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# Employment and Labor Policy Response to the Great East Japan Earthquake: Focus on the First Year after the Disaster

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## I. Introduction

On March 11, 2011, a massive earthquake of magnitude 9.0 hit northeastern Japan off the Pacific coast, and an enormous tsunami struck the coast shortly afterward, claiming countless lives across a broad area of eastern Japan and devastating the social and economic infrastructure of the region. The disaster also triggered the serious accident at a nuclear power plant. Employment and labor were severely affected in the disaster-stricken area and elsewhere as well, and a great many problems remain unresolved today, though much stability has been regained as restoration and reconstruction progress. While the recovery is still far from complete as of this writing, this paper will primarily give an overview of the circumstances and characteristics of employment and labor immediately following the catastrophe and during the first year of reconstruction.<sup>1</sup>

## II. The Disaster and Its Aftermath

### 1. A Triple Calamity: Earthquake, Tsunami, and Nuclear Accident

The disaster was threefold: the earthquake itself, the resulting tsunami, and the nuclear accident these phenomena caused.

- Earthquake

The earthquake occurred at 2:46 PM JST on March 11, 2011. It was named the 2011 Off the Pacific Coast of Tohoku Earthquake, in reference to the location of its hypocenter 24 kilometers beneath the Pacific Ocean near the Tohoku region of Japan at latitude 38°06.2'N, longitude 142°51.6'E. Its magnitude, i.e. the absolute intensity of the energy released by the earthquake, was 9.0, the fourth largest measured worldwide since 1900. Its maximum seismic intensity was recorded at 7.0, and powerful vibrations were felt across a wide swath of

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<sup>1</sup> The Japan Institute for Labour Policy and Training (JILPT) has launched the Project to Record the Great East Japan Earthquake in order to document the impact of the March 2011 disaster of that name on employment and labor, and the policy response to that impact, and the JILPT is collecting, organizing and analyzing information to that end. This paper summarizes the Project's interim report, compiled in March 2013, entitled JILPT Research Report No. 156: *The Great East Japan Earthquake and Records on Employment and Labor—1st Compilation Report on the Project to Record the Earthquake* (JILPT, Compilation of the Results of the Project to Record the Great East Japan Earthquake No.3) (March 2013). This report was written jointly by seven Project team members, all of whom are JILPT researchers or investigators: Shinichi Umezawa, Yutaka Asao, Akira Endo, Yasuhiko Matsumoto, Mari Okutsu, Noboru Ogino And Akiko Ono.

Japan even outside the Tohoku region. Even in Tokyo, 300 kilometers from the earthquake's center, the seismic intensity was over 5.

Afterward there continued to be frequent aftershocks, as strong as seismic intensity 5 or 6, primarily in the Tohoku region. While damage from the earthquake itself may have been surprisingly mild compared to that resulting from major quakes in other countries, there was still no small number of homes totally or partially destroyed, and a great deal of property damaged.

- Tsunami

As the earthquake took place along an undersea fault line, it generated a titanic tsunami, which reached the Pacific coast between 20 and 40 minutes after the quake, its fury decimating coastal areas. Reaching heights of 8 or 9 meters in places, the wave swept over or destroyed breakwaters and coastal levees, crashing into communities, farmland, ports and harbors, and sweeping away or crushing all but the sturdiest buildings. Under the influence of the coastal terrain, it towered to heights of 40 meters in some places.

The earthquake and the tsunami, which are collectively known in Japan as the Great East Japan Earthquake, caused a death toll of 15,879, with 2,700 more missing.<sup>2</sup> 90% or more of these deaths are thought to have been from drowning. According to reports, approximately 129,000 buildings were completely destroyed and another 269,000 partially destroyed, and the tsunami was responsible for the majority of this destruction as well. The unimaginable devastation caused by this colossal tsunami is one of the most notable features of the 2011 disaster.

- Nuclear Power Plant Accident

Fukushima Daiichi Nuclear Power Station (hereinafter referred to as "FDNPS"), operated by Tokyo Electric Power Company, is located roughly halfway up the Pacific coast in Fukushima Prefecture, the southernmost prefecture in the Tohoku region in northeastern Honshu. There were six nuclear reactors at the plant.

The earthquake caused an emergency shutdown of the reactors in operation at FDNPS, and external electric power was cut off as well when towers used for receiving electricity from outside sources collapsed. Emergency backup generators immediately kicked in to power the cooling of reactors and other vital functions, but soon afterward a tsunami exceeding the maximum height predicted by the facility's planners struck, and the emergency backup electrical equipment ceased to function as well. For this reason, despite the frantic

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<sup>2</sup> These figures are those aggregated January 16, 2013 and published in Report No. 156 described in footnote 1. The latest figures available as of this writing, from November 8, 2013, place the death toll at 15,883 and number of missing persons at 2,651. Note that these totals are for deaths, etc. directly caused by the disaster, and if other "disaster-related deaths" (for example, of patients who were hospitalized when the disaster struck and as a result could not obtain adequate medical treatment and died, etc.), the number of dead and missing persons is said to top 20,000.

efforts of plant personnel and other parties, there was a partial reactor meltdown, triggering hydrogen explosions that destroyed upper portions of the reactor buildings, and causing the release of massive quantities of radioactive substances into the external environment. The accident was classified as a Level 7 (Major Accident) on the International Nuclear Event Scale (INES). Currently, while the cold shutdown status of the reactors at FDNPS is being maintained, albeit barely, efforts are still underway to get the situation fully under control and move forward with decommissioning of the reactors amid myriad challenges. In addition to the issue of FDNPS itself, there are also large numbers of people who were forced to evacuate, uprooted from their homes and robbed of their livelihoods. Many will not be able to return for years or even decades.

## 2. Various Aspects of Damage

The threefold disaster described above affected a huge number of people, with numerous deaths, many forced to evacuate to other regions, and great damage and detriment to the economy as business activities were disrupted due to the destruction of facilities. The damage took many forms, but here I will only outline the most basic characteristics needed to provide context for this paper.

- Damage Suffered by Disaster Victims and Displaced Persons

As described above, when deaths indirectly caused by the Great East Japan Earthquake are included, over 20,000 people lost their lives as a result of the disaster. While this is truly a staggering death toll, it is thought to be considerably less than it might have been, thanks to the fact that the region has been hit by tsunamis in the past and its residents keenly recognize the dangers they pose.<sup>3</sup>

Among survivors of the earthquake and tsunami, those whose homes were totally or partially destroyed or washed away were forced to evacuate to neighboring regions, while those who lived in the area affected by the FDNPS accident were forced to move further away, and both have been forced to relocate for extended periods.<sup>4</sup> Immediately after the disaster there were a total of 470,000 evacuees nationwide, including those who had to relocate temporarily as basic infrastructure was disrupted, and those who were unsure of safety conditions in their homes. By one week afterward the number had fallen to 390,000, and two weeks afterward to 250,000, but three months later the number still stood at 100,000. Around this time relocation to temporary housing began in earnest, and according to a report on September 8, 2011, almost exactly six months after the quake, the number of people in evacuation centers had shrunk to 27,531, but 47,369 were residing in temporary

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<sup>3</sup> Even so, there were reports of many tragic cases, such as those who evacuated to what they considered a safe elevation but were nonetheless swallowed up by the tsunami.

<sup>4</sup> Evacuation centers were generally established in schools or community centers, and a large number of households lived there communally. The number of evacuees also includes those who went to live with relatives or friends and so forth.

housing. By the end of 2011, there was almost nobody left in the evacuation centers. As of March 8, 2012, approximately a year afterward, 326,000 people were living in temporary housing or similar circumstances, of which 98,000 had relocated within Fukushima Prefecture and 63,000 had been displaced from that prefecture.<sup>5</sup>

Those affected by the disaster received emergency relief in its immediate aftermath, followed by further support aimed at restoring functionality and security to their day-to-day lives, and are currently residing in “restoration housing” (or “disaster recovery public housing”—intended to be inhabited for a longer period than temporary housing), and are aiming to stabilize their lives over the long term.<sup>6</sup> However, this process is expected to be particularly long and arduous in the case of those formerly residing near the FDNPS and displaced by the accident.

- **Damage to Businesses**

The affected area, especially along the coast where the tsunami struck, is in close proximity to one of the world’s four largest fishing grounds, and numerous fisheries or related marine product processing and manufacturing businesses were located there, with these industries accounting for a relatively large portion of the regional economy. Meanwhile, both coastal and inland areas were home to many suppliers of parts for automobiles and industrial equipment. Tourism was also a key industry. Business locations and related facilities like ports were heavily damaged by the earthquake and particularly by the tsunami.

Industry in the region is underpinned by transportation infrastructure including an expressway (the Tohoku Expressway) and high-speed railway (the Tohoku Shinkansen) acting as main arteries connecting Tohoku with the Tokyo region. Both of these were temporarily out of service following the disaster, but all lanes of the Tohoku Expressway were open to traffic by March 24, and the entire Tohoku Shinkansen network was running again by April 29.

Businesses that supply parts for the manufacturing industry received help and support from the companies they supply and other parties, and many began operating again relatively swiftly.<sup>7</sup> The fishery industry, however, has faced extremely difficult circumstances and in many cases has not been recovering so smoothly. Massive amounts of rubble generated by the tsunami (including submerged debris) has to be cleaned up, and damaged fishing ports repaired or rebuilt from scratch, while fishing boats have to be procured and

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<sup>5</sup> The latest data as of June 1, 2013 places the number of people temporarily living in public housing complexes, etc. at 27,000, with 141,000 in private housing and 108,000 in temporary housing. The number of people who relocated within Fukushima Prefecture is reported to be 92,000, with 52,000 displaced outside the prefecture.

<sup>6</sup> According to June 2013 data from each prefecture, the total number of units of public housing needed for evacuees is 21,929, of which 11,483 are under construction and 316 are ready for inhabitation.

<sup>7</sup> A case example often cited is that of Renesas Electronics, which has a large share of the global market for automotive microcomputers. Even though it underwent severe damage, round-the-clock support from automakers enabled the company to get back to business in June 2011.

ice-making, refrigeration and processing facilities reconstructed. Essentially the entire industry has to be rebuilt from the ground up.

- **Extent of Damage to Business Locations and Status of Businesses: Results of a JILPT Questionnaire Survey**

Assessing the entirety of a disaster's impact on the business community is no easy task, but based on the results of a questionnaire survey of companies nationwide conducted by JILPT in May 2012, 24.5% of respondents had at least one business location damaged in the natural disaster of March 11, 2011.<sup>8</sup> Among these, in terms of the location of the damaged facilities (for which companies could give multiple responses), Miyagi Prefecture was the most common response at 49.3%, followed by Fukushima Prefecture at 26.3%, Ibaraki Prefecture at 22.7%, and Iwate Prefecture at 14.6%.<sup>9</sup> Meanwhile, by sector, 30.2% of enterprises in the hospitality and food services sector had at least one damaged location, with high figures for retail (29.6%) and manufacturing (28.8%) as well. In the manufacturing sector, broken down by category, 10.9% of companies reporting damage were in food products manufacturing, followed by chemical industry (10.4%), metal products manufacturing (9.8%), electrical machinery and equipment (8.7%) and production machinery, equipment, automobiles and auto parts (6.6%).

With regard to the extent of damage (based on multiple responses), the most common response was "Generally speaking, the damage was light" at 42.4%, followed by "Some machinery or equipment was destroyed" (35.3%). However, 14.3% responded that "The building was partially damaged," 11.3% that "All, or a large of portion of, machinery or equipment was destroyed," 8.4% that "The building was entirely destroyed," and 3.6% that "One or more employees died or were injured." These findings indicate that quite a few business locations were severely affected by the disaster.

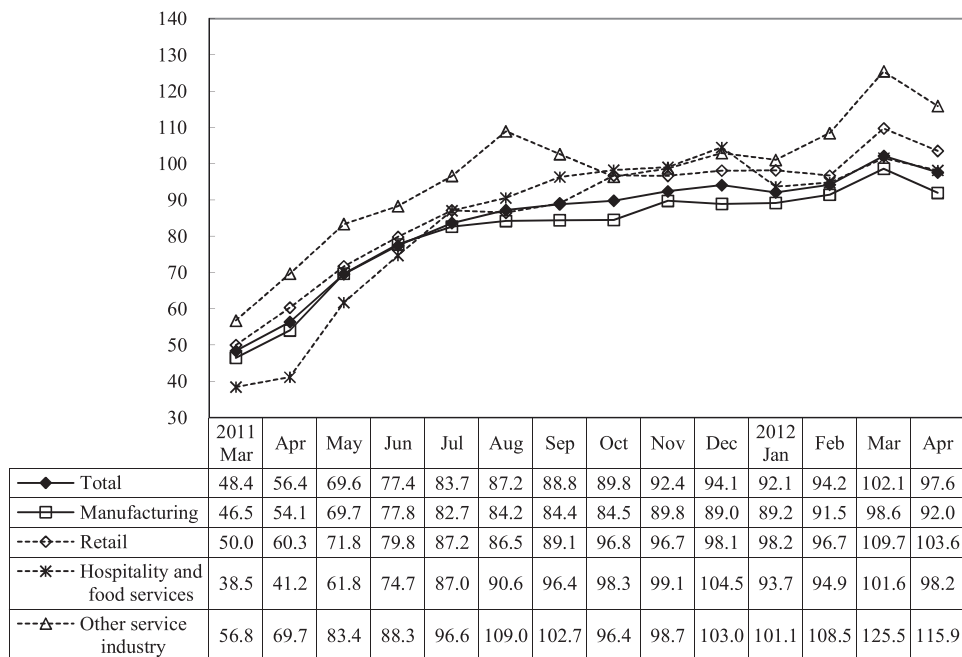
In terms of the status of business at affected locations (excluding those suffering only light damage), the greatest percentage of locations were "forced to suspend operations entirely on a temporary basis" (35.9%), followed by "forced to downsize operations on a temporary basis" (26.7%) and "forced to cease operations entirely" (8.4%).

Among severely affected business locations such as these, the percentage forced to cease operations altogether is by no means negligible, and all of them temporarily

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<sup>8</sup> The survey was distributed to 10,000 companies nationwide, and elicited 2,716 responses. While there were considerable limitations to the survey, such as the inability to assess companies that had been wiped out altogether by the disaster, the findings are thought to provide an accurate reflection of overall trends. It should be noted that due to the nature of the survey, a relatively high number of responding companies were those that were affected by the disaster in some way.

<sup>9</sup> There are six prefectures in the Tohoku region, four of which are on the east side of Honshu and have a Pacific coast: Aomori, Iwate, Miyagi and Fukushima. The three prefectures that bore the brunt of the damage in March 2011, Iwate, Miyagi and Fukushima, are often referred to collectively as the "three disaster-stricken prefectures." Ibaraki Prefecture, to the south of Fukushima, was also severely affected.



Source: JILPT survey series, *Results of Survey on the Great East Japan Earthquake and Corporate Activities*.

Figure 1. Average Volumes of Business Activity at Most Severely Damaged Business Locations Where Operations Had to Be Scaled Back Temporarily (By Industry) (2010 Averages = 100)

experienced considerable detriment to business operations. Examination of the average progress (totals for each industry) of volume of business activity at the affected locations, based on survey results, reveals that this volume fell by nearly half in the immediate aftermath of the disaster (March/April 2011).<sup>10</sup> Recovery was fairly swift thereafter, however, with volume of activity back to approximately 80% of pre-quake levels in July, 90% in November, and the overall average for all industries more or less back to pre-disaster levels by March 2012. However, not all industries fared equally, and manufacturing had still not recovered to previous levels by one year after the disaster.<sup>11</sup>

While the fact that some business locations were forced to close and others continued to struggle over the long term cannot be ignored, overall it can be said that business activity at locations affected by the earthquake recovered swiftly in the several months afterward, and most had more or less returned to pre-disaster levels by one year later (Figure 1).

<sup>10</sup> Examination of individual case data rather than averages reveals that in April 2011, volume of activity at 18.2% of business locations had fallen to less than 10% of the 2010 average (including locations that suspended activities entirely).

<sup>11</sup> This figure is thought to reflect the struggles of fisheries-related manufacturing.

### 3. Secondary Impact of the Disaster and Other Characteristics

The Great East Japan Earthquake was characterized by a wide range of indirect and secondary consequences occurring across a broad swath of Japan, in addition to its immediate effects. To describe a few: first, as mentioned previously, suppliers of parts had their business locations damaged and became unable to supply parts to manufacturers, disrupting the supply chain and forcing other companies and business locations to suspend or scale back operations temporarily. A second consequence consisted of large-scale energy conservation measures put in place due to the FDNPS accident, which had considerable impact on operations for many companies and business locations.<sup>12</sup> A third consequence was a nationwide drop in expenditures for tourism and leisure amid the solemn mood following the disaster with its enormous death toll. This drop in demand and consumption hit certain industries and categories hard. Fourth, radioactive contamination resulting from the FDNPS accident negatively affected the reputation of products, particularly agricultural and marine products.

## III. Employment and Labor Policy Response

### 1. Overview of the Reconstruction and Restoration Process Thus Far

The recovery process after a major disaster that thoroughly wipes out basic infrastructure has three key phases. These are the emergency relief phase immediately following the disaster, the restoration phase in which life is provisionally restored to some degree of stability, and the reconstruction phase in which people's lives and livelihoods are restored to security over the medium to long term. In this case, however, it should be noted that progress through these phases varied widely depending on the region, as the damage was spread across an extremely large area and the FDNPS accident further complicated matters.

During the *emergency relief phase just following the disaster*, employees who were working at various business locations when the disaster struck aimed to ensure their own safety and that of co-workers or subordinates, and evacuated to safer locations as needed. Immediately after the chaos subsided, people provided assistance to the injured (including contacting emergency medical services), sought to verify the safety of family members, and attempted to return home while remaining alert to safety threats. Depending on the type of business, some employees had to engage in dangerous tasks without delay in order to ensure the safety not only of the facility itself but also of the surrounding region. In some cases employees lost their jobs, as damage to the business location rendered operations impossi-

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<sup>12</sup> Planned electrical blackouts (rolling blackouts) were implemented in the area served by Tokyo Electric Power Co. between March 14 and March 27, 2011. In the summer of the same year (July through September), electricity conservation measures were enacted on a large scale and in some cases forcibly. After this, however, despite the suspension of nuclear power generation, electric power providers began meeting demand based on assumptions of voluntary energy conservation, and there have since been no forcible caps on power consumption implemented.

ble for the foreseeable future, or forced operations to cease entirely. Some employees were injured or lost their lives on the job.

In the immediate aftermath of the disaster, relief supplies were sent to many businesses from other business locations operated by the same companies, but due to the obliteration of transport networks and other infrastructure, it was extremely difficult to deliver these supplies for the time being.

Next, during the *phase focused on restoration of basic stability*, efforts were made to restore provisional security to the lives of people who had lost their jobs permanently or for extended periods, people who had been injured on the job, and family members of those killed on the job. The Great East Japan Earthquake entailed the FDNPS accident as well as widespread destruction from the natural disaster, and the aftermath was characterized by evacuation and displacement over great distances.

During this phase various projects were launched, primarily aimed at restoration of public facilities and equipment. Tremendous challenges included the reconstruction of roads, railways and public infrastructure, as well as disposal of debris<sup>13</sup> from the tsunami and decontamination of soil, etc. contaminated by radioactive substances from the FDNPS accident. With these projects underway, there was a dramatic rise in demand for labor particularly in the construction sector, but a mismatch between this demand and the supply of labor in the affected region was noted.

A large number of people came into the affected region from elsewhere, including volunteers dispatched by various companies or coming on their own initiative who assisted with restoration work. Concerted efforts were made to restore damaged business locations to functionality and recommence operations, in many cases with the assistance of teams dispatched from companies' other locations throughout Japan.

Another notable feature of the Great East Japan Earthquake was widespread impact on business operations and, as a result, employment, which were not limited to the affected area itself, due to various factors such as disruption of the supply chain caused by damage to business locations in the affected areas, sinking consumer demand, adverse effects on the reputations of various products, and limitations on electricity supply.

With regard to the third phase, *full-fledged reconstruction*, while many enterprises and business locations have returned to the volume of business activity they carried out prior to the disaster, full-fledged reconstruction of regional social and economic infrastructure is still in the early stages. This topic will not be addressed in this paper and will be left for future study.

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<sup>13</sup> According to data from the Reconstruction Agency, the estimated volume of rubble (debris from the disaster) requiring disposal totaled 26.29 million tons. As of July 2013, 69.6% of it had been disposed of.



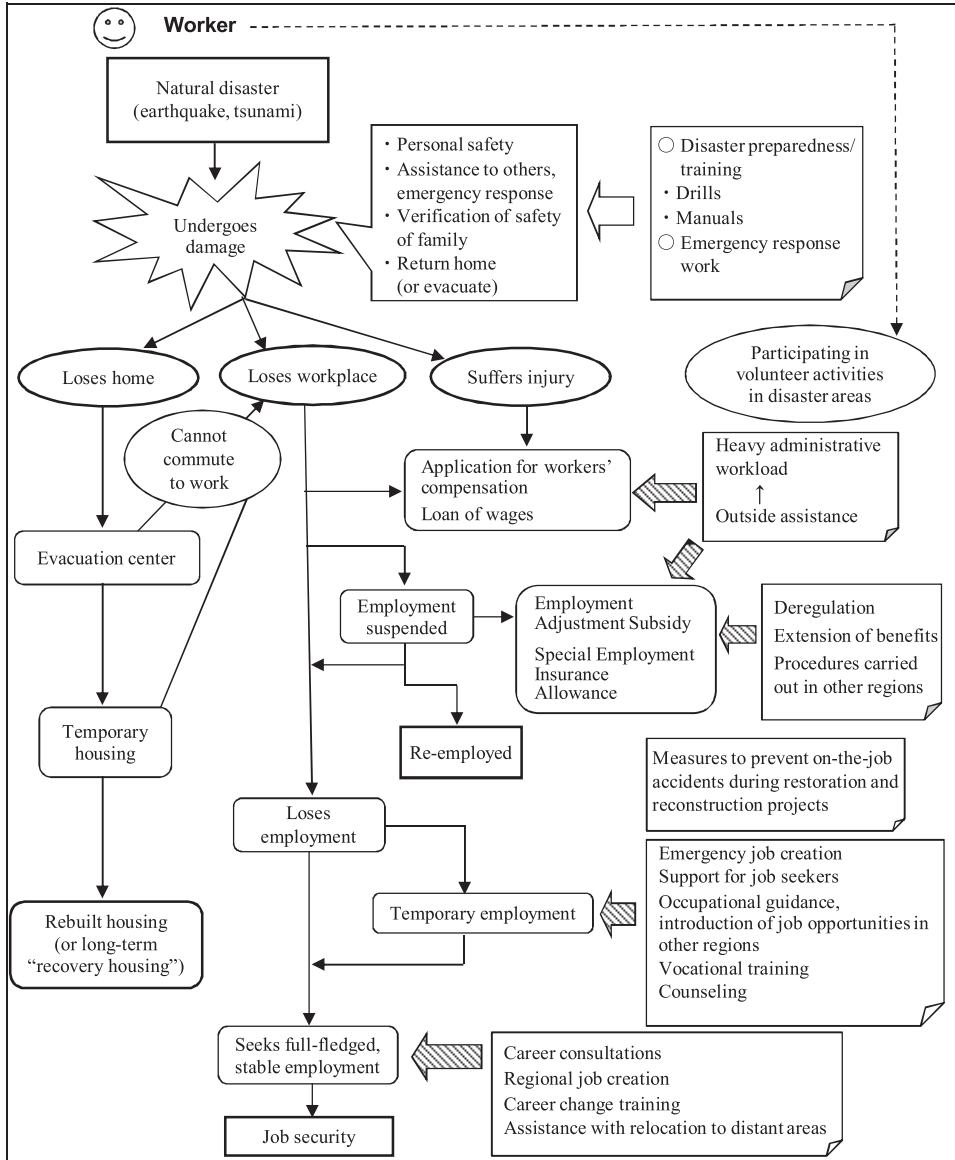


Figure 2. Flow Chart Illustrating Key Aspects of Disaster Response (Particularly Employment and Labor-Related, from Workers' Perspective)

## 2. Overview of Employment and Labor Policy Response

Here I would like to give an overview of the employment and labor policy response to the above-described circumstances. After outlining key aspects of the response not only of national policymakers but also of local agencies, I will briefly note some of the major policies and measures implemented.

Key points relating to policy response are presented in flow charts in Figures 2 and 3

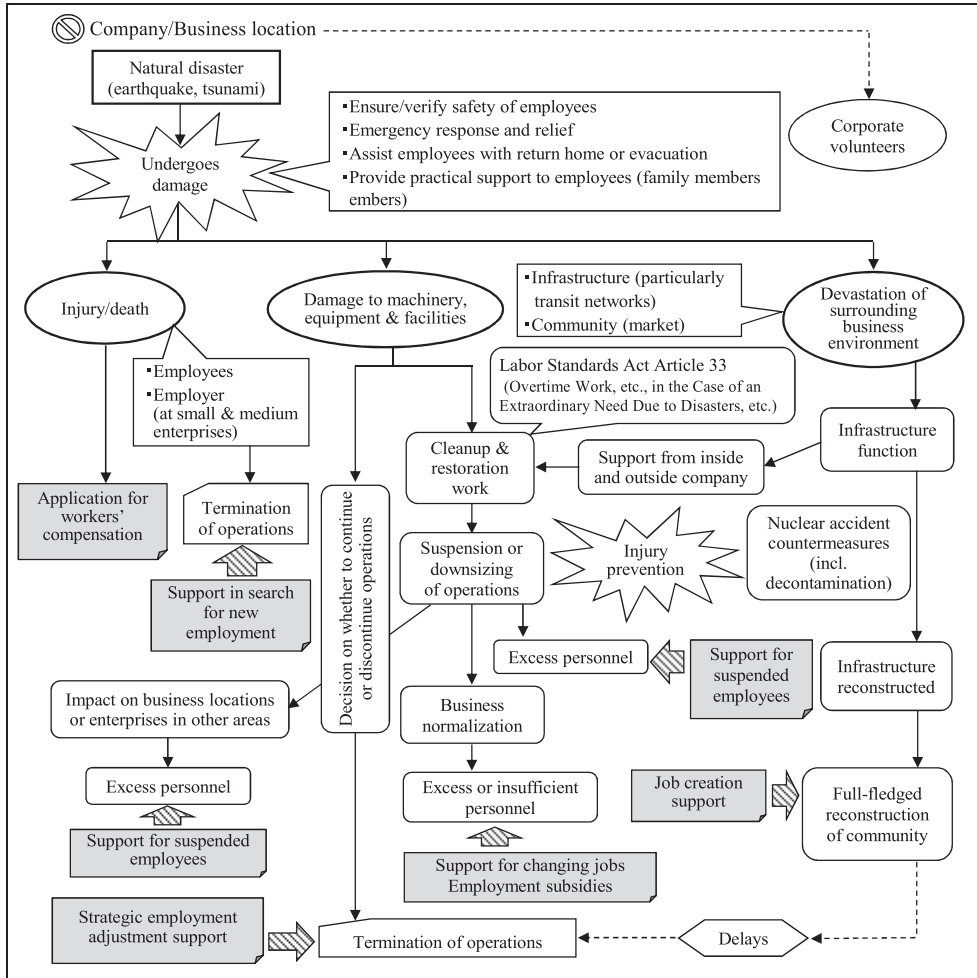


Figure 3. Flow Chart Illustrating Key Aspects of Disaster Response (Particularly Employment and Labor-Related, from Employers' Perspective)

for easy viewing. Please refer to these as needed.

• Emergency Response during and Immediately Following the Disaster

Local agencies in the affected areas (including Labour Standard Inspection Offices and Public Employment Security Offices) took emergency measures during the disaster, and in its aftermath, worked to inform people of relevant initiatives and procedures. The central government focused on monitoring the situation, identifying key features of the disaster, putting all relevant existing measures into effect, and deliberating on and preparing further policy responses as needed.

- i. Local agencies placed top priority on the physical safety of people, including those who happened to be on the premises when the disaster struck. In some cases they

accepted evacuees on an emergency basis (when the situation had calmed somewhat, the evacuees were guided to municipal evacuation centers.)

- ii. In cases where local agencies' facilities had been rendered dysfunctional, temporary offices were swiftly set up in other locations.
  - iii. Local agencies distributed information to the public on systems and policies relating to termination of employment, wages, workers' compensation, and job security, areas where a drastic rise in the volume of claims and inquiries was expected. (Efforts included handling of inquiries by telephone, visits to evacuation centers for briefings and consultations, and public announcements via the media, etc. Service was provided on Saturdays and Sundays as well.)
  - iv. A Headquarters for Emergency Disaster Control was swiftly set up by the Ministry of Health, Labour and Welfare, and worked to monitor the situation and plan and propose countermeasures. The Headquarters compiled a basic policy and comprehensive strategy for emergency response, and distributed information on these.
- **Restoration Phase in Which Life Was Provisionally Restored to Some Degree of Stability**

As measures began to be implemented to provide provisional security to those who had lost their jobs permanently or for extended periods or suffered injury on the job, as well as family members of workers who had died on the job, it was predicted that when related administrative needs met their peak, the agencies involved would be inundated with work. To cope with this situation, supplementary frameworks were swiftly and smoothly put in place. The central government implemented various measures, notably relaxation of regulations so as to ensure effective responses.

- v. To provide (provisional) security to people and businesses affected by the disaster, there was a need for diverse labor programs and countermeasures including processing of applications for workers' compensation, payment of unpaid wages, employment insurance, and Employment Adjustment Subsidies.<sup>14</sup> At its peak (April through June 2011), the workload at administrative agencies was staggering. Employees were also dispatched to evacuation areas and temporary housing for consultations with residents. Personnel from labor administration organizations throughout Japan were deployed to the affected areas to provide backup assistance, while Public Employment Security Offices in far-flung locations processed applications from evacuees who had relocated there.

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<sup>14</sup> Employment insurance offers special unemployment benefits to those who have been dismissed even in cases where they may be re-hired, if a severe disaster has occurred. Meanwhile, the Employment Adjustment Subsidy program provides employers who place employees on furlough without terminating them, when they are forced to scale back operations temporarily, with financial support in proportion to these employees' wages. These programs can be utilized to provide security for the time being to employees of businesses damaged in the disaster.

- vi. To implement the measures described in (v) above, policy measures including relaxation of relevant regulations were enacted so as to respond effectively in light of the pertinent features of the disaster.<sup>15</sup> Employment Adjustment Subsidies were granted not only to businesses in the affected areas, but also to those throughout Japan that were forced to downsize operations as a result of detriment to product image resulting from the nuclear accident.
- vii. As an Emergency Job Creation Program, financial assistance was provided to prefectures and municipalities carrying out projects that provide temporary or short-term employment to people affected by the disaster.
- viii. In addition to the above measures, steps were taken to prevent on-the-job accidents during restoration and reconstruction projects,<sup>16</sup> and to provide the necessary occupational training to workers engaged in these projects.

- **Reconstruction Phase: Aiming to Ensure Mid- and Long-Term Security**

With regard to the Great East Japan Earthquake, this phase has just begun. What can be said at this point in time is that it is vital to create jobs in the affected regions, playing close attention to regional reconstruction plans and coordinating job creation initiatives with these plans; to implement programs that provide well-targeted career counseling to people affected by the disaster; and to provide vocational training, as this will be necessary to secure employment opportunities and job security over the long term.

#### **IV. A Few Considerations and Suggestions for the Future**

According to Reconstruction Agency data, as of November 14, 2013, there were still 278,000 displaced persons in Japan, and many are still enduring harsh circumstances. There remains a pressing need for swift yet sustained recovery efforts and effective support for the affected population. That being said, with specific regard to job creation and unemployment countermeasures, in general steady progress is being made, and the situation has not declined into extreme severity (see Table 1).<sup>17</sup>

This relatively smooth recovery is largely thanks to the efforts of related parties, such

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<sup>15</sup> For example, with regard to workers' compensation, a special provision was made to declare missing persons deceased after a period of three months; employment insurance benefits to job seekers were extended; conditions for receipt of Employment Adjustment Subsidies were relaxed in response to circumstances, and a disaster victim employment development subsidy was established to provide subsidies to businesses that employ people affected by the disaster.

<sup>16</sup> For example, dust masks were distributed free of charge to workers engaged in rubble disposal. Rules were established and guidance provided to workers and businesses exposed to radiation when involved in decontamination work after the FDNPS accident.

<sup>17</sup> As already stated, recovery has not been smooth sailing for some industries such as fisheries and marine products processors in damaged coastal areas, and the after-effects of the FDNPS accident will continue to pose serious problems over the long term. It is necessary to keep these sobering realities in mind.

Table 1. Total Unemployment Rates by Prefecture (Estimated by Modeling)  
(%)

	National total	Iwate	Miyagi	Fukushima	Ibaraki
2007					
IQ	4.1	4.2	4.9	4.3	3.5
IIQ	3.8	4.3	4.8	4.3	3.6
IIIQ	3.7	3.8	4.5	4.3	3.4
IVQ	3.7	3.8	4.9	4.2	3.4
2008					
IQ	4.0	4.6	5.2	4.7	3.8
IIQ	4.0	4.2	4.6	4.2	4.0
IIIQ	4.0	4.0	4.8	4.3	3.9
IVQ	3.9	4.1	5.1	4.5	3.9
2009					
IQ	4.6	5.6	6.3	5.5	4.5
IIQ	5.2	5.8	6.3	5.5	5.0
IIIQ	5.4	5.5	6.4	5.5	4.9
IVQ	5.0	5.3	6.1	5.2	4.8
2010					
IQ	5.1	5.7	5.9	5.5	5.0
IIQ	5.3	5.4	5.7	5.1	5.0
IIIQ	5.1	4.8	5.5	5.0	4.7
IVQ	4.8	4.8	5.6	4.9	4.6
2011					
IQ	4.8	5.7	5.7	5.4	4.7
IIQ	4.8	5.7	5.8	5.2	4.6
IIIQ	4.5	4.8	5.6	4.7	4.3
IVQ	4.3	4.1	5.2	4.2	4.1
2012					
IQ	4.5	4.8	5.4	4.6	4.1
IIQ	4.6	4.4	4.8	4.1	4.1
IIIQ	4.3	3.5	4.3	3.6	3.8
IVQ	4.0	3.2	4.2	3.5	3.6
2013					
IQ	4.3	3.4	4.0	3.5	3.7
IIQ	4.2	3.7	3.7	3.5	4.2
IIIQ	4.0	3.7	4.2	3.7	4.0

Source: Statistics Bureau, Ministry of Internal Affairs and Communications, *Labour Force Survey*.

as employees dispatched to the affected areas from companies' other locations in Japan or from affiliated companies to assist with restoration of damaged business facilities. Fiscal and economic policy measures, such as financial support and generation of demand through reconstruction projects, have had a positive impact, but the role of the employment and labor policy responses described above has also been major. In particular, the Employment Adjustment Subsidy and Emergency Job Creation Program are seen as playing a significant

role in the recovery process thus far.<sup>18</sup>

It should be pointed out that these two programs were already fully in effect and widely used before the disaster, as countermeasures in response to the global financial crisis that began in 2008.<sup>19</sup> They were not planned, organized and implemented following the disaster, but simply reapplied under different circumstances. If it had been necessary to create these policy responses out of thin air, it is highly unlikely that they would have been enacted and effectively utilized so rapidly after the catastrophe. The Scout motto, “Be Prepared,” is a good one to keep in mind at any time, but particularly when it comes to responding to major calamities.

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<sup>18</sup> Above all, we must not forget the contributions of personnel at local agencies who carried out demanding administrative tasks under harsh conditions, even while they themselves were suffering the disaster’s effects.

<sup>19</sup> From the perspective of dealing with the effects of drastic declines in economic activity and the resulting impact on employment, there is little difference between a natural disaster and a socio-economic phenomenon like the global financial crisis of 2008. However, unlike the former, the latter falls in the category of avoidable catastrophes.