Ministry of Health, Labour and Welfare	Public Employment Security Office	March – June 2011
5	震災被害者への失業手当の特例支給		Special Provision of Employment Insurance Benefit	-	-	-	1	Maintaining and Securing the Employment of Disaster Victims	Whole Country	Ministry of Health, Labour and Welfare	Public Employment Security Office	March 2011 – Present
6	被災した中小企業者の事業活動の維持・早期再開支援		Support for Maintaining and Resumption of Business of Affected Small and Medium Enterprises	-	-	-	1	Maintaining and Securing the Employment of Disaster Victims	Whole Country	Ministry of Land, Infrastructure, Transport	-	March 2011 – Present
7	農地・農業用施設、農業生産関連施設等の復旧支援		Support for Recovery of Agricultural Lands and Facilities, and Agriculture-Relevant Production Facilities	農地・農業用施設災害復旧等事業（公共）	Nouchi Nougyou Shisetsu Saigai Fukkyuu tou Jigyō	Project on Reconstruction of Facilities for Agricultural Land and Agriculture	2	Steady Creation of Employment through Reconstruction Projects	Whole Country	Ministry of Agriculture, Forestry and Fishery	National Government, Prefectures, Municipalities, Land Improvement District etc.	April 2011 – Present
8	学校施設等の災害復旧の推進		Promotion of Reconstruction of School Facilities	公立学校施設災害復旧事業	Kouritsu Gakkou Shisetsu Saigai Fukkyuu Jigyō	Project on Reconstruction of Facilities at Public Schools	2	Steady Creation of Employment through Reconstruction Projects	Whole Country	Ministry of Education, Culture, Sports, Science and Technology	Establisher of Educational Institution, Prefectures Board of Education	April 2011 – Present
9	災害廃棄物（がれき等）の処理の推進		Promotion of Treatment of Disaster Wastes	東日本大震災に係る災害廃棄物処理事業	Hisashi Nihon Daishinsai ni kakaru Saigai Haikibutsu Syori Jigyō	Project on Disposal of Disaster Waste caused by the Great East Japan Earthquake	2	Steady Creation of Employment through Reconstruction Projects	Affected Prefectures	Ministry of Environment	Municipalities	April 2011 – Present
10	中小企業向け金融支援の継続・拡充		Continuation and Expansion of Financial Support for Small and Medium Enterprises	東日本大震災復興特別貸付	Higashi Nihon Daishinsai Fukkō Tokubetsu Kashitsuke	Special Loan for Post-Great East Japan Earthquake Reconstruction	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Iwate, Miyagi, Fukushima. Part of Aomori, Ibaraki, Tochigi, Saitama, Chiba, Niigata, Nagano.	Ministry of Land, Infrastructure, Transport and Tourism	Japan Finance Corporation Shoko Chukin Bank	May 2011 – Present
11	中小企業組合等共同施設等災害復旧事業の対象規模拡大		Expansion of the Project on Reconstruction of Common Facilities for Small and Medium Enterprises	中小企業組合等共同施設等災害復旧事業（グループ補助金）	Chusyo Kigyoutou Kyoudou Shisetsu tou Saigai Fukkyū Jigyō "Group Hojokin"	Project on Reconstruction of Common Facilities for Small and Medium Enterprises (Group Subsidy)	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Affected Prefectures	Ministry of Land, Infrastructure, Transport and Tourism	Municipalities, Central Federation of Societies of Commerce and Industry	November 2011 – Present
12	仮設工場・仮設店舗等の整備		Establishment of Temporary Factory and Shops	仮設施設整備事業	Kasetsu Shisetsu Seibi Jigyō	Project on Establishment of Temporary Facilities	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Tochigi, Chiba, Niigata, Nagano.	SMEA (Ministry of Land, Infrastructure, Transport	SME Support, JAPAN	May 2011 – Present

Target Group and Persons	Content	Budget Amount and its Source	Reference
Job seekers evacuated to the disaster evacuation sites	The personnel of the Public Employment Security Offices visit the evacuation sites to deliver to the affected people on-site counselling services on job seeking and to provide information on countermeasures of various institutions.	Amount: Unknown Financial Source: Existing budgets	Ministry of Health, Labour and Welfare <Progress of Efforts in "Japan as One" Work Project> http://www.MinistryofHealth,LabourandWelfare.go.jp/stf/houdou/2r98520000024syd-
Individuals and business owners affected by the disaster	The "Japan as One" Public Employment Security Office, Special Desk was established to the Public Employment Security Offices nationwide, and it accommodates a wide variety of consultation, such as job hunting and application to various grants, for the affected people and business owners.	Amount: Unknown Financial Source: Existing budgets	Ministry of Health, Labour and Welfare <Progress of Efforts in "Japan as One" Work Project> http://www.MinistryofHealth,LabourandWelfare.go.jp/stf/houdou/2r98520000024syd-
Devastated employees	<Expansion of Jobseeker Support System> -For those who are not eligible to receive the Unemployment benefit of the Employment Insurance System, 100 thousand JPY is provided as subsidy to take occupational training courses under certain conditions. - For the organization which provide occupational training course, bounties are given depending on the following courses; i) Basic course: 60 thousand JPY / month ii) Practical course: 50 thousand JPY / month (* When the trainees get a job, 10-20 thousand JPY per person is provided additionally. <Example of provided course> Training in Operation of Construction Machinery <Achievement of the courses> Number of trainee of occupational courses opened in FY 2012: 11,997 persons Number of trainee of special training courses opened in FY 2012: 791 persons	Amount: Unknown Financial Source: Existing budgets	http://www.mhlw.go.jp/wp/yosan/yosan/11hosei/di/kanrenziguou_21.pdf http://www.mhlw.go.jp/jigyo.shiwake/gyousei_review_sheet/2013/h24.pdf/578.pdf http://www.mhlw.go.jp/stf/houdou/2r98520000017z-yd-img/2r98520000019ly7.pdf [Trainig contents] http://www.kikin.javada.or.jp/pdf/oshirase20110620_1.pdf http://www.kikin.javada.or.jp/pdf/oshirase20110620_2.pdf
Business owners of offices located in the five prefectures (i.e. Aomori, Iwate, Miyagi, Fukushima, and Ibaraki) designated in the Disaster Relief Act	[Phase 1] *For Employment Adjustment Subsidies, exceptional measures, which had been applied only to Aomori, Iwate, Miyagi, Fukushima, and Ibaraki as specified in the Disaster Relief Act, are expanded to the other Act-designating areas in need *New exceptional measures are established for the business offices located outside the affected area which had a strong business relationship with the offices in the affected areas, and for the business office who suffered from scheduled blackouts *For business offices which lost documents due to the impact of the disaster, the procedures to apply for the Employment Adjustment Subsidies will be simplified as much as possible [Phase 2] In addition to the exceptional measures taken in the Phase 1, new exceptional measures are implemented if the business owners in the affected area or those in other areas who have a certain business relationship started to suspended the business operation within the specified period.	[Phase 1] Amount: Unknown Financial Source: Existing budgets [Phase 2] 726.9 billion JPY (=8.77 billion USD) 1st Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare Outline of Related Measures taken in the "Japan as One" Work Project, Phase 1 http://www.MinistryofHealth,LabourandWelfare.go.jp/stf/houdou/2r9852000001usoq- img/2r9852000001ustd.pdf
Affected people related to the business offices located in the Disaster Relief Act-applied areas	*As an exception measure, unemployment benefit are provided to; i) those who suspended their business operations or left their jobs temporarily due to the impact of the disaster, and thus cannot receive "Allowance for Absence from Work", and ii) business offices located in the areas for which evacuation or sheltering order (within 30 km from the Fukushima Daiichi Plant) was announced.	Amount: Unknown Financial Source: Existing budgets	Ministry of Health, Labour and Welfare <Progress of Efforts in "Japan as One" Work Project> http://www.mhlw.go.jp/stf/houdou/2r98520000024syd-att/2r98520000024szu.pdf
Business owners whose capitals, such as offices and factories, were affected directly or indirectly by the Great East Japan Earthquake	Utilizing the existing financing support system for SMEs, maintaining and early resumption of business operation of the affected SMEs are supported.	Amount: Unknown Financial Source: Existing budgets	Ministry of Health, Labour and Welfare Outline of Related Measures taken in the "Japan as One" Work Project, Phase 1 http://www.mhlw.go.jp/stf/houdou/2r9852000001usoq- img/2r9852000001ustd.pdf
Agricultural lands and facilities affected by an extraordinary natural phenomenon with the reconstruction cost of more than 400 thousand JPY	1. Projects based on the "Act for the Special Measures of the Land Improvement Act to deal with the Great East Japan Earthquake" Smooth implementation of zoning as well as emergent reconstruction projects and salt removal are promoted aiming at early resumption of farming. 2. Disaster Reconstruction Projects and other measures (1) Disaster Reconstruction Projects (Agricultural land and facilities) It promotes the reconstruction of the agricultural lands and facilities affected by the Great East Japan Earthquake by granting the reconstruction projects for i) agricultural facilities, ii) agricultural lands, iii) coastal preservation facilities, and iv) facilities for water resources development. (2) Disaster-relevant projects for agricultural lands and facilities To prevent the severe damage by disasters in the future, the following projects are implemented such as the rebuilding and reinforcement projects of i) agricultural facilities and ii) coastal preservation facilities, and iii) the projects for recovery of facilities for experiencing lives in rural areas. 3. Projects for Improvement of Agriculture and Rural Areas	68.9 billion JPY (=831 million USD) 1st Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of the "Japan as One" Work Project, Phase 2> http://www.mhlw.go.jp/stf/houdou/2r9852000001amjd-img/2r9852000001amo0.pdf
[National Subsidy] - Schools which suffered from the disasters specified in the "Act on National Treasury's Sharing of Expenses for Recovery of Public School Facilities Damaged by Disaster" - The target covers the facilities of public elementary school, junior high school, high school, secondary education schools, universities, technical colleges, special support education schools, kindergartens, shared facilities of these schools [Subsidy]	For the reconstruction works which require less time such as construction of emergent temporary school buildings, restoration of the ceilings and grounds that undergo liquefaction, supplementary budget is used to promote prompt reconstruction. [Subsidy rate] 67% of expenses for reconstruction of facilities of public schools (Exception: 80% for isolated island, 50% for ash removal)	147.9 billion JPY (1.78 billion USD) 1st, 2nd and 3rd Supplementary Budget to FY 2011 14.7 billion JPY (177 million USD) Special Account for Reconstruction from the Great East Japan Earthquake to FY 2012 21.2 billion JPY (225 million USD) Special Account for Reconstruction from the Great East Japan Earthquake to FY 2013	Ministry of Health, Labour and Welfare <Outline of the "Japan as One" Work Project, Phase 2> http://www.mhlw.go.jp/stf/houdou/2r9852000001amjd-img/2r9852000001amo0.pdf
Projects on the treatment of disaster waste implemented by the municipalities affected by the Great East Japan Earthquake	[National Subsidy Rate] Rets varies according to the proportion of expenses for disaster waste treatment to the standard tax revenue of the municipality; i) When the proportion is less than 10%, 50% of the expenses for disaster waste treatment is granted ii) When the proportion is between 10% and 20%, 80% of the expenses for disaster waste treatment is granted iii) When the proportion succeeds 20%, expenses for disaster waste treatment is granted by its 90% [Local Financial Measures] The whole amount of burden charge of local government is raised by the bond for disaster countermeasures, and the local allocation tax is appropriated for the 100% of redemption money for principal and interest	351.9 billion JPY (=4.25 billion USD) 1st Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of the "Japan as One" Work Project, Phase 2> http://www.mhlw.go.jp/stf/houdou/2r9852000001amjd-img/2r9852000001amo0.pdf
i) Direct Victim - Those suffered directly from earthquake and Tsunami among others - Those who used to own an office in the caution zone, planned evacuation zone and evacuation prepared zone ii) Indirect Victims - Those heavily dependent upon the business activities of the direct victims iii) Others - Those whose business is deteriorated because of the disaster In all the cases, the eligibility is restricted to those who run business in the office located in the special	For the small and medium enterprises which suffered directly from the Great East Japan Earthquake, and/or whose businesses are deteriorated due to groundless rumours, loans of 720 million JPY at maximum and interest rate cut by 1.4 % at most are implemented.	217.5 billion JPY including 152.8 billion JPY allocated to the Ministry of Land, Infrastructure, Transport and Tourism (=2.62 billion USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the "Japan as One" Work Project, Phase 3> http://www.mhlw.go.jp/stf/houdou/2r9852000001sg0z-att/2r9852000001sg5o.pdf
[Target Group] Group composed of Small and Medium Enterprises etc. [Target Facility] Warehouses, production facilities, processing facilities, marketing facilities, inspection facilities, joint workplace, raw material yard, and other associated facilities 1) Devastated Small and Medium Enterprises 2) Devastated agriculture, forestry and fishing workers 3) Organizations	When the prefecture approves the reconstruction business plan of the SMEs in the affected areas, the scale of projects on recovery of the facilities and equipment necessary for the plan are widened if there is strong needs in the area. The applicants should be categorized under the following 7 categories: i) Supply chain type; ii) Great impact on economy and employment type; iii) locally important aggregate type; iv) fishery and food processing type, and v) shopping street type.	124.9 billion JPY (=1.51 billion USD) Reserve Fund in 2nd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the "Japan as One" Work Project, Phase 3> http://www.mhlw.go.jp/stf/houdou/2r9852000001sg0z-att/2r9852000001sg5o.pdf
	Based on the requests by municipalities, SME Support, JAPAN establishes impromptu facilities such as shops, offices, and plants and rents them to business operators through municipalities.	Amount: Unknown Financial Source: Unknown	SMRJ <Guidebook of Project on Establishment of Temporary Facilities> http://www.smrj.go.jp/kikou/earthquake2011/dbps_data/material/earthquake2011/pdf/kasetu_guideboo

13	漁業・養殖業と水産加工・流通業が一体となった復興の推進		Promotion of Reconstruction of Fishery and Aquaculture Integrated with Fishery Processing Industry and Fishery Marketing	漁業・養殖復興支援事業	Gyogyo Yosyoku Fukkou Shien Jigyo	Project on Support for Fishery and Aquaculture	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Country	Ministry of Agriculture, Forestry and Fishery	Implementer of Project (Fishery Cooperatives etc.)	November 2011 – Present
14	雇用復興推進事業の実施		Implementation of Project on Promotion of Employment Recovery	事業復興型雇用創出事業	Jigyo Fukkougata Koyou Sousyutu Jigyo	Business Reconstruction Type Employment Creation Project	3	Integrated Support for Industrial Development and Employment	Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Nagano, Niigata, Tochigi, Chiba	Ministry of Health, Labour and Welfare	–	Businesses which started by the end of FY2013 (Subsidy lasts until the end of FY 2015)
15				復興支援型地域社会雇用創出事業	Fukkou Shien Gata Chiki Syakai Koyou Souzou Jigyou	Project for Job Creation in Community (Reconstruction Support Type)	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Affected Area	Cabinet Office	Mitsubishi Research Institute	March 2010 – March 2013
16	新卒者等支援の充実		Improvement of Support for New Graduates	新卒者就職実現プロジェクト事業の被災者特例の延長等による就職機会の拡充	Shinsotsusya Syusyoku Jitugen Project no Hisaisya Tokurei no Entyoutou ni yoru Syusyoku Kikai no Kakujū	Expansion of Job Opportunity through Extension of New Graduate Support Project	3	Training of Personnel who Contribute to Reconstruction and Support for Placing Disaster Victims in Stable Jobs	Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Nagano, Niigata, Tochigi, Chiba	Ministry of Health, Labour and Welfare	Public Employment Security Office	– March 2013
17	漁業・養殖業と水産加工・流通業が一体となった復興の推進		Promotion of Reconstruction of Fishery and Aquaculture Integrated with Fishery Processing Industry and Fishery Marketing	漁業・養殖復興支援事業	Gyogyo Yosyoku Fukkou Shien Jigyo	Project on Support for Fishery and Aquaculture	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Country	Ministry of Agriculture, Forestry and Fishery	Implementer of Project (Fishery Cooperatives etc.)	November 2011 – Present
18	中小企業向け金融支援の継続・拡充		Continuation and Expansion of Financial Support for Small and Medium Enterprises	震災対応型資本性劣後ローン	Shinsai Taiougata Shihonsei Retsugo Loan	Capital Subordinated Loan for SMEs Program	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Iwate, Miyagi, Fukushima. Part of Aomori, Ibaraki, Tochigi, Saitama, Chiba, Niigata, Nagano.	Ministry of Land, Infrastructure, Transport and Tourism	Japan Finance Corporation	December 2011 – Present
19	雇用復興推進事業の実施		Implementation of Employment Recovery Promotion Project	生涯現役・全員参加・世代継承型雇用創出事業	Syougai Geneki Zenin Sanka Sedai Keisyougata Koyou Sousyutu Jigyo	Employment Creation Project Characterized by Lifelong Commitment to Work, Employee Involvement, and Generational Transfer	3	Integrated Support for Industrial Development and Employment	Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Nagano, Niigata, Tochigi, Chiba	Ministry of Health, Labour and Welfare	Private Companies and NPOs consigned by Prefectures and Municipalities	Businesses which started by the end of FY2012 (Subsidy lasts until the end of FY 2014)
20	中小企業向け金融支援の継続・拡充		Continuation and Expansion of Financial Support for Small and Medium Enterprises	東日本大震災復興緊急保証	Higashi Nihon Daishinsai Fukkou Kinkyu Hosyou	Emergency Guarantee for Post-Great East Japan Earthquake Reconstruction	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Iwate, Miyagi, Fukushima. Part of Aomori, Ibaraki, Tochigi, Saitama, Chiba, Niigata, Nagano.	Ministry of Land, Infrastructure, Transport and Tourism	Japan Finance Corporation National Federation of Credit Guarantee Corporations	May 2011 – Present
21	災害復旧・復興等インフラ整備の推進等		Promotion of Recovery and Reconstruction of Infrastructures	水道施設災害復旧費補助	Suidou Shiestu Saigai Fukkyuho Hojo	Reconstruction of Water Supply Facilities	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Affected Prefectures	Ministry of Health, Labour and Welfare	–	March 2011 – Present
22	住宅エコポイント制度による住宅の省エネ化促進等		Promotion of Saving Energy Houses by "Ecopoint for Houses" system	住宅エコポイントの再開	Jutaku Ecopoint no Saikai	Resumption of Ecopoint for Houses	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	i) Specified Disaster Areas in Iwate, Miyagi, Fukushima, Aomori, Ibaraki, Tochigi, Saitama, Chiba, Niigata, Nagano. ii) Other Areas * Provisions of the Ecopoint are different between	Ministry of Land, Infrastructure, Transport and Tourism, Ministry of Environment	–	[New Construction of Eco House] Construction which started between 21 October 2011 and 31 October 2012 [Eco Reform] Construction which started between 21 November 2011 and 31 October 2012
23	放射性物質に汚染された土壌等の除染の実施		Decontamination of Soil contaminated with Radioactive Substances	放射性物質汚染廃棄物処理事業	Housyasei Busshitsusen Haikibutsu Syori Jigyō	Project on Treatment of Radioactive Materials	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Country	Ministry of Environment	–	April 2011 – Present
24	東日本大震災復興交付金 基幹事業		Core Projects using the Great East Japan Earthquake Subsidy	介護基盤復興まちづくり整備事業	Kaigo Kiban Fukkou Machidukuri Seibi Jigyō	Care Basis Community Development Project	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Iwate, Miyagi, Fukushima	Ministry of Health, Labour and Welfare	Municipalities Social Welfare Corporation	November 2011 – March 2013

"Fishermen whose profitability are deteriorated due to the fishing boat and fishery-related facilities affected by the disaster" or "Fishermen who suffered the equivalent damage" who are recognized as truly needing the support for restructuring due to the impact of the disaster.	[Fishery Reconstruction Support Project] Based on the Fishery Reconstruction Plan, necessary expenses such as operational cost and fuel expenses are granted to establish a stable fishery production system by introducing new operation forms. [Grant Rate] 90%, 67%, or 50% of the expenses that cannot be covered by the landing cost. The rate varies according to the content of projects. [Period] 3 years at maximum	23.8 billion JPY (= 287 million USD) 3rd Supplementary Budget to FY2011 48.2 billion JPY (= 582 million USD) Initial Budget to FY2012	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3> •Fishing Industry/Communities Promotion Organization http://www.jf-net.ne.jp/fpo/gyoumu/hojyogigo/08hukkou/kyotu_file/20111128_1gyogyoku_tebiki.pdf
[Target Office] Offices located in the five prefectures (i.e. Aomori, Iwate, Miyagi, Fukushima, and Ibaraki) designated in the Disaster Relief Act, and fall under either condition below. i) Granted by national government or municipalities, or ii) Recognized by municipalities as "Employment Support Integrated with Industrial Policy" [Target People] Job seekers affected by the Great East Japan Earthquake (* Not only school graduates but also others)	Under the conditions below, municipalities set the grant content with the reference to the standard shown by the national government [Condition] - 100 million JPY is the maximum grant amount for one business entity - Grant amount decreases stage by stage - In case of ii), grant amount for the re-employed decreases [Standard] - 2.25 million JPY is the maximum grant amount for one person for 3 years (1st year: 1.2 million JPY, 2nd year: 700 thousand JPY, 3rd year: 350 thousand JPY) - 1.1 million JPY is the maximum grant amount for part-time workers for 3 years	151 billion JPY (=1.82 billion USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare "Projects using the fund on Employment Creation" http://www.mhlw.go.jp/bunya/koyou/chiiki-koyou3/
NPO 3rd sector Private company in social field	12 organizations selected by Selection and Evaluation Committee, Cabinet Office operate one or two projects below. 1) Social Enterprise Incubation Project a. To support the incubation of social enterprise in affected areas b. Target number of social entrepreneur : 600 2) Internship Project for Development of Human Resources for Social Enterprise a. To support the development of human resources who take a role in Social Enterprise in affected areas b. Target number of human resources : 2000	Amount: 3.2 billion JPY 3rd Supplementary Budget to FY2011	http://www5.cao.go.jp/keizai1/koyou/chiiki/chiiki.html http://www5.cao.go.jp/keizai1/koyou/chiiki/pdf/pam.pdf http://fukkou.chiikisyakai-koyou.jp/ http://www5.cao.go.jp/keizai1/koyou/chiiki/pdf/jiss-hiyouyou.pdf http://www5.cao.go.jp/keizai1/koyou/chiiki/pdf/kou-hiyouyou.pdf
[Expanded Grant for the graduates in the last three years] The graduates who graduate from university and the like after March 2010, and do not have stable work experience [Trial Employment Grant for the graduate in the last three years] The graduates who graduate from university, high school or junior high school and do not have stable work	[Expanded Grant for the graduates in the last three years] SMEs submit a "Disaster Special Offer" and employ the person qualified. -> If regular employment lasts for 6 months, 1.2 million JPY is granted * A maximum of 10 cases are acceptable per insurance-applied business office [Trial Employment Grant for the graduate in the last three years] SMEs submit a "Disaster Special Offer" and employ the person qualified. -> If regular employment lasts for 3 months, 600 thousand JPY is granted	23.5 billion JPY (=283.5 million USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3> http://www.mhlw.go.jp/stf/houdou/2r985200001sg0z-att/2r985200001sg5o.pdf
"Farmers or his/her successors who are recognized as truly needing the support for restructuring due to the impact of the disaster.	[Aquaculture Reconstruction Support Project] Based on the Aquaculture Reconstruction Plan, necessary expenses are granted to establish a stable fishery production system in which the fishermen aim to be independent within 5 years. [Grant Rate] 90% of the expenses that cannot be covered by the landing cost [Period] - 5 years at maximum - 3 times of production <Maximum amount of loan> 720 million JPY per company	56.6 billion JPY (=682.8 million USD) 3rd Supplementary Budget to FY2011 57.8 billion JPY (697.9 million USD) Initial Budget to FY2012	•Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3> •Fishing Industry/Communities Promotion Organization http://www.jf-net.ne.jp/fpo/gyoumu/hojyogigo/08hukkou/kyotu_file/20111128_3yosoku_tebiki.pdf
SMEs and the like who are eligible to the Special Loan for Post-Great East Japan Earthquake Reconstruction	<Loan Period> 10 years (lump-sum repayment) <Loan Interest Rate> Every year after loan, either 0.4% or 3.6% is applied according to the most recent financial results	3.9 billion JPY (=47.05 million USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3>
The unemployed who lost their jobs in the areas designated in the Disaster Relief Act or job seekers who used to live in those areas	Local governments commission private companies and/or NPOs to implement a project which can be a model for employment of the elderly, women and the handicapped people in terms of technical transfer from the elderly to the youths and active employment of women and the handicapped.	151 billion JPY including Business Reconstruction Type Employment Creation Project (=1.82 billion USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare "Projects using the fund on Employment Creation" http://www.mhlw.go.jp/bunya/koyou/chiiki-koyou3/
[Target Group] SMEs in financial difficulties due to the impact of the Great East Japan Earthquake i) Those who suffered directly or indirectly from the Great East Japan Earthquake in the specified disaster area designated in the "Act for special grants and financial assistance to deal with the Great East Japan Earthquake". ii) Those who used to own an office in the caution zone, planned evacuation zone and evacuation prepared zone iii) Those outside the specified disaster areas who suffered from the deterioration of business relationship with business owners in the specific disaster areas	In addition to the directly-affected SMEs, other indirectly-affected SMEs are also qualified for the loan in this emergency guarantee system. Furthermore, 100% of the loan amount is guaranteed by the National Federation of Credit Guarantee Corporations. There are three more types of credit guarantee systems: i) General Guarantee, ii) Safety Net Guarantee, and iii) Disaster-Related Guarantee. The General Guarantee covers all SMEs with the guarantee rate of 80%. The Safety Net Guarantee covers the SMEs whose business is declined with the guarantee rate of 100%. The Disaster-Related Guarantee, with the guarantee rate of 100%, covers the SMEs which suffered directly from the Great East Japan Earthquake and which used to own an office in the caution zone, planned evacuation zone and evacuation prepared zone. Combining ii), iii) and the Emergency guarantee, SMEs can borrow 160 million JPY without security, and 560 million JPY at most with some securities.	370.3 billion JPY including 30.1 billion JPY allocated to the Ministry of Land, Infrastructure, Transport and Tourism (=4.47 billion USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3>
i) Projects which reconstruct the waterworks facilities damaged by the Great East Japan Earthquake ii) Projects which reconstruct the water supply facilities that are integral with i) in terms of water pressure management iii) Contracted leakage survey on the pipeline of i)	Among the water supply facilities damaged severely by the Great East Japan Earthquake, expenses for disaster reconstruction projects in the water services managed by local governments are partly granted. i) Projects which reconstruct the waterworks facilities damaged by the Great East Japan Earthquake Grant Rate: 80 - 90% (*The previous rate of 50% was increased by a special legislation) ii) Projects which reconstruct the water supply facilities that are integral with i) in terms of water pressure management Grant Rate: 50% (*It was not covered by the former legislations) iii) Contracted leakage survey of pipeline of i) (Grant Rate: 50% (*It was not covered by the former legislations)) To promote saving energy houses, "Ecopoint for Houses" project, which ended in July 2011, resumes for one year.	46.3 billion JPY (558 million USD) Budget to FY 2011 20 billion JPY (241 million USD) Initial Budget to FY 2012 20 billion JPY (212 million USD) Initial Budget to FY 2013	http://www.mhlw.go.jp/jigyo/shiwake/gyousei_review_sheet/2012/h23.pdf/0973.pdf
[New Construction of Eco House] i) Houses correspondent to the "Top Runner Standard" stipulated in the Energy Saving Act ii) Wooden Houses satisfying the "Energy Saving Standard" (set in 1999) [Eco Reform] Renovation of windows, walls, ceilings, roofs, and floors.	<Ecopoint to be obtained> i) Specified Disaster Areas: 300,000 Ecopoints per house ii) Other Areas: 150,000 Ecopoints per house <What Ecopoint is exchanged for> - Reconstruction Support Product e.g.) Product of the affected areas, Coupon to be used in the affected areas, Donation to the affected areas - Eco Gift Certificate e.g.) Saving energy and environmentally friendly products, Donation to environmental conservation activities, Additional construction work to the Eco House or Eco Reform.	144.6 billion JPY (=1.74 billion USD) 3rd Supplementary Budget to FY2011	Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3> Secretariat of "Ecopoint for Houses" Project http://fukko-jutaku.eco-points.jp/common/file/leaflet01.pdf
Those who are qualified in planning competition and general competitive bidding (*For some cases, negotiated contract is employed)	In order to promote the treatment of disaster waste contaminated with radioactive substances, and thus decrease the impact on human health and living environment, the below projects are implemented based on the basic principles of the Act on Special Measures concerning the Handling of Pollution by Radioactive Materials; i) Treatment of designated waste ii) Treatment of waste in the specified areas for countermeasures iii) Monitoring of waste treatment facilities	45.1 billion JPY (= 544 million USD) 3rd Supplementary Budget to FY2011 *41.8 billion JPY (= 504 million USD) carry forward to Budget to FY2012, and 50 million JPY carry forward Budget to FY2013	http://www.env.go.jp/guide/budget/spv_eff/review_h25/sheets_h24f/sheets_p10.pdf
Specified municipalities in Iwate, Miyagi and Fukushima Prefectures	To establish a "Region Inclusive Support" which provides medical and nursing care services integrally and continuously, in addition to the improvement of small-scale special elderly nursing homes and group homes for elderly persons with dementia utilizing the existing fund, projects which act as a model for regional cooperation are implemented such as construction of stations for home-visit nursing care. The maximum grant amount is 30 million JPY per project.	2.85 billion JPY allocated to Ministry of Health, Labour and Welfare (=34.38 million USD) 600 million JPY allocated to Cabinet Office (=7.24 million USD) 3rd Supplementary Budget to FY2011	•Ministry of Health, Labour and Welfare <Outline of Related Measures taken in the 'Japan as One' Work Project, Phase 3> •Ministry of Health, Labour and Welfare http://www.mhlw.go.jp/wp/yosan/yosan/11hosei/dl/kanrenzinev07.pdf

25	被災者を雇用して農林水産業に関する研修等を実施する法人等に対する支援の推進		Promotion of Support for Companies which Employ the Affected People and Provide Trainings related to Agriculture, Forestry and Fisheries Industry	被災者向け農の雇用事業	Hisaisha muke Nou no Koyou Jigyo	Project on Employment of Disaster Victims in Agriculture	3	Job Creation through the Revival and Reconstruction of the Local Economy and Industries	Whole Country	Ministry of Agriculture, Forestry and Fishery	Agricultural Corporations etc.	December 2011 – Present
26	-	-	-	激甚に対処するための特別の財政援助等に関する法律（激甚災害法）	Gekijin Saigaihou	Extreme Disaster Act	-	-	Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Tochigi, Chiba, Niigata, Nagano	Cabinet Office	Authorities concerned	<Period for major measures> Article 8 (term of redemption) 3-6 years -> 4-7 years (*extended in Apr. 2011) Article 12 (application period) 11 Sep. 2011 -> 31 Mar. 2012 (*extended in Sep. 2011) -> 31 Mar. 2013 (*extended in Mar. 2012) -> 31 Mar. 2014 (*extended in Mar. 2013) Article 25 (application period) 10 Mar. 2012 -> 30 Sep. 2012
27				水産業共同利用施設復旧整備事業	Suisangyou Kyoudouriyoushitsu Fukkyuu Seibi Jigyou	Restoration and Maintenance Project for Shared Fishery Facilities	3		Devastated area (From Hokkaido to Chiba)	Ministry of Agriculture, Forestry and Fishery	Fishery Cooperatives, Marine Product Processing Cooperatives, Business Cooperatives, Prefectures	FY2012-FY2016
28				共同利用漁船等復旧支援対策事業	Kyoudouriyou Gyosentou Fukkyuu Shien Taisaku Jigyou	Restoration Support Project for Shared Usage Fishing Boat			Devastated area	Ministry of Agriculture, Forestry and Fishery	Fishery Cooperatives, Marine Product Processing Cooperatives, Business Cooperatives, Prefectures	FY2012-FY2016
29	-	-	-	特定地域中小企業特別資金	Tokubestu Chiiki Chushokigyouto Tokubetsu Shikin	Special Fund for SMEs in Specified Areas	-	-	Fukushima	Ministry of Land, Infrastructure, Transport and Tourism, Fukushima prefecture	Chambers of Commerce in Fukushima prefecture, Fukushima Industrial Promotion Centre	June 2011- March 2014
30				ふくしま産業復興企業立地補助金	Fukushima Sangyou Fukkou Kigyou Ricchi Hoyjokin	Subsidy for the Firm Location for Industrial Recovery in Fukushima			Fukushima	Ministry of Land, Infrastructure, Transport and Tourism, Fukushima prefecture	Fukushima Industrial Promotion Centre	January 2012- March 2015
31				原子力災害周辺地域産業復興企業立地補助金	Genshinyoku Saigaishuhentiki Sangyou Fukkou Kigyou Ricchi Hoyjokin	Subsidy for the Firm Location for Industrial Recovery in Surrounding Areas of Nuclear Disaster			Ibaraki, Tochigi, Miyagi	Ministry of Land, Infrastructure, Transport and Tourism	Mizuho Information & Research Institute	June 2011- Present
32				被災地の復興のための先端技術展開事業	Hisaichi no Fukkou no tameno Sentan Gijyutsu Tenkai Jigyou	Project for Development of Advanced Technology for the reconstruction of Affected Area	-	-	Miyagi, Iwate	Ministry of Agriculture, Forestry and Fishery	Agriculture, Forestry and Fisheries Research Council	FY2011
33	-	-	-	新食糧供給基地建設のための先端技術展開事業	Shinshokuryou Kichi Kensetsu no tameno Sentan Gijyutsu Tenkai Jigyou	Advanced Technology Development Project for the Establishment of Food Supply Base	-	-	Affected Prefectures	Ministry of Agriculture, Forestry and Fishery (AFFRC)	Private Organization etc.	FY2012 - FY2017
34	-	-	-	高度化事業	Koudoka Jigyou	Sophistication project (for small and medium-sized enterprise)	-	-	Whole country	Ministry of Land, Infrastructure, Transport	SME Support	-

Agricultural corporations who employed the below persons prior to the Great East Japan Earthquake, and provides practical trainings such as agricultural techniques: i) Affected farmers specified in "Business Early Resumption Master Plan" and/or "Human and Agricultural Land Plan" ii) Affected people who want to be engaged in farming with farming experience of less than five years * Farmers specified in the Master Plan indicates those who a) used to be engaged in farming at the time of the Great East Japan Earthquake b) are/will be specified in the "Business Early Resumption Master Plan" and/or "Human and Agricultural Land Plan" as management body which acts as the centre of the region, or c) are willing to be engaged in farming after the completion of trainings	As expenses for implemented training, a maximum of 97,000 JPY is granted monthly per trainee for up to 12 months. *In case the training is approved to continue, the grant period is extended to 24 months in total.	600 million JPY (=7.24 million USD) 3rd Supplementary Budget to FY2011 420 million JPY (=5.07 million USD) Special Account for Reconstruction from the Great East Japan Earthquake of FY2012 180 million JPY (=4.46 million USD) Special Account for Reconstruction from the Great East Japan Earthquake of FY2013	Reconstruction Agency http://www.reconstruction.go.jp/topics/20121005_160.062.pdf
Article 8: Among the below, those who are approved by the mayor of municipality are targeted: - Farmers whose yield decreased by more than 30% and who suffered losses of more than 10% of their sales - Foresters and fisher men who suffered losses of more than 10% of their sales or 50% of their facilities Article 12: Small and Medium sized enterprise operators who are certified by the Mayor of municipality that their business office or major business assets are affected by the disaster	<Summary> - Extreme Disaster System is established based on the Extreme Disaster Act. In this system, in case of disasters which cause great negative impact on economy, the government designates them as "Extreme Disasters" and specifies the measures to be taken for the disasters. - When designated as "Extreme Disaster", such measures as raising the share of national subsidy for recovery projects implemented by local municipality governments and special financial aids are provided. <Major measures> 1) Special financial aid for recovery projects for public civil engineering facilities (Article 3, 4) 2) Special measure for subsidy for recovery of agricultural land (Article 5) 3) Subsidy for recovery projects for aquaculture facilities (Article 7) 4) Application of provisional measures for financing for those engaged in agriculture, forestry, and fishery affected by natural disaster (Article 8) 5) Special measures of disaster-related credit guarantees based on the Small and Medium-sized Enterprise Credit Insurance Act (Article 12) 6) Special measure for provision of job applicant benefits based on the Employment Insurance Act (Article 25) *12 other measures are included (18 measures in total)	Amount: Depending on each measure	http://www.bousai.go.jp/taisaku/gekijinhukko/list.html http://www.meti.go.jp/press/2011/09/20110906002/20110906002.pdf http://www.rescuenow.net/2012/03/post-1727.html
1. Devastated fishery operators and marine products processors and marketing distribution companies 2. Devastated fishery cooperatives 3. Devastated seed and seedling production facilities 4. Devastated fishery harbour	1. Related to the restoration of fishery operators and marine products processors and marketing distribution companies To support the maintenance of facilities for the advancement of adequacy and the hygiene function of the scale 2. Related to the restoration of aquaculture facilities To support the maintenance of culture raft, logline facilities, seeding collection facilities, facilities for primary processing of products 3. Related to the restoration of seed and seedling production facilities To support the maintenance of facilities for the advancement of adequacy and the hygiene function of the scale 4. Related to the restoration of fishery harbour To support the maintenance of facilities for the function recovery of devastated fishery harbour and facilities which contribute to restoration of the fishing port environment	73.1 billion JPY (881 million USD) Supplementary Budget to FY2011 10 billion JPY (= 120 million USD) Initial Budget to FY 2012 8.1 billion JPY (86 million USD) Initial Budget to FY 2013	http://www.reconstruction.go.jp/topics/20121005_399.090.pdf
[Restoration Support Project for Shared Usage Fishing Boat] Fishery operators whose boats were damaged by The Great East Japan Earthquake	1. Restoration Support Project for Shared Usage Fishing Boat To support the building of the fishing boat, the introduction of the used ship and fishing implements such as a fixed shore net Subsidy rate: (the government) up to half, (prefectures) up to one third	Amount: 12 billion JPY	http://www.jfa.maff.go.jp/j/budget/23_hosei/pdf/set1-2.pdf
[Support Project for the introduction of equipment to Strengthen Fishery Management] Group of Fishery operators damaged by The Great East Japan Earthquake 1. Loan for business continuity and/or resumption in the relocation place within the prefecture	2. Support Project for the introduction of equipment to Strengthen Fishery Management To support the introduction of the latest energy-saving facilities such as a LED fishing lamp Subsidy rate: fixed amount, up to half		
Small and Medium Enterprises located in the restricted areas, planned evacuation areas, restricted living areas, specific refuge encouragement areas, and continue and/or resume the business at the relocate place within the prefecture 2. Loan for business continuity and/or resumption in the lifted designation areas A. Small and Medium Enterprises sitting their business in the areas that is lifted under evacuation orders	1. Loan for business continuity and/or resumption in the relocation place within the prefecture Limited amount of subsidy: Up to 30 million JPY Duration: within 20 years (not redeemed for five years) Subsidy rate/security : None 2. Loan for business continuity and/or resumption in the lifted designation areas Limited amount of subsidy: i) Small enterprises (number of regular employees: up to 20 employees, commerce or services industries: Up to 5 employees) : Up to 5 million JPY ii) Enterprises other than i) : Up to 10 million JPY Duration: within 10 years (not redeemed for two years) Subsidy rate/security : None	Unknown	Small and Medium Enterprise Agency http://www.chusho.meti.go.jp/earthquake2011/130326NCencho.html http://www.chusho.meti.go.jp/earthquake2011/130326NCencho1.pdf
1. Sector related to transport equipment, semiconductor, medical and welfare apparatus, renewable energy, and agricultural-commercial-industrial collaborations 2. Manufacturing industry and research institute in the industry sector related to Act on Promotion of Establishment of New Business Facilities 3. Industry sector to install logistic facilities 4. Call centre, data centre, and Industry sector of which is similar to Private employers willing to obtain lands and build new factories in three prefectures	[Limit amount of subsidy] Up to 20 billion JPY [Subsidy rate] Areas where the warning zone is lifted: (1st year) up to three fourths, (2nd year) up to two thirds, (3rd year) up to half Areas other than above: (1st year) up to two thirds, (2nd year) up to half, (3rd year) up to two fifths (half for Small and Medium Enterprises)	Unknown	http://www.cms.pref.fukushima.jp/download/1/kiyouri_xituti_05gaigyoutij.pdf
*Need to meet the following requirements - Adjacent prefectures of Fukushima prefecture - Falling land price is higher than the national average	[Target Facilities] 1. Factories (Manufacturing industry) 2. Logistic facilities 3. Facilities that the governor finds particularly necessary [Expenses eligible] From the cost of land obsession to the cost of construction of production facilities [Subsidy rate] Within 25% (Maximum: 2 billion JPY per company) 1. Maintenance costs for experimental study areas i) To set experimental study areas for "Agriculture and Rural areas type" and "Fishery and fishing village type" and create an environment for the development of experimental studies ii) To coordinate the research information sharing among researchers of the whole country and prepare a collaborative research laboratory for the transmission of information to research institute and agricultural/forestry/fishery workers of the whole country 2. Expenses for commission for experimental studies To conduct experimental studies as follows i) Experimental study of vegetable and fruit tree	14 billion JPY (= 169 million USD) Initial Budget to FY2012	http://www.reconstruction.go.jp/topics/main-cat8/sub-cat8-3/reviewsheet_final/20130902_24sheet154.pdf
Private Organization	1. Maintenance costs for experimental study areas i) To set experimental study areas for "Agriculture and Rural areas type" and "Fishery and fishing village type" and create an environment for the development of experimental studies ii) To coordinate the research information sharing among researchers of the whole country and prepare a collaborative research laboratory for the transmission of information to research institute and agricultural/forestry/fishery workers of the whole country 2. Expenses for commission for experimental studies To conduct experimental studies as follows i) Experimental study of vegetable and fruit tree	0.43 billion JPY (= 5.1 million USD) 3rd Supplementary Budget to FY2011 0.76 billion JPY (= 9.1 million USD) Initial Budget to FY 2012 0.24 billion JPY (= 2.5 million USD) Initial Budget to FY 2013	http://www.maff.go.jp/j/budget/review/pdf/0227_sai.pdf
1) Prefectural/Public research institutions in affected prefectures 2) Incorporated administrative agencies, universities and private companies 3) Agricultural production	1) Restoration of agriculture, forestry and fisheries industries by introducing advanced technology 2) Development of new agriculture, forestry and fisheries industries with potential growth ability through technological innovation 3) Reduction of production cost by 50 per cent (or Doubling the rate of return)	Amount: 6 billion JPY (= 72.48 million USD) for FY2012 - FY2017 *Exchange rate as of 1st April, 2012	http://www.maff.go.jp/j/budget/2012/pdf/b60.pdf http://www.saffr.go.jp/docs/hyouka/pdf/h23_kihon_zizen.pdf http://www.maff.go.jp/j/budget/review/h23/result3/pdf/24_0032.pdf
1) Small and medium-sized enterprise 2) Third sector/semi-public sector etc.	Sophistication project, in cooperation with respective prefectural governments, provides counselling and loan services for small and medium-sized enterprise to promote the collectivization and commercial zones for solving the issue of mixed development of residential and industrial areas and improving and vitalizing towns.	Amount: Unknown	http://www.smrj.go.jp/keiei/kodoka/000280.html http://www.smrj.go.jp/keiei/kodoka/000282.html

Research on employment and labour measures in the Post-Great East Japan Earthquake recovery process

The International Labour Organization conducted in-depth research on employment, labour and livelihood recovery measures carried out by the government and civil society in Japan in the aftermath of the 2011 Great East Japan Earthquake. This report presents findings from the research. The report begins with a comparative analysis of socio-economic situations before and after the 2011 disaster. It provides a comprehensive overview of the institutional framework of recovery measures initiated by the government of Japan. It details pre-disaster employment policies which were utilized in the 2011 disaster response. The report then details post-disaster policy measures including the national programme and local-level initiatives for employment protection and livelihood recovery. The report then looks at innovative recovery efforts by private initiatives. The report concludes with lessons from Japan and recommendations on how to place employment in the centre of a reconstruction process.

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ISBN: 9789221298113 (print)
9789221298120 (web pdf)