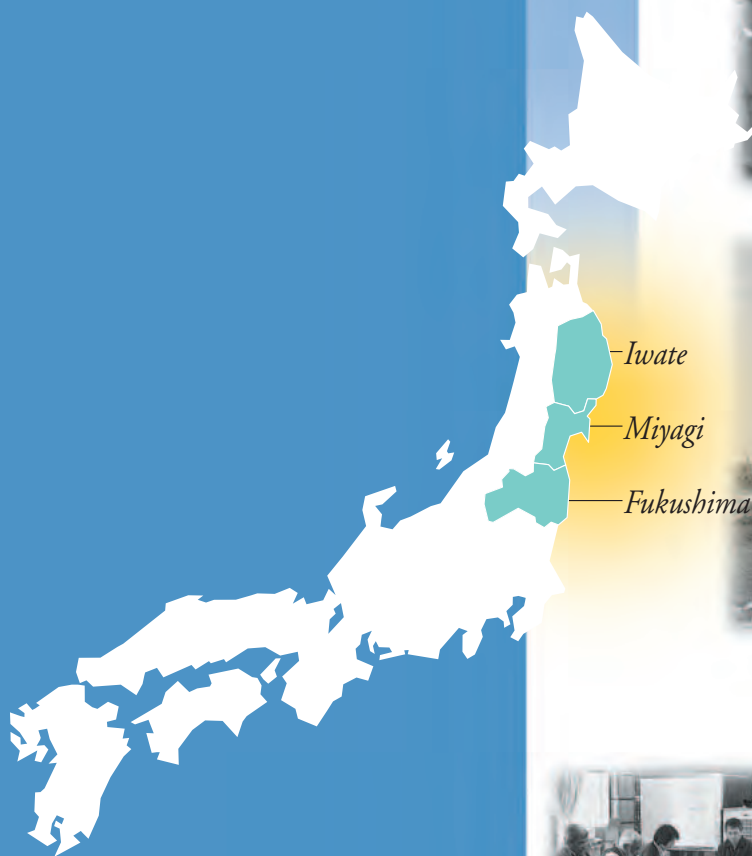


Reconstruction towards Sustainable Communities:

Promotion of locally-based industries with all stakeholder approach

27 February-2 March 2012



United Nations
Centre for Regional Development
Nagoya, Japan

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Report



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Centre for Regional Development
Nagoya, Japan

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Preface

The Great East Japan Earthquake that struck on 11 March 2011 wreaked devastating havoc across many areas in Japan. One year after the earthquake, the process of recovery is well under way, and the focus has been shifting to the reconstruction phase. By the end of 2011, all the affected cities submitted reconstruction plans formulated by involving diverse stakeholders. Of course, the scars of the disaster still remain, but reconstruction activities have gradually begun. Notably, the Reconstruction Agency (Government of Japan) was inaugurated on 10 February 2012. It should be noted, however, that reconstruction efforts have only just begun. It is necessary to address challenges in employment, particularly the challenges faced by young people and women, in the Tohoku region into the future. Promotion of business opportunities is another challenge that has to be urgently tackled.

Against this backdrop, the United Nations Centre for Regional Development (UNCRD), financed by the Ministry of Foreign Affairs of Japan, organized workshops and site visits in three prefectures in the Tohoku region (Iwate, Miyagi, and Fukushima) from 27 February to 2 March 2012. UNCRD engaged experts from in and outside Japan and visited local governments and communities. The workshops were intended to share the experiences of community reconstruction from the Great East Japan Earthquake and tsunami and to exchange information between representatives of local communities and experts. Practical ideas were also exchanged to support economic activities of local communities, particularly community-based eco-friendly industries. In addition, exchange of information was made regarding the role of NGOs and NPOs in reconstruction efforts.

UNCRD compiled the information derived from the workshops in this report, with the aim of disseminating information to the rest of the world. UNCRD will also reflect experiences and lessons derived from the workshops in its training programmes that will be planned for government officials of developing countries.

This report includes the details of the workshops, results of site visits, and recommendations of experts. We hope that this report will help stimulate discussions on this topic and assist in the efforts of reconstruction.

May 2012



Chikako Takase
Director, UNCRD

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Courtesy visit to Iwate Prefectural Government



Kamaishi Hamayuri temporary restaurants



Workshop at Kamaishi



Ofunato Yume temporary shopping mall



Ofunato fish market



Workshop at Rikuzentakata



Workshop at Minamisanriku-cho



Minamisanriku-cho tsunami-affected area



Minamisanriku-cho temporary housing



Ishinomaki tsunami-affected area



Debris recycling



Decontaminated farm land

1. Outline of the UNCRD Workshop in Tohoku

Background

The Great East Japan Earthquake, which struck a wide area of East Japan on 11 March 2011, was unprecedented in scale and nature. The earthquake was the fourth largest in the world and the largest in Japan ever recorded. Subsequent tsunami hit the Tohoku region along the Pacific coast of Japan and washed away many towns and communities, resulting in massive loss of lives and property. Full recovery and reconstruction will likely take many years, but much effort is being made and the region is seeing substantial progress. There is a great deal to learn from this experience for future disaster risk reduction and sustainable regional development.

The recovery work has been progressing steadily and is now shifting to reconstruction. By the end of 2011, all of the municipalities submitted their reconstruction plans, which had been formulated through a participatory process. Although the scars suffered from the disaster have not been completely healed, activities for reconstruction have gradually started. These reconstruction plans will be discussed between the municipalities and respective prefectures, and then will be implemented. The Japanese Government has also formulated its Basic Plan for Reconstruction and passed several legislations to facilitate the reconstruction efforts of affected municipalities. They include establishment of special zones and eco towns. Therefore, we can see that the foundation for reconstruction has been cemented. However, as these efforts have just started, there is an urgent need to look into the issue of unemployment, in particular for the young generation and women, in the Tohoku region and to promote business opportunities.

Against this backdrop, UNCRD organized a workshop, consisting of site visits and discussion meetings with local municipalities and communities. Two issues of particular interest for this workshop are: (a) promotion of locally-based industries; and (b) involvement of all stakeholders in reconstruction efforts, including NPOs and NGOs.

Objective

The main objective of the workshop is to learn from the experience of the communities affected by the Great East Japan Earthquake and Tsunami. By organizing discussion meetings with local representatives, UNCRD hopes that the group of experts assembled for this workshop can engage in the exchange of information and practical ideas that could assist the effort of local communities in increasing their economic activities, in particular by promoting locally-based industries. In addition, in line with the Basic Reconstruction Plan of the Japanese Government, UNCRD hopes that the group of experts would also share their ideas of engaging NPOs and NGOs in the reconstruction efforts. UNCRD will compile all the information gathered during the workshop in a report, which will be disseminated globally. UNCRD will also incorporate the lessons learned and good practices into the relevant training programmes organized by the Centre.

Programme

<1st day: Sunday, 26 February>

Meet at Morioka
Accommodation: Hotel Metropolitan Morioka New Wing

<2nd day: Monday, 27 February>

8:30	Courtesy visit to Iwate Prefectural Government
9:00–11:30	Bus transportation from Morioka to Kamaishi
11:30–	Site Visit Kamaishi Hamayuri temporary shopping mall
12:00–	Lunch
13:00–14:30	Workshop (discussion) Venue: Kamaishi District Office, Iwate Prefecture, 3rd floor meeting room <input type="checkbox"/> Local participants Mr. Sachihiko Sawada (Kamaishi Chamber of Commerce and industry) Mr. Osamu Kikuchi (Kamaishi Junior Chamber) Mr. Keiji Odashima (Kamaishi Federation of Shopping Mall Association) Mr. Junichi Ogasawara (Kamaishi-Otsuchi Regional Industrial Research Development and Training Center) Mr. Hiroyasu Sasaki (Kamaishi Bay Fisheries Association, Youth Chapter) Mr. Junichi Kano (@Rias NPO Support Center) <input type="checkbox"/> Resource persons Luis F. Diaz, Warren Karlenzig, Vaughan Levitzke, Ranjit Mahindapala, Mohammad Sharifur Rahman, Marilyn Shigetani, Yozo Mitani, Yuko Sakita, and Takeshi Yamamoto <input type="checkbox"/> UNCRD Chikako Takase, Katsuaki Takai, Tomoko Okayama, and Yoko Saito
15:00–16:50	Site Visits 15:00– U! Hamanasu Shopping Mall (Unosumai temporary shopping mall) 15:30– Horaikan (Japanese Inn damaged by Tsunami, just re-opened) 16:00– Tenjin temporary housing 16:20– Kamaishi No. 2 Fish Market
16:50–18:00	Bus transportation from Kamaishi to Touno
18:00	Hotel check-in (Aeria Touno)
18:30–	Dinner

<3rd day: Tuesday, 28 February>

9:00–	Bus transportation from Touno to Ofunato
10:00–11:30	Workshop (discussion) Venue: Maeda Community Ceter, Ofunato City <input type="checkbox"/> Local participants Mr. Syogo Obara (Ofunato Chamber of Commerce & Industry) Mr. Hidekazu Miura (Ofunato Junior Chamber) Mr. Katsuya Sato (Ofunato Main Street Shopping District Promotion Association) Mr. Akimitsu Funada (Ofunato Agricultural Cooperative) Mr. Kyoji Iwaki (NPO Dream Net Ofunato) <input type="checkbox"/> Resource persons Same as previous day

	<input type="checkbox"/> UNCRD Same as previous day
12:00 –	Lunch
13:00 – 14:30	Site Visits 13:00 – Ofunato Yume (Dream) Shopping Mall (temporary shops) 13:45 – Ofunato Fish Market 14:15 – Nagasawa temporary housing
14:30 –	Bus transportation from Ofunato to Rikuzentakata
15:00 – 16:30	Workshop (discussion) Venue: Rikuzentakata Commerce and Industry Association (RCIA) <input type="checkbox"/> Local participants Mr. Tsutomu Nakai (Executive Officer of RCIA) Mr. Kanji Kumagaya (Director of Commerce, Industry and Tourism Division, Rikuzentakata City) and Mr. Murakami Mr. Masato Imaeda (Administrative Office, Nagoya City Government) <input type="checkbox"/> Resource persons Same as above <input type="checkbox"/> UNCRD Same as above
16:30 – 18:00	Bus transportation from Rikuzentakata to Minamisanriku
18:00	Hotel check-in (Hotel Kanyo)
18:30 –	Dinner

<4th day: Wednesday, 29 February >

9:30 – 12:00	Workshop (discussion) Venue: Hotel Kanyo, Minamisanriku town <input type="checkbox"/> Local participants Mr. Yasuhiro Abe, President, Abecho Shoten (fish processing) Ms. Noriko Abe, Okami (Inn manager) of Hotel Kanyo Mr. Ryujiro Abe (Vice President, Abecho Shoten/Minamisanriku Town Tourist Association) Mr. Ryuichi Ohmori and Mr. Daisuke Abe (Minamisanriku Town, Reconstruction and Planning Department) Ms. Satoko Matsui (The Japan Asian Association & Asian Friendship Society) Mr. Yasushi Miura (Fish shop) Mr. Shimizu (Volunteer) <input type="checkbox"/> Resource persons Luis F. Diaz, Warren Karlenzig, Vaughan Levitzke, Ranjit Mahindapala, Mohammad Sharifur Rahman, Marilyn Shigetani, Yozo Mitani, and Takeshi Yamamoto <input type="checkbox"/> UNCRD Same as previous day
12:00 –	Lunch
13:30 – 16:00	Site Visits Walk around Shizugawa district (tsunami-affected area), Matsubara Park, Shizugawa Junior High School, and Bayside Arena
16:00 – 18:00	Bus transportation from Minamisanriku to Tagajo
18:00	Hotel check-in (Hotel Route-Inn Sendai-Tagajo)
18:30 –	Dinner

<5th day: Thursday, 1 March >

9:00–10:00	Bus transportation from Tagajo to Ishinomaki
10:00–12:00	Site Visits Hiyoriyama Park, Maehama district, Sakana-machi, Minamizakai temporary housing
12:00–	Lunch
13:30–16:00	Workshop (discussion) Venue: Ishinomaki Senshu University <input type="checkbox"/> Local participants Mr. Shuuki Ito (Chairman, Ishinomaki Disaster Recovery Assistance Council, Inc. (IDRAC)) Mr. Teruo Ogata (Ishinomaki Chamber of Commerce and Industry) Ms. Honami Yoshida, and several other people (Japan Primary Care Association/Affected area pregnant and parturient women support team) (Ishinomaki Commerce and Industry Association) Mr. Takashi Sakata (President, Ishinomaki Senshu University) Mr. Shigehiro Goda (Peace Boat) <input type="checkbox"/> Observer Health and Welfare East Office, Miyagi Prefecture <input type="checkbox"/> Resource persons Same as previous day <input type="checkbox"/> UNCRD Same as previous day
16:00–	Bus transportation from Ishinomaki to Iwaki
	Hotel check-in (Iwaki Washington Hotel)
	Dinner

<6th day: Friday, 2 March >

9:00–11:50	Site Visits 9:00-10:10 Namakiba Farm 10:50-11:50 “Chopsticks for Hope” Factory (Iwaki Takahashi)
12:00–	Lunch
13:30–14:30	Workshop (discussion) Venue: Iwaki Meisei University <input type="checkbox"/> Local participants Mr. Koji Ogura (Head, President’s Office, Iwaki Meisei University) Mr. Kenji Sato (Professor, Iwaki Meisei University) Mr. Motoya Kitase (Iwaki Association for Linking Agriculture, Commerce and Industry) <input type="checkbox"/> Resource persons Luis F. Diaz, Warren Karlenzig, Vaughan Levitzke, Ranjit Mahindapala, Mohammad Sharifur Rahman, Marilyn Shigetani, Tetsu Hattori, Yozo Mitani, Takeshi Yamamoto, and Koji Yamauchi <input type="checkbox"/> UNCRD Same as previous day
14:30–16:00	Bus transportation from Iwaki to Fukushima
16:00	Hotel check-in (Fukushima View Hotel)
16:30–17:15	Closing Session Venue: Corasse Fukushima, 5th Floor meeting room

	<input type="checkbox"/> Local participants Mr. Tsutomu Nakai (Executive Officer of RCIA) Mr. Shuuki Ito (Chairman of IDRAC) Mr. Koji Ogura (Head, President’s Office, Iwaki Meisei University) <input type="checkbox"/> Resource persons Same as above <input type="checkbox"/> UNCRD Same as above
17:20–18:00	Bus transportation from Corasse Fukushima to Yoshikawa-ya
19:00–20:30	Reception Hosted by H.E. Mr. Koichiro Gemba, Minister for Foreign Affairs of Japan
20:30–	Bus transportation from Yoshikawa-ya to Fukushima View Hotel

<7th day: Saturday, 3 March >

Break up at Fukushima

2. Workshops and Site Visits

Prior to conducting the series of workshops, UNCRD shared basic information with the participants available in a “background paper” (Annex 2). The information derived from the workshops and site visits as well as contents of the discussion are as follows in the form of minutes.

Morioka City and Kamaishi City, Iwate Prefecture 27 February 2012

(1) Iwate Prefecture

[Courtesy visit to Iwate Prefectural Government]

Ms. Takase, Director, UNCRD: I would like to express my sincere gratitude for the kind and elaborate cooperation extended to us by Iwate Prefecture in setting up this UNCRD workshop in the Tohoku region. Yesterday, we held a preparatory meeting and came to realize that this is going to be a very fruitful workshop and we can expect a great deal from it. Through this information exchange with the local people and the experts, we hope we will be able to find solutions to some of the problems you have in the prefecture. Thank you so much for this opportunity.

Iwate Prefecture: I would like to extend my appreciation to all the experts who came here to Iwate Prefecture as part of the UNCRD programme. Thank you so much for coordinating the programme with us today. Today, we have some of our staff from the prefectural office who will be participating in your workshop that is being held for the purpose of exchanging opinions with the local people as well as experts so that they will be able to learn from this experience. We hope that they will be able to gain a lot of useful ideas and know-how from this workshop.

A word of thanks from the experts (Dr. Luis Diaz): Good morning, everybody. We would like to thank you very much. I have been asked to speak on behalf of my colleagues. First of all, we would like you to thank you very much for offering us your support. We would not be here without your support or the availability of staff to make all of this possible. We came from very different parts of the world – from Australia, California, Hawaii, Bangladesh, and Bangkok, Thailand. But our main purpose is to work with you and to support the people of your prefecture. So we would like to thank you again very much. We would like to be of help to you.

Iwate Prefecture: From the capital city of Morioka to where you are going will take about 2 hours to get there. It’s a rather long trip so we hope you will have a safe trip and it won’t be too tiresome. The city of Kamaishi was one of the hardest hit by the disaster. Therefore, you may not be able to enjoy its very rich culture. But the city we are going to spend overnight is called Tono City, and it is very famous for its rich culture so we would like you to enjoy it. Although you may not be able to enjoy the rich cultural aspects of the city of Kamaishi, we would like you to come back again after a few years when it is fully rehabilitated to see the rich culture of these areas.

(2) Kamaishi City, Iwate Prefecture

[Visit to Kamaishi Hamayuri temporary shopping mall]

Thank you very much for coming here. We would like to welcome you to Kamaishi. We look forward to your confirming the stage of reconstruction that we are in at the moment. A number of people here are very resilient and filled with the energy to rehabilitate this city.

This is the temporary shopping district or restaurant area. It was opened on 27 January and we completed building this facility with the support of the agency for small- and medium-sized industries and regional innovation. We would like to introduce you to Mr. Yamazaki, the owner of the bar. He is the representative of the owners here.

Mr. Yamazaki, representative of the mall: This temporary area contains nine restaurants, making it the largest temporary shopping district. It is approximately 23 square meters. We have two two-story buildings called A building and B building. The first floor is for dining and the second floor is for drinking and bars. Eight restaurants are accommodated on A building's first floor, and the second floor has eight bars. They are allocated space of 20 square meters each. In the case of B block, there are fifteen restaurants on the first floor and eight bars on the second floor.

In the case of B building, smaller restaurants are accommodated. And the drinking area is called the drinker's alley or street. Before the earthquake, there was a street called the drinking street and all the bars there have been moved out to this facility. Most of the restaurants on the drinking street have been moved to this facility. There are forty-eight restaurants here so it is the biggest shopping area. Shall we have a look around?

Q: My question is that are you a private businessman who received the support of the government? How was this coordination between the government and the private sector undertaken?

A: Actually, the local authority of Kamaishi City took the initiative in coordinating this sort of activity. The city officials came to visit to us and ask whether if we were interested in the facilities. If so, we needed to submit an application to the city authority; the city coordinated the applications and calculated the cost, and applied to the government for financial support.

Q: Is there a time limit for staying here?

A: In principle, two years. However, it depends on the rate of recovery. If it takes a long time to rehabilitate, the period can be extended.

Q: What is the framework of central government support by the small- and medium- sized industries agency?

A: The land is provided by the city government and the cost of building the facility is financially supported by the central government.

Q: Now there are only restaurants in this facility. Weren't there various other shops affected by the disaster?

A: There is another temporary facility in another location for other kinds of businesses. However, this one only for restaurants.

Q: How close is the residential area from here? Was consideration given to easy access?

A: It is not close to the residential area, but there were some restrictions due to noise as well as availability of land. So we chose this place, taking these factors into consideration. However, this place is just right because there is a bus station here. Another prospective location was much farther away.

Q: Covering the cost for the building had the support of the government, but what about the individual? How much of the cost did they need to bear in order to open their restaurant such as for interior fixtures and furniture?

A: Aside from central government support, additional support was received from the Lion's Club that covered major purchases such as gas stove and refrigerator. It totaled about US\$10,000. The Chamber of Commerce and other areas such as Osaka and Kyushu also gave us much support. In my case, I just needed chairs and a kitchen counter. I am good at DIY so I made them by myself. The initial cost was 400,000 yen, so that's about US\$5,000.

Q: How was the communication between the shopowners of the drinkers' alley before the disaster?

A: Even before the disaster, the alley also had an association and communication between the owners was good and we didn't have any problems between individuals.

Q: There seem to be restaurants that opened quite late in the area. What is the reason for this?

A: There were various circumstances that delayed the opening such as not being able to get the carpenters needed, and not being able to obtain the necessary material for the shop interior.

This is a small restaurant that specializes in dumplings. It is supposed to open this month and preparation is still under way. You can take a look inside.

Q: Can't you call upon the volunteers and have them help in preparing for the opening?

A: Yes, we also ask volunteers for their help, but they are usually asked to move heavy items such as refrigerators. When it comes to actual interior work such as putting electrical appliances into place, we oftentimes ask professional carpenters to do it.

Q: In the United States, professional carpenters have come to help as volunteers, but did they do so in Japan? Were there instances where the volunteers received instructions from the carpenters and helped them in their work?

A: That didn't happen in Japan.

Q: You should consider it because then you will be able to use the volunteers' skills.

A: We think that's a great idea and we need to get the young people more involved.

Q: And it would be less expensive

A: That's true. Nice idea.

Q: Are your customers the same as before?

A: Eighty per cent are new customers. Access is poor so mainly customers are people living nearby and volunteers. Before, most of my customers were salaried workers. Let's move on to the common washroom of this facility.

Q: Do all the profits go to the owners or do they have to pay some loan to the city or municipalities?

A: We have the profit to ourselves and there is no rent or such, but we pay for utilities such as electricity and gas.

Q: Are you taxed?

A: Yes, of course, we pay taxes.

Comment: I think you should negotiate as to whether those taxes can be removed.

A: The water bill for the community washroom is divided among and paid for by the tenants of this complex. We ask a company to do the cleaning and tenants pay 5,000 yen a month to cover such fees.

Q: This is the case of the United States, but a large corporate sponsor provides funds to a small business and pays for everything so that the small business can recover. All the money they receive goes back to their recovery. Big companies will sponsor little companies for those types of fees.

A: I see.

Comment: Louis was saying that, in doing so, big companies can get their tax deductible. So it will also benefit the corporation.

A: I see. That is something to be considered. In fact, several companies as well as talent/singers were involved in the recovery phase, and they contributed their efforts at the opening ceremony of this temporary shopping district for free. The cost for the ceremony was cut to zero due to their help. So I returned their favour by posting their posters in my shop.

[Workshop at Kamaishi]

Ms. Takase, Director, UNCRD: It has already been nearly one year since the major disaster hit the area and here I want to take the opportunity to express my heart felt condolences to the people who passed away and also those who survived. I am thankful for the opportunity to sit together and exchange our ideas. Here we have experts have come from all parts of the world and all parts of Japan to have this opportunity to talk with all of you. Once again, I would to say thank you to Iwate Prefecture for setting up this activity.

Mr. Sawada, Director, Kamaishi Chamber of Commerce and Industry: As the Chamber of Commerce and Industry, we set up several initiatives. One of the initiatives is that we have set up special consultation sessions for those affected by the disaster and who are in need of financial support. For them, we provide advice and consultation services so that they can get funds from the Japan Finance Corporation. Also, there are some victims who need advice about obtaining aid in the form of grants from the central government. We are giving advice to such people and we have already processed several different cases based on their applications.

Another area we have been working on is developing a new vision for the city of Kamaishi, including ground design and infrastructure and development, in cooperation with the government and the prefecture.

And we have received a lot of material donations such as PC, tables, etc.; we have distributed these goods to the members who are in need of those items.

We also conducted seminars and lectures concerning reconstruction of the city and business activities.

Mr. Kikuchi, Kamaishi Junior Chamber: As the Junior Chamber, immediately after the disaster, we conducted a survey to grasp how many people needed food, water, clothing, and special care. As we did so, we faced some problems due to the breakdown of transportation infrastructure, which caused the isolation of some communities. What we did first was find out where those people were staying and identify their needs. We organized a group of people for dispatching to remote areas.

A second activity was that right after temporary shelters had been set up; people encountered difficulties as they had been relocated from several different areas and were living apart from their families and friends. So it was a very stressful situation for them. In order to eliminate such stress, we held many events called “Everybody Smile Project,” during which we sang and engaged in dueling as a sport.

Q: As far as I understand, you have been undertaking relocation activities for displaced persons and setting up community-level discussion among the victims so that they will be able to overcome with their mental problems. What I am interested in is the professions of the people who have been helping you.

A: Those doing such work are just volunteers who are also members of the Junior Chamber.

Q: How about the livelihood situation of the victims? Are they able to make an income? How are they managing to survive?

A: There are two kinds of people who live at the shelters; one is those who work and live on that income, while the other is those who lost their jobs and don’t have any income. These people are looking for jobs and they try to manage by either obtaining a subsidy or unemployment pension.

Mr. Odashima, Chairman of Kamaishi Federation of Shopping Mall Association: After the disaster, all the functions of the shopping district in our community were

destroyed. Therefore, we are trying to reestablish businesses in the community where I belonged to called Omachi shopping district, which is a very small community.

I have a friend who is working as a designer at Nissan Motors. According to him, the government's aid will come in the form of mainly hard materials and more than likely not in the form of soft materials like providing technologies. Therefore, he asked whether it would save our cities if they helped by providing industrial design and interior design technologies.

After the tsunami, the space was empty because the shopping centre in our community had been destroyed. We came up with the idea of establishing a small shopping area using old containers in that empty area.

Fortunately, the owner of the shopping centre lent his land to us at very low cost and we plan to put ten shipping containers there. We will then put another container on top of each of the containers. In that way, there will be altogether twenty containers, making a two-storied building at very low cost. We plan to use this design of building for restaurants as well as shops. The tenants will aim to successfully operate their businesses for five years. After five years, we will leave this place and buy land and each of us will start businesses elsewhere. That is the model as well as goal of our project. We will try to succeed with this model and plan to expand it to other disaster-affected areas.

What disaster-affected areas need is a glimmer of light and we hope to be that light.

Q: Has that project already shown results, or is this the starting point?

A: Construction will start in August.

Q: Have you already decided on the tenants who are going to do business in the mini shopping area?

A: Not yet, but we are placing the condition that the tenants should have the strong will to do business.

Q: Can you tell me the size of the container?

A: The size is 20 tons. As soon as the project is completed, we plan to sell them.

Q: Is there coordination between the three organizations that just made their presentations? Is it a matter of the whole community as a group, responding to needs for long-term recovery versus individuals' opportunities or efforts, or is there collaboration among those efforts. The reason why I ask this question is that I have seen a lot of disasters and the evolution from response to recovery takes, many many years and there are different activities. You mentioned the case where your work was to identify where the victims were and their origins and what their needs were right after the disaster, but they are a lot different later on. People change. This journey takes place and there has to be collaboration within the community to make sure that you keep pace with those needs or people will be lost along the way. Each of your projects is exceptional, but there has to be mending in the time together or you will miss something, unfortunately.

A: We are taking a very Japanese way of approach. As we are living in a closely knitted society, we share the same mindsets. In an official manner, we have not yet established a collaborative structure; however, as I used to be a member of the youth chamber as well as was active in the community, we share the same mindset and can communicate with each other without some official framework.

Comment: I understand that you are a very resilient and very close community. Sometimes large corporations, when they are making decisions as to whether they can come back to and have an impact in the area, will look to a single voice, a unified group. It may work here where it's informal, but it will require much more for large companies to decide to come back. They may want to see that a single collaboration for action. This is just a suggestion.

Mr. Ogasawara, Secretary General, Kamaishi-Otsuchi Industrial Research Development and Training Center: My work stations are Kamaishi and Ozuchi. Immediately after the disaster, I conducted a survey of the industries in the area. In Kamaishi, there are altogether 2,400 offices and among them 1,380 had been washed away by tsunami. Among them, 180 enterprises were either 100 per cent or 50 per cent severely damaged or destroyed. We are focusing our support on these companies

Starting from summer, the grant aid policies of the government as well as prefecture were finally formulated. The government subsidy called “group subsidies” is for small- and medium-sized enterprises (SMEs), that have been affected by the disaster. The grant goes to SMEs as a group. The government covers three-fourths of the cost and approximately fifty companies received such aid. In addition, the prefecture provides rehabilitation aid that covers half of the total cost and 140 companies have received it.

The Organization of SMEs supported the businesses that suffered damage by building temporary shopping areas and temporary factories. Remember the facility we visited this morning? It was supported by this organization. In Unosumai, it is planned to build the biggest temporary factory and shopping area, but it has not been started yet.

We have been supporting the companies, focusing on SMEs which fit into the categories of the types of subsidies I mentioned before; however, there are other types of businesses which do not fit into those categories. So the prefecture established a new fund for them which covers half of the expenses. Starting from April, the government established Phase 4 of the Group Subsidies, which has a budget of 15 billion yen.

It is been almost one year since we suffered from the disaster, and there has been a lot of support and funds made available to our region. Right now we are facing new forms of issues and problems. One of them is employment. There are some companies that have restarted their businesses, and naturally they would like to recruit employees. However, they have found it difficult to find manpower. This is a result of the unemployment benefit extended by the government, among others.

Another challenge we face right now is the shortage of construction companies, although there are some subsidies for the reconstruction of companies.

Another important challenge at the moment is between the communities in disaster areas and the central government; there is no coordinator who can serve as a link between them.

Mr. Sasaki, Director, Kamaishi Bay Fisheries Association, Youth Chapter: Due to the disaster, those engaged in fishery businesses in Kamaishi City lost 90 per cent of their fishing ships. Moreover, sea aquaculture business men lost almost nearly 100 per cent of their facilities. We removed debris and repaired our facilities damaged by the disaster with the support of the prefecture and city in the form of daily wages received until the end of last year.

Regarding the acquisition of boats that we completely lost, there are subsidies available from the government for the acquisition of either new ships or second-hand ships, and repair of damaged ones. So there are three different options available. For new ships, the subsidy will be provided by the government for the two years it is being built. For used ships, we have to go and buy them ourselves. Then there is the repair of damaged ships. There was a plastic factory where many of the fishermen worked during the off season, so they can manage to repair their damaged boats by themselves. Thus, in our town the repair of small fishing boats can be done faster than other areas.

Let me explain the progress of our efforts in bringing back our aquaculture business. In order to have aquaculture, you have to have some foundation. What we did here was set up bags of sand and tie them all together with ropes in order to anchor the foundation.

But the problem was there weren't enough ropes. In some areas, people threw away the old ropes together with debris, while other areas kept those that were still usable. As for our city, we had some ropes available because we kept some of the usable ropes that were found in the debris. So our recovery was much more sooner than others. However, the overall picture is that many cities are facing delays in restoring their aquaculture because they do not have enough ropes.

The shipment of aquaculture, in particular seaweed, is scheduled to begin from March. We used to ship the seaweed after boiling them, but we don't have the machines to do that anymore so we are going to sell them fresh. The food processing companies are expected to undertake the entire process.

As for other aquaculture products such as oysters and scallops, we received oyster "seeds" from our neighbouring prefecture of Miyagi, and we put them into the shells. As for scallops, we obtained middle-sized scallops and put a hole in them so that we could string them and hang them in the sea. So by the end of this year, we will be able to sell them.

Another product is sea squirt, and we used to produce their "seeds". We were able to preserve some seeds despite the disaster, but other areas lost theirs. Now we have finished planting them and will be able to make shipments a year earlier than other areas.

This is the situation regarding aquaculture. As for fishery business, fishermen are private entrepreneurs so those who own ships continue to work. And people like me have bought used ships and restarted their businesses. The subsidies system allowed us to receive funding smoothly in order to restart our businesses, but we still need to purchase tools and equipment by ourselves. The insufficient distribution of such equipment is a struggle for us. We have to make new investment in order to purchase them as well. Most of the people who engage in this business are advanced in age, so they wonder if they will be able to repay this debt. In order to support those who need financial support, there are some private initiatives; for example, one of my friends in Morioka Prefecture is a shoe retailer, but he started a business to support the fisher-men. By putting advertising logos and stickers on fishermen's boats, they are able to get some money from the advertising company. This kind of project started from the 12th of September last year. I also have some advertisement on my ship. Since the introduction of this kind of sponsorship programme, already about nine ships are displaying ads.

Q: You mentioned there are some debris; what kind of debris are they? Can they be recycled?

A: Most of the debris are recyclable. However, for example, just as the ropes I mentioned, most consist of fishing gear as well as materials which could be recycled. They are a mixture of recyclable materials and those which are not. Some items are made of stainless steel and they can be reused. There are volunteer divers who search for them so that we can use them. There are only five to ten of them, so it is hard to pick up heavy items and those items which are sunk in the deep sea bed. There are things lost in the waters of this bay, and it is so hard to collect them.

Q: What kinds of "seeds" were swept away? Can they be rehabilitated genetically?

A: The seeds lost were those for seaweed, scallops, and oysters. Each of them generates at a different time. In the case of scallops, we wanted to be able to ship them as soon as possible so we bought one year old "seeds" to be able to make the shipment on time within a year.

Q: Do you do fish cultivation?

A: No, not at the moment.

Q: Where is the commend centre where you hold business meetings, public meetings, and official meetings?

A: At the Kamaishi City Government office.

Comment: I asked because when each of you spoke, I felt that I wanted to see information, I wanted to see photos of the work you are doing and to look at the businesses that suffered damage on a map. And a draft of how much money is needed as well as a 3D model of the actual reconstruction work. And I wanted to see a map, where all these things are needed. I think this would be very helpful not only for outsiders, but also for the public, the citizens, and the businesses, and this would allow the leaders to think of it in a more visual way to ensure better communication. This would be helpful fund-raising and, as she said (Shigetani), for planning for the future. People need to see the planning for the future.

Q: Is there a ground vision for the reconstruction plan?

A: Last year in December, the rehabilitation plan for Kamaishi City was formulated. The basic policy includes information as to how the land should be utilized and the direction we intend to go based on this vision as well as how we are going to implement and realize our future plan.

Mr. Kano, Representative, @Rias NPO Support Center: I am the representative of the NGO called Rias NPO Support Center. Our mission is to participate in the reconstruction of the local community as a support organization that serves as an intermediary, with the involvement of as many participants as possible. We have worked in this area even before the disaster, but today I would like to talk about our activities after the disaster. The major goal of our NPO Support Center is to make the victims of the disaster take a major role in rehabilitating the community. I would like to introduce you to our activities towards achieving this aim. The first thing we have been working on is in order for the victims to remain in their local communities, we have to create jobs. That is the first thing. We created a model based on the Cash-for-Work concept. After the disaster, there were many jobs that were done without pay, and we developed them into payable work. In this way, Iwate Prefecture and the city of Kamaishi worked together in order to formulate an emergency employment system. We are employing 100 persons using this model. Starting from the middle of March, eighty-six out of 100 will be employed as communication officers for the temporary housing complex. Their job is to help us create community-building activities. A second activity is match-making between the employer who wants to recruit people and the unemployed who are looking for jobs. All together there are 450 organizations/NGOs/NPOs, both international and local, that are lending their support in the coastal areas of Iwate. We are working as a coordinator between these 450 organizations and local governments. We have an active network with the NPOs working in other prefectures such as Miyagi and we exchange information and opinions with them. We offer information as we have produced an information exchange space for all the NGOs in the three disaster-affected prefectures. As for those in Iwate Prefecture, we provide information to the prefecture as well as support information exchange between those who suffered from the disaster and NGOs.

Although it may take some time, the victims are taking the major role in recovery planning, and it is important to let their voices be heard. We have a project underway to set up a round-table discussion on the multi-stakeholder approach. We believe it to be very important to have information on what is happening at the disaster-hit areas so that we can match up the private as well as public support with the needs of the people. Unfortunately, in Japan this kind of intermediary such as NGOs and NPOs is not fully understood, so we struggle to find funding as well as manpower.

Comment: I think the role of voluntary agencies in each step of the recovery is important because they are the grass-roots of the community. They are part of the community,

sometimes they are the victims, so they have a realistic understanding of the real situation. Often they speak objectively; often they are trusted by the community because they are not government officers or businessmen, but intermediaries. Your work is exceptional, but your work is at the beginning stage so you have to sustain that work. The only way you can do this to unite your vision as one vision throughout the nation. Whether you are in Japan or the US, or anywhere in the world, disasters come and sweeps away that diversity. So we all have the same needs as human beings. A lot of time is needed for voluntary agencies to evolve. Even though you don't have money, you can express that concern by objective action. And then it will be the responsibility of the government and community to come together. This gentleman here has a question as to who is the liaison between the government and different entities. Here we are sitting together; we are the liaison and you are the community that comes together, and then you just have to take the next step and do it.

Q: Is there any work (coordination) in regards to habitat, damages and restoration?

A: I'd like to express my personal opinion, not as a public presentation if it's okay with you. There is still no rehabilitation in the area. So far, as far as recovery is concerned, there is still a lot to be restored. Speaking of recovery, there are two aspects such as recovery of the town and recovery of the industries. For recovery of the town, it still has not been decided as to how the land where land subsidence has occurred will be assessed? The victims are trying to survive without knowing what will happen to their assets. The policy has not yet been decided. That is why those people in the affected community need to speak out as to what they want for their community. We should not wait for the authorities to come up with a plan. Unfortunately, people here do not have this kind of experience. In order to rehabilitate the industries, we need to maintain a balance between the people's livelihood and the city development plan. People who operate businesses might initiate efforts to rebuild their livelihood, but local government action might still be delayed due to lack of experience. So the answer to your question is no.

Q: I am from Japan. Thank you very much for receiving me. My question is that there seems to be much coordination needed among the groups, but in order to realize those actions what kind of structure do you want to have in your community?

A: At the moment, we are in a state where everybody is so preoccupied with looking after themselves. The same is true for NGOs and authorities – we are still at the stage of defining the challenges and issues. Therefore, internal coordination is needed but probably later or in the near future. Sometime in the future, there should be a round- table for all the stakeholders. At the moment, it is too soon to realize that kind of action. Another thing is that an actual future plan or ground design has not yet been established.

[Visit to Unosumai temporary shopping mall]

This is called Unosumai temporary shopping mall. It was also funded by the Organization for Small- and Medium-sized Enterprises and Regional Innovation.

Mr. Nomura, Representative of U! Hamanasu shopping mall: This area is called Unosumai. Originally, there were forty to fifty shops, but out of them nine of the shopowners initiated and participated in this shopping mall project.

So far, the city reconstruction plan has not yet been formulated by the town authorities. So the shopowners are still considering what they should do. We could move to a place that is now a mountain or here. We would like to reopen our shops in the centre of the town, but we are still waiting for the relocation plan to be announced.

Q: You said there were forty to fifty shops in the town. Where are they now?

A: Some more shops will open here and are waiting for construction to finish. Others are doing business by running restaurants using mover vans..

Q: Could you tell me how far it is from here to the location that used to be Unosumai?

A: When you came here you passed through a wide area of land, and that's the place that used to be Unosumai (Everything was washed away).

Q: How far did the water come in?

A: We saw a big construction sign when we came here. Water came in up to the place.

Q: There used to be forty to fifty shops. Here you have nine shops and four more are being planned. What happened to the rest of the thirty shops? Are they going to close down?

A: We are still investigating this matter. However, we heard that twenty shops were not going to reopen their shops. There are cases such as the death of the shopowner as well. So their wives are not able to continue the business by herself.

Q: What are they doing over there?

A: They are building temporary schools, both an elementary school and a junior high school. The elementary school just moved here the day before yesterday. The junior high school will move here next month. The students are attending Kamaishi Junior High at the moment.

Q: How is your business doing here? Do you have a lot of customers?

A: In the beginning, business was good. But now I have lost customers because there are more shops in the bigger cities. Even volunteers do not come here often so I have very few customers and business is difficult.

[Visit to Horaikan (Hotel)]

Ms. Iwasaki, Landlady of the hotel: This memorial was set up after the 11 March disaster. If you have QR code reader, you can get detailed information about the disaster. This is a very high-tech memorial. There is a message from the Meiji period written here. "Whenever there is a tsunami, don't worry about what happening in your neighbourhood but go to higher ground and save yourself." This stone is not only to look at, but is also a place to pray for those who passed away. In addition to this memorial, there is also a bell. It was donated by the relatives and friends or families of those who lost their lives. This is the area where the disaster hit hardest. It is called Ozuchi-cho and there are about 1,300 people, 10 per cent of the local population. You passed through the elementary school and junior high school, and they are called the "Miracles of Kamaishi" because the students and pupils of the schools managed to escape even though they were so close to the coast and river. This is because they include disaster prevention in their school curricula. When you are confronted by a disaster, you have to overcome all the obstacles to save your life. This message of going to higher ground and saving yourself is one of the very essences of disaster response. In the back of the building, there is high ground where I took refuge with a few other people during the tsunami. This building, Horaikan, is one of the four official refuges or shelter buildings set up by Iwate Prefecture. When this building was designated as a shelter, no one wanted to stay here because they thought that the inside of the building would be a mess if there were any aftershocks. After taking shelter with the others, we experienced several aftershocks and I somehow managed to be calm because I knew I could save myself if I ran to higher ground and if I ran at once. Then I came to realize that if people had managed to do the same, they could have saved their lives. After experiencing this major disaster, I realized that human beings cannot fight against nature. Neither God nor Buddah can save you from natural disasters, and what you need to do is to escape from them. You have to run for your life. So the important thing to do is to receive disaster education that teaches you how to escape and disaster planning. This summer we will hold a sports tournament here. Although we have been hit hardest in this area, we will enjoy nature despite the harsh conditions. There is also something we hope for and that is

a refuge shelter for all the villagers living around this area. This shelter can, at the same time, serve as a gathering space for the villagers to communicate with one another and as seats to watch sport tournaments.

This is a map produced after the earthquake. We are now trying to promote green tourism. This map is the source of our motivation. This here is called Nebama Village, and there are seventeen households in this village, with only one having left. The villagers gathered here and took refuge until the 26 March.

So it has been nearly one year since the 3.11 disaster, Horaikan is planning to hold a memorial ceremony for those who passed away. This will be a time when the villagers will be able to see the real situation of the village compared to before because they were then in grief. Many villagers have become concerned about their native village, as to whether it will be rehabilitated or not. There were quite a lot of tragic incidents around here. Last summer, there were several cases of suicide. In February, a young man committed suicide by drowning himself in the ocean. We understand the fact that the government and the authorities are making the effort to rebuilding towns, and villages and we also received many visitors from the cities. However, the mindset between us is different because while the world around us is moving on, people living here have the feeling that the world has ended.

We suffered a severe disaster a hundred years ago (1896) and the people of olden times survived and rebuilt their village at their own pace. The difference between disasters of olden times at disasters today is similar to the difference between the digital age and analog age. The environment is different from the previous time. Especially, young people feel that they have lost everything. They don't know how whether they would be able to catch up with the modern society around them. But, as for me, I don't think that what happened to us is necessarily a depressing situation, instead, I think it is a chance to renovate our way of life. We used to live in harmony with nature. Famous poets and folk tales refer to the spirits we have in Iwate Prefecture. We should honor the traditional Japanese mindset in order to shape the future. What I can say here is that in this community, we will be helping one another, that is for sure. The municipal officers, post office workers, and volunteer fire brigade, they did what they could do to help other people and themselves.

This is called the Iwate spirit and it is based on the appreciation of nature and co-existence with nature. Since losing the blessings of nature all at once, we began to appreciate the beauty of the ocean and the food it brings to us as gifts. I hope that the world will understand this spirit of appreciating nature and helping each other out with a strong bond. After the disaster, we prayed and we came to understand the pain and hardships of those in Kobe City and the victims of 9.11 in New York. Although normally, Iwate people do not want to be subject to charity, we appreciated the help from the people of Kobe. The people of Kobe were worried about us and provided much support to us because they suffered in the same way, and we would be willing to do the same for them. Our feelings have become mutual. So we will try our best to rehabilitate. It may take a long time, but we welcome the help from all around the world and throughout Japan. Please continue to support us.

I have two episodes to present to you. One case is that during the disaster, a fisherman was found dead in his house and he seemed to have tied himself to the house. The reason was because he knew he couldn't escape from the tsunami and he was concerned that his family would search for his body if he was not found. He didn't want to put a burden on his family. That is the spirit we have in our village. Another case is a five-year old girl who lost her mother asked us if we knew who was stronger than a tsunami. We said no, and she said those who run for higher ground are the strongest. And then she added that her mother tried to save her life by swimming to higher ground. Even the five-year old girl

has the strong spirit of Iwate and we are very resilient people. We will rebuild our society. So please continue to help us with your support and encouragement. Thank you very much.

[Tenjin temporary housing]

On your right, you can see the temporary housing. Altogether there are forty-seven temporary housing areas and this is one of them. Individual houses are altogether 3,164 houses. There are 139 households taking shelter in this housing complex.

[Kamaishi No. 2 Fish Market]

The original fish market was around here but it was completely destroyed. Actually, Kamaishi City had a new fish market project before the disaster. That new building under construction was also destroyed.

Due to the impact of the disaster, the ground subsided to the scale of 1.1 meter.

No. 1 fish market was completely washed away and the new one was also affected so we have to use No. 2 fish market.

The Iwate fishing season for saury starts at the end of August and lasts to September. This is followed by the season for catching salmon.

In order to complete preparations in time for catching fish, we have to lift up the ground by 60 cm. We cannot lift it to 1.1 meter because in order to do that we will need to lift up the whole structure.

We also need ice to work at the market. We have to bring ice from the other facility.

The annual fish catch here is 17,000 tons, amounting to 2.7 billion yen. Due to the impact of the disaster, saury's annual catch has declined by 70 per cent, and salmon in half.

Q: Due to climate change will the water level rise? Did you make the adjustment taking it into consideration?

A: The priority at this moment is making it possible for the fishing boats to unload their catch in order to make it in time for production.

Ofunato City and Rikuzentakata City, Iwate Prefecture 28 February 2012

(3) Ofunato City, Iwate Prefecture

[Workshop at Ofunato]

Mr. Obara, Director of Industrial Promotion, Ofunato Chamber of Commerce & Industry: I am going to talk about what we have been doing after the disaster. Immediately after the tsunami hit our city, our offices were completely swept away. It was a major catastrophic disaster for our members and for our offices. So the things we did immediately after the disaster was on behalf of the companies and their employees. We went about applying for unemployment benefits coming from the central government, so that they would stay employed or have a means of livelihood. Another important task we did was on behalf of our members, who are SMEs. They had loans and naturally after the disaster, they were not in the position to return those loans. Therefore, we negotiated with the banks to give them some period of time to return the money. As time passed, many of those companies started resuming their businesses. However, the burden for these companies was that, in addition to their loans before the disaster, they had to get more loans from the banks in order to run their businesses again. So there was the problem of double debt. In order to find a solution to that very difficult financial situation, we introduced to those companies the subsidies or support available from the central as well as local governments. As time went by, many businesses got back to their feet, especially, Taiheiyo

Cement, fishery producers, and food processing companies. Right now, the employment situation has improved. Looking at the offer-to-demand situation, we now have multiple job demand to job seekers.

Q: That was a very nice thing you did for the companies. But I am interested on the size of the companies you mentioned. Are they large, medium or small companies?

A: The size of the companies we supported varies from big ones to small ones. However, our focus was on the major large companies because they generate a lot of employment. The recovery for SMEs have faced a delay, so from now on we are going to put more efforts on SMEs.

Q: Those companies which started very quickly, were they large, small or medium?

A: They were large companies.

Q: Yesterday we visited the merchant association. Is there any relation between that association, and your association or merchant associations in other areas? Do you have any common goals shared among the merchant associations? Is there is a coordination or integration between the reconstruction activities?

A: Yes, we have a relationship with the merchant association of Kamaishi as well as other local merchant associations. We also have coordination between temporary shopping districts within areas in this vicinity.

Mr. Miura, Ofunato Junior Chamber: Looking back, what we did after the disaster was serve as a bridge between the individual companies and aid and support extended from other associations outside the city and prefecture. We thought it was very important for our youth chamber, in order to continue doing our work, that businesses run by individuals and small companies recover from the disaster and get back on their feet. Upon entering this fiscal year, the Junior Chamber elected new members. Under the leadership of a new leader, we have come up with a new slogan, and that is, “Live in the present with pride and have gratitude for the support and assistance received.” So it is very important that, in order to express our appreciation, we are able to stand on our feet. We must try to make a recovery in order to return the gratitude we received from the outside world. The second pillar for this association’s activity is to increase our members. We have thirty-eight members at the moment but there used to be fifty members five years ago and 100 members before that time. I think the Junior Chamber is shrinking in terms of members. We would like to increase our members so that we can have a stronger organization and carry out a lot of activities.

Q: You said your organization implemented some of the activities for the members; I would like to know what are the challenges were for you in implementing those activities?

A: We are planning to work on improving the physical health care of the children and youth. There is a lot of debris and the temporary housing areas are too limited in space so they cannot exercise or play around or do sports in order to maintain their physical health. That is the project we are planning.

Q: Concerning the decrease in membership, what is your understanding of the reason for this decrease in membership?

A: We are called the junior chamber of commerce so when we reach the age of forty, we have to retire from the association, but for entry there is no age determined for invitation. Therefore, in order to expand our membership, we need to actively recruit members; otherwise, our financial situation would be weakened. That is also one of our challenges; how to increase our membership.

Q: Because of my role, I have been communicating with many younger people, including those from the Ofunato area as well as many of those who are considering coming back to this area in order to restart their fishing business. So in order to receive those young people,

do you have any system in place?

A: In response to your question, our existing members consist of those who are running their own businesses. They are trying to generate employment as well as protect existing employment in this area. We implemented this kind of project last year and we are continuing to do so this year as well. For starting up a new business in this area, the door is always open. We will welcome them and are willing to cooperate with them, so we will provide them with the necessary information and support. In addition, we can thus expand our membership. Officially, we don't have any plan or scheme, but our door is always open.

Mr. Sato, Ofunato Main Street Shopping District Promotion Association: I would like to explain to tell you about what we went through after the disaster. The damages were beyond our expectations; therefore, at the time we suffered from the earthquake as well as tsunami we were depressed by the situation and thought it would be impossible to revive our businesses. That was our situation immediately after the disaster. However, we received much support from the government as well as from neighbouring cities, the prefectural government, and from overseas. So with such support and encouragement, we gradually started to feel motivated. Mr. Obara also mentioned that the damages caused by the disaster amounted to 6.3 billion yen in Ofunato City. Our shopping district was destroyed almost 100 per cent. Now that we have been motivated by the great support received, we are determined to put our efforts into getting back on our feet. We assessed the recovery situation of retail stores and we confirmed that approximately 20 per cent of the small-sized shops have already started their businesses. Seventy per cent of the large-scale enterprises have already recovered their business. In comparison, the recovery rate of small businesses is so slow because the recovery budget mainly goes to large-scale businesses. Moreover, 20 per cent of the small-scale businesses are going to shut down their business. The shops consisting of the 20 per cent that got back on their feet to some extent are those who were being provided support and reopened their shops in temporary shopping areas. However, they want a shop of their own sometime later rather than opening a shop in the temporary shopping facility. Some people open their shops in other towns or areas, but they all want to reopen their businesses in their community as a permanent business. Now a limited number of retailers have started their shops again. One of the major reasons as well as the bottleneck for not being able to resume their retail businesses is that they are heavy in debt with double loans. This means that they were already in debt before the disaster and they now need to get new loans in order to rebuild their businesses. There are government systems that support businesses with the problem of double loans, but it is very difficult for that kind of support to reach the level of small shops. There is private financial support extended as a donation or contribution from various sources; however, this kind of support is not reaching the small shops. So we are sincerely hoping that national government as well as prefectural government support will reach us as early as possible so that they can resume their businesses. Our members are motivated to rebuild their business, but their hands are tied with the financial restraints of the current situation.

Q: Has support been received from major exporting companies?

A: Much material support has been received and we are very thankful for it.

Q: You said that 20 per cent of the small businesses have recovered from the disaster and 20 per cent of them are going to close down. What about the other 60 per cent? What happened to them?

A: They are still wondering what to do, given the very difficult situation they face of living in temporary housing right now. And we cannot operate businesses in the temporary

housing. They are also worrying about another tsunami coming to the region, and they are still waiting for the new reconstruction plan of the local government. However, it will take some time, about two to seven years. They are unable to make the decision as to whether they should go back to the same place as before the disaster to start their business or to rebuild their business elsewhere. This conflict of emotions or uncertainty poses a dilemma. There are three reasons for the growing uncertainty among the operators of small businesses. The first is something I just mentioned that the processing of supports and aid for SMEs have been delayed. The second is the double loan problem, although some action has started to be taken by the central and local governments. And the third concerns land-use planning and it has not yet been started in the city of Ofunato.

Mr. Funada, Ofunato Agricultural Cooperative: Our agricultural cooperative covers certain areas, such as Ofunato City, Rikuzentakata City, and Sumita City. After the disaster, 45 per cent of the paddy fields were flooded, and 337 hectares of paddy field were flooded out of a total of 750 hectares. Furthermore, 530 agriculture households were unable to get their paddy fields ready for planting this season. In addition, there are also farmers who grow tomatoes. About 1.2 hectares of tomato farms were completely destroyed as well as tomato-producing facilities. We also have other important agricultural products such as mushroom culture and cattle farms. The Shiitake mushroom culture farm has an annual production of 300 million yen estimated value. Due to the disaster, there wasn't sufficient electricity and this resulted in hampering the growth of the mushrooms. On the other hand, because of the lack of electrical power, cattle farms which produced milk had also been affected. Refrigerators did not work and it was impossible to undertake the sterilization process while milking machines also did not work properly. As a result, the owners lost their revenue. In addition to such damage, agricultural tools and machines were swept away. Farmers cannot engage in cultivation without tools. Another negative impact is the pollution of radioactive substances, which was dispersed after the explosion of the nuclear reactor in Fukushima. We suffer from both the direct and indirect impacts of this radio active pollution. For example, we produce dried Shiitake mushroom, but due to rumors that there was a certain level of radioactive substances in our products we had to stop shipments of our products. And also the rehabilitation of agricultural land has not yet been undertaken so it is impossible to start planting the paddy fields. Moreover, there is a possibility that our agricultural land might be used for a building complex for those whose houses had been swept away. That will be an additional negative pressure for Ofunato City's agricultural sector. As for the stock-raising business, we need to import fodder for animals from other areas because of radioactive pollution. So I think there is an immediate need for the cleaning-up process for these radioactive materials. There is also a need to set up safe food-producing standards so that we can deliver our products to the consumers without the distraction of the influences of rumors. Moreover, for the agricultural sector, there is an immediate need for tools and facilities in order to recover. For farmers who are not producing anything, they don't have any other income. So they need some form of benefits or confirmation in order to make a living as well as an early recovery plan for the agricultural sector. For the future, we would like to establish a new model in order to welcome new farmers and set up employment systems as well as a foundation for training the younger generation in running a farming business.

Q: You mentioned three areas; crop producing, tomato, mushroom, and milking cattle farm. All of these have been affected by radioactive substances. And then you said you wanted to establish a new model that produced workers and trained the younger generation of the community. Have you already submitted these activities in a project- type proposal to the local authorities? If not, what is your future programme to get help from the local

government or support from outside your community?

A: In order to start the cultivation of paddy fields, we are now in the process of getting support from the government in the form of disaster rehabilitation business support. We aim to recover our paddy land in fiscal year 2013. As for radioactive contamination, on this specific issue, we have to cope with the situation case by case by measuring the respective dose level. As for nurturing and training the younger generation, we are moving into action. We have already come up with a plan and concept which is going to be launched in Rikuzentakata city. We are going to start a large-scale horticulture complex. There we are going to invite young people to acquire the know-how as well as technology of running a horticulture farm. So at the end of the day, they will be able to become independent horticulture farmers. We have an idea of running a similar project in Ofunato City. We are submitting the project idea to the local authorities in order to realize those ideas. In terms of the former horticulture project in Rikuzentakata City, we have already submitted the concrete plan to our government. If all goes well, the horticulture complex is going to be commissioned sometime in 2013.

Q: Have you considered bringing in new soil or new substrates to grow mushrooms? I am familiar with a programme where coffee grounds and tea leaves are being used to grow mushrooms by young people in the United States and it is a very successful business. In that way, the customer would be assured that there will be no contamination of the products. And I am wondering if there might be other waste products that might not be contaminated that could be used for soil mending and for growing agricultural products.

A: About the radioactive contamination you mentioned, particularly in the case of animal farming, our plan for dealing with contamination is just to deeply scoop up the soil with a crane, reclaim it, and mix it with uncontaminated soil so that we can lower the level of radiation. And reclaimed land will be used to grow grass to feed the animals. We have such a plan; however, we also have a bottleneck such as construction machinery such as excavators as well as diggers are not sufficient in number. That has hampered plan implementation. Therefore, at the moment we are asking the authorities to give us support so that we can get the necessary equipment to implement our plans. As for other areas that were contaminated by the radiation, compared to the Fukushima area close to the meltdown reactors, our dose level is lower. That dose level can be lowered by using chemical fertilizers and so on. Our largest problem at this moment is inundated paddy land. It covers a wide area of 330 hectares and those paddy land also has the problem of being mixed with glass, chips as well as contaminated by oil. So the soil of that paddy land should be replaced immediately with new soil, but our problem is that there is no available soil for replacement. We have problems in not only getting the new soil, but also dumping the contaminated soil. We have nowhere to store that soil.

Q: We would like to clarify the fact concerning the shipment of mushroom and the reasons for shipments having been halted by the government. Is it because of a national food standard and that they did not meet those standards? Or was it because of rumors and the concerns of consumers, that even though the dose level was below government standards, consumer sentiment cause the halt in distribution?

A: It was because our mushrooms had exceeded the national standard. The national standard is 500 Becquerels and our mushroom in Ofunato has 1,600 Becquerels. In Ishinoseki City it is over 2,000. Hiraizumi has about 1,500 Becquerels. So that is the reason of it being halted. Not only the mushrooms, but there are other crops that may have been affected by the radiation.

Mr. Iwaki, NPO Dream-Net Ofunato: Our NPO was founded in December 2006, and March this year marks the sixth year since its foundation. Our activities reach out to

Ofunato, Rikuzentakata, and Sumita. The aim of our foundation is basically to promote local economic activities as well as establish a bond among the citizens and have a very active township. As for concrete activities, we have given various kinds of lectures to different types of volunteers, and different NPOs as well as organizing festivals. In the wake of disaster on 11 March, with the support from the NPO called Aichi Net from Aichi Prefecture, we started the Kesenuma Citizen Reconstruction Liaison Group. Along with the volunteers, we have engaged in activities such as distributing rice balls to the victims and also transporting goods in order to help the victims. In addition to our activities, we are publishing this type of community leaflet, featuring a lot of information about what is happening in the community and also information about emergency centres, offices, and businesses. On the second page, we have featured photographs of some products that victims have made themselves using the fabrics donated from some other cities. The victims sewed and knitted these products and in this way we are trying to reinvigorate the everyday life of the victims and citizens. We are now focusing on the victims who have been living in temporary shelters and others who have taken refuge elsewhere such as their damage houses after repairing them. Others stay in public housing complexes. However, aid given to victims who decided to live on their own is considered very limited. Therefore, in order to know the needs of those victims, we are making rounds of their home. What we have in mind for the future is trying to gather together all the displaced victims of our community in one place so they can communicate and chat and share information. In addition, we would like to take advantage of the handicraft produced by the victims. From just being made for fun, they can be sold for revenue. We are trying to do this kind of activities. However, in order to set up such activities, we need to have funds. We are going to apply for the Iwate Prefecture Government subsidy. Right now, our NPO employs twelve people. Before the disaster, we only had one employee working for our organization.

Q: First of all, thank you for sharing information on your activities. The question I have is that is there any activities where the survivors of the disaster can come together and network with government agencies that are providing particular programmes for assistance?

A: At Ofunato City, we have that kind of working opportunities twice a month. It's called action network. It is an occasion for a lot of supporting and for the volunteers and NPOs to get together and exchange information.

Q: The question is in connection to the question about opportunities to interact with other networks and organizations. Especially, your training in handicraft for sale is very interesting. In order to do that, it is important to liaise with other organizations in your cities such as the chamber of commerce and the junior chamber and also the local merchants. Do you have the intention of having that kind of occasion of getting together with the local players?

A: Thank you very much for your interesting proposal. Right now, we have several routes to sell this kind of handicrafts. The first is the local route, and the survivors of the disaster have come up with their own route to sell their products. The second one is much larger; Ofunato, Rikuzentakata, and Sumida, we are thinking of establishing sell routes. The third one is much larger because we have been liaising with a lot of support cooperative groups, supporters who live outside the Tohoku Region. We have been receiving a lot of material support from them and, in exchange, we send back those finished products. Probably those support groups and organizations will be able to sell those handicrafts on our behalf. So those are several different routes we have in mind.

Comment: I think that you demonstrated the tenacity and resilience of the people. That is a great thing and you have my respect. I don't think you'd be where you are now if it wasn't for that. You have exceptional programmes that you developed based on

the uniqueness of the needs of the community. Now you are going into the next phase of recovery which is very complex, and there will be different priorities with each of the sectors of your community that will be important as others. The community has to somehow develop a strategy to identify the key priorities. The national government has the funding; the prefectural government has the funding. You have a very strong network. So these are the opportunities to get funding for your community. When you go into the recovery phase, you have to clearly articulate as a community what you need or it will be very confusing for those who are making the decisions at the central level, if that hasn't already happened. From our experience, we learned a lot from Katrina. We ended up telling the local community what they needed and that was wrong. We can't do that so I think you are at a level where you need to go to the next stage and it is very difficult. But it involves a lot of coordination and cooperation with NGOs, and the government has to come to the table and participate.

Q: I have a question for Mr. Funada. You mentioned that a lot of productive land was flooded and cannot be used now. We know that it is difficult to bring them back to normal condition. It will take time. Is there any government plan or strategy to do something about this? Can relief be provided to the farmers and research conducted on resilient seedlings which can be introduced?

A: The first answer to your question is yes, the government will come up with a specific strategy or plan as a remedy or solution to the flooded paddy field. What they have explained to us is that the top layer of the paddy field will be removed along with the debris and replaced with different soil. However, the total area of the paddy field in our prefecture and the cities is enormous; so another point is where the good soil is. That's why there has been a delay in implementing this remedy.

Comment: First of all, the radiation problem is difficult to solve for it needs time to decay. Chemical substances such as salts, oils, hydrocarbons in general, and pesticides also present problems, but they can somehow be managed. One good way is using organic matter. You can make compost. You have many people in Japan who have knowledge in waste management. I can make contact with them or I can help you. I've been doing this for forty years. So I can help you. One more important thing is if you are going to replace the top layer of the contaminated soil with good soil, the top layer soil still has hazardous waste and needs to be properly managed. I will come back later and work with you. I donate my time and money to many causes and I also teach my children and my grandchildren to do it because we have to and must do this. And I expect nothing in return.

[Visit to Ofunato Yume Shopping Mall]

There won't be any explanation or briefing here. We are just going to look around this shopping area. Altogether there are thirty-one shops and businesses. On the second floor, there are mostly offices. The tenants here include a real estate agency. There is also an office for an Internet store and cosmetics store. This is an insurance company. The shops are located on the first floor and restaurant as well. There is a beauty parlor and barber. There is also a fish monger and vegetable store. There is a bicycle shop as well. The most popular shops are the fish monger and the one selling fresh produce, and there is also an NPO office. This land has suffered subsidence and this particular NPO has been working on this problem. This subsidence has continued even after the earthquake and series of aftershocks. We are wondering if this is because of the aftershocks or if there is any other cause. This NPO is investigating this matter.

[Visit to Ofunato Fish Market]

Mr. Sato, Ofunato Fish Market: This company was founded in 1951 so when the

disaster hit Ofunato, that was just the 61st anniversary of our foundation. As for the level of inundation, the water came up to the ceiling of this second floor. Right in this neighbourhood, there is a room that is a little bit lower than this ceiling, and in that case the ceiling was completely lifted up and the water poured in. However, rather than waiting too long, we quickly started to remove the debris that had accumulated on this site. From 23 March, twelve days from the disaster, all the employees participated in the removal process. Fortunately, all of our employees survived. However, there are some employees who lost their family members and cases of houses being completely washed away. The top management of our company, including myself, were more or less affected by the disaster. In my case, my house remained but the first floor was completely destroyed. Twelve days after the disaster, all the people gathered here to remove the debris. I thought it was fortunate to have each other despite the massive disaster. Ever since the 23rd, we have been very busy removing the debris as well as pumping out the remaining sea water and removing mud. We used our generator as a power source. After the disaster, we open a business on 7 May. Although we restarted our business, when the catch arrived at our shore, there was no power, no water, and no ice. There were no means to keep our catch cold and fresh. What we did was we brought ice from the inland cities, and also there were some customers who bought scallops. and when they came to buy scallops they also brought along ice. During the peak season of our fish market, which is between September and October, we use 500 tons of ice a day. All ice-making facilities were destroyed by the tsunami. So we had to buy ice from quite far places such as Chiba Prefecture and Saitama Prefecture. That pushed up the cost of transportation and the price of the product became enormous. Therefore, what we did was talk to the administration and talk to the government to give us subsidies. Just for your reference, our annual revenue last year was 6.8 billion yen and this year it is 3.6 billion yen. So this is the minus 47 per cent compared to last year. In addition, we had a pretty bad year for our salmon catch. Usually, we get about 5 billion yen in value of salmon, but this year the catch was only 500 million yen in value. So it was such a big blow to us. We are facing a very tough situation. This negative impact was not only suffered by Ofunato, but also all other coastal areas. However, our company is not incurring any deficit for this fiscal year. It is very encouraging news for us. In addition to that, we are looking to recovery. Twenty miles down the road there is a new fish market. So that is something to look forward to. The new fish market will be completed in twenty months. Originally, this new fish market was to be completed by September. However, unfortunately, there was the 11 March disaster, so that really delayed the building of the new fish market. We will start catching Isada from March 5th this year. We have to have numerous containers to hold them on the boat. We lost everything by the tsunami. However, the Japan Foundation donated 10,000 containers to us. Because of its support, we were able to resume fishing. The autumn salmon catch was very poor this year, but hopefully the spring fishing of Isada will bring us much income, although in terms of money value it is only about 500 million yen. However, the volume of the catch is 8,000 tons, which will allow us to involve the local people by giving them work. So there will be a lot of economic benefits this spring fishing season. A major characteristic of the fish market is that the unit price of fish such as saury and horse mackerel is not very expensive. However, this is typical for fish for which the catch is very big. Several thousand tons and that will support local economy. Altogether, there are 500 to 600 people who make living out of this fish market, including fishermen and those people who are involved in distribution and purchasing and so forth.

Q: What was the reason for the poor catch?

A: The major reason for that is when the young autumn salmon were released into the sea, the water temperature was too hot. Many of them didn't survive. In addition, due to

climate change, there is a fluctuation in fish catch. For example, typically a very big catch is found within a certain feeding area. Recently, the pressure along the coast where salmon is caught was not low enough. We are still investigating the cause of the low catch this year.

(4) Rikuzentakata City, Iwate Prefecture

[Workshop at Rikuzentakata]

Mr. Kumagaya, Director of Commerce, Industry and Tourism Division, Rikuzentakata City: Thank you so much for visiting us. I am sorry for the inconvenient conditions; however, in one month's time; we are going to move to another place which has more space.

Greeting from Ms. Takase, Director, UNCRD: Thank you very much and I have to apologize for our delayed arrival. We would like to start the presentation from the Rikuzentakata City authority about the situation as well as on the city itself. Please refer to the materials in Japanese, then followed by a presentation by the Rikuzentakata Commerce and Industry Association. First, we would like to hear the presentation of Mr. Kumagaya, Head of Unit, Planning Division of Rikuzentakata City.

Mr. Kumagaya, Director of Commerce, Industry and Tourism Division, Rikuzentakata City: My name is Kumagaya. I represent Rikuzentakata City; I have my colleague here with me and his name is Murakami. Please refer to the presentation materials. As a city authority, we have established a disaster rehabilitation plan in December last year. We have established a rehabilitation committee with city representatives. We are having a discussion on the restoration plan. Let me just explain to you about the status as well as impact of the disaster. The total population before the disaster was just over 24,000. The number of deceased was approximately 2,000 and as a result, the number of surviving population was just over 22,270. This is the currently surviving population. As for the damage caused, before the earthquake there were 8,000 houses, and approximately half of the houses were damaged; 3,400 houses were left after the disaster. Those were individual homes, and the people moved to temporary housing. We have fifty-three temporary locations, mainly at the site of the elementary school. So they were split into those locations. Based on our restoration plan, it will take eight years, and in the first three years, we will repair the infrastructure, and during the latter five years we will build houses, stores, and so forth and the people will be able to carry on with their lives. Please turn to the page of your materials explaining this. On the right hand side you can see the images of the area being reconstructed and I will explain to you how restoration is being carried out.

The first figure indicates how we are going to develop the new city centre as well as how we are going to build roads and a transportation network and further redevelop industries as well as commercial businesses.

Number two is the area along the sea, and originally there were forests alongside the beaches. We would like to restore those areas. Before the disaster, it was a beach and people could swim in the area. We would like to restore those areas as well.

Also, as shown in number three, there is an area called Imaizumi. That is on the other side of the river. Those areas we would like to restore as well. It is a historical area.

The fourth point is how we would build a residential area and try to move the residential area to higher places. That's how we are going to develop the new residential area.

On the next page, number 5 indicates how we are going to redevelop the paddy field

and redevelop agriculture by building greenhouses.

The area very close to the beach, and the houses which we are going to develop on dry land. The sports and recreation area. Redevelopment of the area for the fishing industry. Green belt.

How are we going to restore the communities in this area? There are eleven communities and we are going to draw a respective plan for each community.

Now this is the overall restoration plan. The colors indicate different types of redevelopment in each of the respective areas. The right hand side of the page indicates redevelopment of the urban area. This yellow color indicates the residential area, housing area. For this urban development, we are including a transportation road network. We have national road as well as prefectural road. We are going to establish a road network for their access and the Japan railway network is needed to be enforce its reestablishment. According to our plan, what we need is reinforcement as well as land for the infrastructure. Therefore, we need to establish a lifeline network. We need to fill the land which subsided and locate the residential area at a higher location. For the building of basic infrastructure, we are going to take up to five to six years of the plan period. As for the relocation of the residential area, we are undertaking an investigation as well as studying feasibility. Therefore, no concrete relocation plan has been drawn yet. We are negotiating with the owners of the respective land parcels and conducting a survey of the interested parties. We are also measuring those land sites, so we are in a preparatory stage. This is the present status in terms of the plans for restoration. The residents are eagerly waiting for us to make a decision as to which location is going to be assigned for their residential areas and when they can start.

Mr. Nakai, Executive Officer, Rikuzentakata Commerce and Industry Association:

My name is Tsutomu Nakai. I am working as the executive officer of the Rikuzentakata Commerce and Industry Association. We would like to extend our thanks for your mission as well as to all individuals for coming all the way to Rikuzentakata City. We thank you very much. I am now going to conduct my presentation. I am going to give you an outline of Rikuzentakata's commercial sector. Also, I will speak about what level of damage we suffered because of the earthquake as I explain our reconstruction plan. This way, you can get an image as to what kind of situation we are in Rikuzentakaya. Let me give you some background. Rikuzentakata City was established in 1955 through a merger of eight townships and villages and had a population was 34,000. However, it had declined to 24,500 before the earthquake. This area was very rich in gold and surrounded by several gold mines. The mountain right behind here is called Hikari Mountain. And that's the size of Gold Mountain. The gold which were excavated from those mines were brought to Hiraizumi in the northern part of Japan. It was an ancient capital where the Fujiwara family reigned and prospered. That was about the 12th century. And in this Hiraizumi area is a temple called Chusonji. It was designated as a UNESCO cultural heritage recently. Our gold allowed them to prosper at that time. I wanted to give you a little bit of historical background of this region. However, in terms of geography, our city is located in the southeastern part of Iwate Prefecture. And right in front of the city, there is a fishing ground considered to be one of the major fishing grounds of the world. In the past, Rikuzentakata used to be the base of the fishing fleets that caught bonito and tuna. It was very prosperous. However, in the wake of the two oil shocks in the 1970s and the 20-nautical mile issue, all of those fishing fleets went bankrupt. We then came up with the aquaculture of seaweed and wakame, oysters, and scallops. Now we enjoy good fishing. In Iwate, Rikuzentakata has the most temperate weather because we usually don't have much snow. We may have snow, but its melts by noon. Our city boasts as being a very beautiful

coastal town designated as a national park. Before the earthquake hit our region, we had very beautiful pine trees along the coastline that attracted a lot of tourists and sunbathers and those who enjoy swimming. With such advantages in geographical and historical heritage in our region, we aimed to become a tourism-oriented city. For tourists staying for a long period of time, we wanted to become a beautiful city with a very healthy culture. Having this attractive wide area of land, it can easily be invaded by tsunami waves and many of the victims were those who couldn't reach higher ground.

Now to the main point regarding economic activities carried out by our city. In our city there are 1,100 companies and businesses. The breakdown is as follows: wholesale business/retail business accounted for 407; service industry accounted for 233; construction 144; and manufacturing 99. Although there are 1,100 businesses, the majority are small-scale businesses. The breakdown of industries which generate employment is: (a) wholesale/retail, restaurants and food, and entertaining industry accounted for 15 per cent; (b) manufacturing industry provided employment to 19 per cent of our total population; and (c) construction accounted for 13 per cent of employment in our city. In our chamber of commerce, there are altogether 738 members. In terms of scale of business, the number one industry was wholesale/retail which accounted 253 members and the service industry accounted for 143 members, while construction, 74 members. Now I would like to move on to the damage we suffered from the disaster. Shops were lost as well. Out of 730 members, 80 per cent of the members lost their homes as well as offices. In addition, products in stock, manufacturing machines, tools, and equipment were lost. In terms of human damage, 138 members of our chamber lost their lives. It goes without saying that there were a lot more victims. This includes their wives, children, and other family members. I will give you a concrete example of the damage our members suffered. One of our chamber members used to have a family of five and he is a fire fighter at the same time, so he was engaged in fire-fighting activities. He lost his parents, wife, and child, all of them at the same time. Despite the fact that he experienced total despair, he felt that it was his duty as a survivor to continue with recovery efforts. So even today, he works as a fire fighter. He is trying to locate the bodies of the victims. Unfortunately, during his recovery activities he could only recover bodies and not survivors. But still he continues with his business of running a house appliance retail shop. Also, of the twenty board members, we lost five. Of the twenty-three young members, we lost seven. We used to have 207 female members. We lost forty of them. So you see we suffered major damage in human terms. We are still mourning their lost. Now I would like to move on to our recovery plan. For details on our recovery plan, please look at the summary of our plan. At present, members are faced with a lot of difficulties. However, they are trying to reopen their businesses in temporary shops. It's better to go back to the location where their business used to be located. That would be best for the continuation of civic life as well as convenience of their daily lives. In order to realize that, we have to have to recover our businesses and industries in our city as soon as possible. That's the reason why we have come up with this plan for recovery. Last year, for the period between the September and October 5th, we conducted a survey on the level of business activity that have been resumed. Unfortunately, the return rate was not too high. It was 36.9 per cent. Still I believe that this result indicates the trend of recovery of businesses in our city. The findings as follows: Ninety per cent of our members who own small businesses suffered total or partial damage of their businesses. Those who answered that their businesses returned back to the normal were only 23 per cent. And 41 per cent of the businesses answered that resumption was not moving forward at all. And since this survey was conducted a lot of time has passed; therefore, the percentage for businesses recovery or rehabilitation might have improved from 23 per cent to a higher figure.

And as for the people who said 'yes' they would like to resume their businesses, 74 per cent said 'yes'. However, 19 per cent said 'no,' and that they are going to go out of business. The reason why they decided to go out of business is that many of the business owners had been victims. I mean, they died or were incapacitated. Or maybe they didn't have any successor or were too old to resume their businesses. So these are the major reasons.

There is a challenge for those business owners. They would like to resume their businesses, but find it very difficult to do so. They don't have sufficient funds to resume their business, and land to start businesses, or factories, tools, machines, and so forth. So those are the major reasons, in addition to the delay in construction of the temporary shops.

Number 5 is regarding various situations related to actual business resumption. Answers are that they don't have a proper business base. They have seen a sharp drop in customer traffic turnout.

Other details pertaining to the responses of the survey will be skipped.

Now I would like to talk about the consolidation of the shopping areas, the project for an integrated shopping centre. What is being planned is the land will be purchased by the city authorities, which will then rezone the area to establish it as a district. The electricity wiring will be buried underground. The land does not necessarily have to be purchased by the city authorities, and can even be purchased by the prefecture or central government. And then along the main street, we are going to establish various commercial facilities such as service stations as well as railway stations and bus terminals and so forth. And then we are going to establish a commercial zone, together with a community facility zone next to that, and build the office of the chamber of commerce in that area. The third point is the centre of the shopping and commercial district. It is going to be a shopping mall, and in this shopping district not only shops but also banks, financial services, medical services as well as accommodation will be built in that vicinity. The community function and emergency evacuation function in the event of a disaster will also be incorporated in that shopping district. We are going to build a multi-storied building in which the lower floors will be allocated for retail stores as well as commercial services, and the upper floors will be residential space. In this way, we are aiming to develop a very compact town. So as I have mentioned earlier, the core facility in the shopping district is going to be a shopping mall and around that mall will be large-sized stores. Our aim is to recover the shopping area as early as possible so that retailers will be able to move to a permanent location. We have an image for the design of the shopping district. It is going to be run by a kind of cooperative. However, if public organization could operate the shopping area, that would be even better; running it with the collaboration of public as well as private organizations is preferable. There is a plan to establish a shopping district; this particular area is to be allocated for a shopping district. The land has subsided so we are going to fill the land approximately 5 meters above sea level in order to lay the foundation for the shopping district. However, in order to fill the land to that extent, it would take about five years. Therefore, our concern is during that period, the shopowners may get tired of running their businesses in temporary shopping areas. On top of that, having been debt-ridden even before the disaster, they would be heavily in debt. In order to move to the temporary facility, they need to make additional loans. They already have double loans. If they move to the temporary facility, another loan will be required. We are concerned that those retail shopowners could end up burdened by these loan. So the shopowners are facing a tough situation, not only regarding retail business facilities. They also lost their homes. So they have to reconstruct their houses in order to live and are in a very challenging situation. So taking into consideration the probable challenges shopowners will face, we would like to request the authorities to take the initiative in establishing and developing the shopping

areas; not only the land but also the building should be built by the city authorities. The land can be rented to the shopowners for a very low rental fee. On top of the development of shopping areas, we have a project to redevelop the industrial zone that involves building commercial as well as industrial buildings, which I will not go into detail. The next topic I would like to talk about is how we can best utilize the inundated area. The empty land will be redeveloped, and an evacuation route will also be established. We are thinking of utilizing it as a tourist resort. Another possibility of utilization of the empty space is to use it to produce new energy such as timber base biomass or biomarines. And in order to generate this energy, we can use offshore wind power generation. That kind of new energy can be developed. In order to do so, we probably need some kind of assistance from the central government to support this new energy or green power generation. That kind of subsidy as well as financial support is needed such as government subsidies. That is the proposal of Rikuzentakata City. I would like to skip to the next page of the attached document. Thank you very much for your kind attention.

Earlier, the city officers explained to you that we need to establish a very compact area because the land to be used by the commercial zone and residential area is to be reduced to one-third of the area we had occupied before the disaster.

Please refer to the other document; the last page of this document shows a map on the left-hand side. Rikuzentakata City is on the right hand side and there are development images for Takada and Imaizumi. Near Takadamtsubara, there will be a memorial park. And the purple color indicates industrial zones. We cannot build shops or residential housing there. Pink and orange will be shops and businesses. A 12.5-meter high embankment will be built. There is land that have suffered subsidence, so we are going to lift the land to 5 meters and build shopping areas. It will be a commercial business area, including offices for administration, health care, banks, and rehabilitation centre. The first floor will consist of shops and restaurants; on the second floor will be offices; and on the third floor there will be facilities for the elderly. Near this area we will build a facility for nurses and health workers so that the elderly can live here and easily obtain the health care they need.

Q: I thought this plan was very excellent, especially considering the limited time you had to devise it. This is an amazing accomplishment. I think we should all commend you for that. I wanted to ask you about the issue of energy development. I was wondering if your city is involved in the eco-town programme in Japan.

A: As a matter of fact, where you are right now is going to be Ecotown Nariishi. You can see the roof of the facilities with the solar panel. And in the ground there is a storage for rain water. So we had this concept of establishing an eco town in Rikuzentakata City even before the earthquake. In newly establishing a commercial zone, we aim to reestablish the concept of eco-town, and are thus trying to establish new energy sources. To accomplish that, we have to have subsidies from the government. One of the ideas that we would like to actively accomplish is the trade of energy by reducing CO₂ emissions. For a safe amount of CO₂, you can get special credit and with this credit, you can sell and buy. So we would like to participate in that kind of scheme.

Q: I would like to say one more thing. Venture capitalists would be interested in the long-term, biomass approach. The city is a perfect candidate because the world knows the city. You would not only catch venture capitalists, but also attract us who would want to come and see how the subsidies are being implemented. So it is a perfect candidate city for such a strategy.

A: Exactly, that's why we need to have a lot of input from many different arenas. In order to make those ideas a reality, we have to have know-how as well as where to do it. Regarding those matters, we would like to have support from outside places.

Q: You are talking about carbon credit, and for that I think you still need to do research on that approach because I think buying carbon credit is okay, but for selling it will there be any buyers?

A: It is possible for the domestic market.

Q: Can you explain how wastewater management is conducted here?

A: A wastewater management facility is built near the river here. Here we plan to build tap water and sewage systems. There will be rainwater system, and a catching and treating facility will be built. They will be separately used as drinking and wastewater. Other than in urban areas, we will install tanks to process sewage water.

Q: Pertaining to industries, of the total ninety-four companies, only seven seem to have been covered in this recovery plan, so what happens to the other eighty-seven companies that have been left out of the digest summary?

A: When we compiled the digest summary on the recovery of business activities, we put seven companies that will be grouped together to form some sort of fishery processing industry complex in the industrial zone, which is the charted zone in this colored map. However, the plan has been undergoing some changes. Right now, eleven companies are participating in this plan. Three out of the seven companies are originally from Rikuzentakata, but there are new companies who joined from other areas. These companies and business are receiving three-fourths of the expenses as financial support from the central government in the form of a group subsidy.

Q: You seem to have very good coordination in preparing the detailed construction plan, which is good. The plot planning written here is very concrete, so does it mean that the government had already decided to provide aid to this establishment?

A: Usually, for new zoning or all the plotting of available land, the participants have to bear 25 per cent of the total cost.

Q: And for this particular fund, the cost of 25 per cent seems to be rather high. It should be lowered down to a much lower level such as 5 per cent or 9 per cent, as in Kobe City.

A: Due to takadai (moving to higher ground), the victims will have the chance to own new land in exchange for their land in the devastated areas. As for Kobe City, the city is an urban city and has much infrastructure such as roads and railways. But here we don't have such facilities so the amount of money people have to bear is not as expensive as Kobe City.

Q: (1) About the exchange of land; will land of equal value be given to the victims?

(Yes)

(2) According to your material, you said that there is a vegetable factory. What does it mean?

A: Vegetable factory means a factory to grow vegetable. So we are going to establish a dome-type of water cultivation factory. We have located some land in the earea called Yonesaki. There are places in other areas that have already signed an agreement to carry out dome-type aquaculture.

Q: Have you done any studies on the soil? You said you are going to fill in 5 meters of land and it has been said that land subsidence is continuing in some places. So will 5 meters be enough?

A: After the earthquake, the subsidence was about 1 meter and the layer had moved to the east by 1 meter. Land investigation will be conducted by the Land and Geographic Agency and is not our responsibility as a local authority. However, we have to consider these facts when we choose the land for a development zone. Another thing we are doing is removing the sand in the paddy fields which was filled nearly 30 centimeters.

Comment: (1) This is an exciting plan. It's important that you share it with everyone. I could learn a lot from this.

(2) If you are seriously thinking of biomass or other such industries, please be very descriptive or very clear about the criteria so that you get these industries established as you wish to, and you can fit them together and make the industries actually work together. You can thus promote bio-industries that can represent the area.

Q: Have you experienced any negativity from the fallout from Fukushima?

A: Yes, we suffered some negative impacts from the radioactive fallout. Some of the pasture lands on higher ground have some level of radioactive materials. Apparently there is no radioactivity on the vegetables and rice, except for mushrooms. We are going to test freshwater fish in the future.

Also, we are communicating with our neighbours as well as other residents to explain our plan in the form of a community meeting. We have eleven communities in this area and we have already reported on this plan. However, as for the plan for relocation, relocation of the residents to a higher location, we need to negotiate with five to twenty households.

Concerning utilizing biomass in order to generate electricity, we would like to invite proposals from the probable candidate. For example, there may be some proposals to generate energy using chips. Not only just the production side, but we also need to examine the demand for such newly generated energy. Therefore, we need to coordinate. We would like to receive positive proposals from the candidates of the business enterprises, and then we would like to select the appropriate one from those proposals. So the actual biomass fuels idea regarding this is to utilize the debris. However, that debris is limited and will not last to infinity. Therefore, not only those debris but there is also another idea to use as fuel material and it is a sort of wood or timber because we have a forest. And in order to nurture the forest, we need to cut the trees down and we can use them as fuel.

Q: Biomass production usually produces ash so you could find an industry that uses these ashes. It's called industry ecology. Now China is using this as a national basic policy called circular economy that involves the outputs of industries to be used as inputs by other industries like an industrial ecosystem.

A: Yes, exactly that's what we have in mind. For the industrial zone drawn in this plan, we are considering zero emissions through the use of biomass and using by-products for other purposes. There are fish processing companies and they have fish bones as output materials. So we could use them as biomass input. In that way, we are the promoting zero emission approach.

Comment: This is a proposal regarding the fact that right now in Japan, for any community that comes up with a project for an eco-town, there could be a lot of restrictions such as household waste management. However, as for disaster-affected areas like this city, I suppose there would be less restrictions. So how about proposing the development of an eco-town?

Q: You said you are going to build a seawall of 12.5 meters. Has there been any hydrological studies done on the possible effects of the construction?

A: As the matter fact, the height of this embankment is not a direct outcome of this tsunami. It is based on the historical tsunami back in the 1890s that hit this area. That was something like 13.8 meters high. This new embankment will be built on the exact same place where there used to be 5.5 meter-high seawall. So there won't be any problem with the sea environment. We are going to plant lines of trees and put soil along the seawall.

Mr. Imaeda, on secondment from Nagoya City Government: My name is Imaida. I am from Nagoya City Hall. It's quite far from here. Nagoya is located 800 km away from Rikuzentakata City. Nagoya is one of the three biggest cities in Japan after Tokyo and Osaka. Before the disaster, there wasn't any special kind of sister city link or anything

like that between our two cities. However, seeing the enormous disaster, the people of Nagoya came to realize it to be very important to render support and help to common fellow citizens. Immediately following the disaster, we gave material support. We have donated 100 million yen worth of goods and products to the three affected prefectures. Cars and ambulances were donated and also employees dispatched. Prior to the disaster, each one of the municipalities would extend support; for example, this city would support Rikuzentakata in the area of disaster prevention and another would help to restore registration procedures. But this time we extended a very unique type of services to this city by supporting the different needs in municipal services that need to be provided to the survivors. You can see from the attached pictures what kind of support work we are undertaking; not only do we dispatch our staff to this city, but we also invite people from this city to Nagoya City. Our assistance is not only between the municipalities, but also applies to the citizens as well. We are extending our further support to this city in future and will promote a more active relationship between the two cities.

Minamisanriku Town, Miyagi Prefecture 29 February 2012

(5) Minamisanriku Town, Miyagi Prefecture

[Workshop at Hotel Kanyo, Minamisanriku Town]

Mr. Abe, President, Abecho Shoten Corporation: Before I start, I would like to extend my heartfelt gratitude as well as appreciation to those of you from all over the world because we received the great support as well as encouragement from people throughout the world.

As far as our company is concerned, our core businesses are in two areas; one is the fishing processing business and the other is operating a hotel, so we are mainly in the tourist business.

But this time, I'd like to focus my talk on the fish processing business.

Our head quarters is located at Kesenuma, and we also have other locations. One is Minamisanriku, that is the place where you are in, Ishinomaki, and also Ofunato in Iwate Prefecture. So altogether we operate in four locations and have four processing plants.

So we are operating in the Sanriku area, and I would like to make the correction to the interpretation that we are operating at four locations with nine processing factories. We had nine processing factories, but lost eight. Therefore, only one plant was left here Minamisanriku.

So talking about the fishery business in Japan, there are three areas in which we operate. One is fishing, another one is the fishery processing business, and the distribution of fishery products. We are dedicated to the fishery processing product business.

So there are two major fishing areas; one is alongside this Minamisanriku coast and the other is around the Kesenuma area. And there are differences in how we conduct the fishing. In the case of the former, focus is on coastal fishing. And in the case of Kesenuma, offshore fishing is the most prevalent. Therefore, in the case of Kesenuma, they have large fishing boats to catch tuna, bonito, saury, and so forth. But in the case of Minamisanriku, the major catch is seaweed – Wakame seaweed. We also have oysters as well as scallops, and salmon is the fishing catch.

At our processing plant in Minamisanriku, the major product is salmon. In the same manner, in the case of Kesenuma, we process the catch we get from the Kesenuma area, namely, tuna fish and bonito as well as saury, and distribute them out of our plant.

I would like to give you an idea of what sort of industries the Kesenuma area had as a whole before the disaster. As far as the overall capacity of Kesenuma before the

disaster is concerned, we had the capacity of freezing approximately 14,000 tons of those fishery products per day. And in the case of storage capacity we could store 170,000 tons. However, due to the effects of the tsunami, 90 per cent of that capacity was lost.

Those facilities were totally destroyed in the case of Kesenuma. However, the fishing vessels and boats were safe because at the time of the tsunami they were offshore; therefore, they were not affected by the tsunami and did not suffer any damage. However, the onshore facilities were destroyed, so the fisherman were no longer able to just go out and fish.

So originally, much catch was unloaded in the Kesenuma area, but because of the situation after the disaster it became impossible to unload them. Therefore, the instead fishing vessels instead go to Chiba Prefecture just down south near Tokyo Bay in order to unload their tuna catches. And in the case of saury, those boats go up to Hokkaido, the northern island of Japan, to unload their saury catches.

At the moment, Kesenuma's turnover of catches is approximately 30 per cent compared to the catches before the disaster, and because of the damage caused to the freezers they can only receive fresh fish at Kesenuma fish market.

The reason why that there is a delay in restoring those facilities at Kesenuma has to do with the subsidence of land around the Kesenuma area. Therefore, the land has to be filled and no facilities can be rebuilt until then. Nothing has yet been decided.

In the Kesenuma area, 70 per cent of the working population had been engaged in some kind of business related to fishing. However, as mentioned earlier, restoration of those places are very much delayed and that presents highly difficult problems to the people who used to work in the fishing industry.

So at the moment, the plan is to fill the land and that is going to be carried out some time in autumn next year. Based on the land filled, the processing plant can be built in autumn of 2014. However, the speed of reconstruction is too slow for us; therefore, if it takes that long in order for us to reconstruct, then probably it may be too late for us to reenter the market.

Now talking about the Sanriku area, Mr. Miura who is going to give a presentation to you later and he is probably better versed than me. But I would like to briefly explain to you the situation of the Minamisanriku area as well as the important processing plant. Most of the plants which were located alongside the coast suffered from damages caused by the tsunami. But as far as we are concerned, our company's plant was located at a higher location, so we were safe and there was no damage.

However, those damaged plants have been striving to recover their businesses and reconstructing plants. At the moment, approximately 50 per cent of the damaged processing plants have been recovered, so the rate is about 50 per cent.

Okay, so I would like to speak a little bit about the processing business. Here in Minamisanriku and people working in the processing sector in this area have been very cooperative. And immediately after the disaster hit this area, those people engaged in the processing industry came together and created a new fishery processing businesses association to procure new equipment that they lost due to the tsunami. And again here they have taken advantage of central government support and at least now have new freezers in place.

Q: How many companies are a part of this new processors' association?

A: Six of them.

Q: And how many processing companies existed prior to the disaster?

A: Including smaller and big sized ones all together, there were some ten companies.

Q: Was there a restriction of construction of new structures in areas where processing plants were completely washed away by the tsunami by the prefecture or township?

A: There was for about six months.

A: Yes, for's Shizugawa district urban planning area, this city planning restriction was extended because of the fact that there is not a very clear picture as to what kind of city will be built on this side which has been completely damaged.

Q: First of all, thank you for your summary. My question pertains to the individuals who are currently out of work as a result of the disaster. What assistance has been provided to them by either your company or your association, or by the prefectural or central government? And my second question is whether the support that's been provided by the central government to the fish processing association has been effective?

A: I would like to address the first question. Yes, a lot of companies who were hit by the disaster looked for all of their employees so that would be notified of unemployment benefits. However, a company like ours decided to continue to employ our employees and, of course, we asked for central government subsidies because they have system in place which is called the employment adjustment subsidy that covers about 80 per cent of what we pay our employees, although not 100 per cent.

As for fishermen in the damaged placed who are self employed, they cannot go and get unemployment benefits because they had not worked for company. It is difficult especially in situations where those fishermen engaged in coastal fishing. However, they fortunately have some means of income; for example, like Wakame seaweed. Right now, this is the peak season of the year for harvesting. There are other types of fishermen who culture oysters or scallops, but it will take a very, very long time, two to three years, until they can harvest them. They don't have any other means of income. Therefore, they have turned to the fishery agency of the central government and the agency seems to have made the decision to give them a subsidy for three years or something like that. They are going to give some form of compensation for the loss.

And now almost one year after the disaster, more and more companies are going back into business and have started to offer employment. However, they don't have applicants and this situation means that those people who are receiving unemployment benefits would like to continue receiving it until it expires. So those companies that have come back into business are having difficulty finding workers.

Q: Okay, and my second question about the central government having decided to extend the system and you mentioning that the fishery agency had made the decision to give some sort of compensation for lost income?

A: That decision has been just reached, but we will have to wait and see how such a decision will positively impact the livelihood of fishermen. So actual good results will probably appear sometime in the course of this year, summer or autumn.

Q: Those here who operate fish processing companies have freezers as well as icemakers and I understand that they have been completely damaged or washed away. What is the recovery rate of those facilities and tools and machines?

A: That depends on the area or the city. For example, Kesenuma has a very strict restriction on the construction of new structures or devising plans. So it would be difficult to expect a very rapid recovery. In that region, however, looking at the facilities and especially machines such as freezers and icemakers, the ice freezer recovery rate has been rather slow, about 10 per cent. However, when we look at the ice-making machine recovery rate, it is very, very good. Right now it is in the range of 60 per cent up to 70 per cent. But when we take into consideration those which are being installed right now, probably it will be nearly 100 per cent. So it is very important to have a quantity of ice for the fishery business because whatever the fisherman catches, they need to have a huge amount of ice when they unload at the market. The government saw the importance of the recovery of ice-making machines and they were very quick to react to the situation and

extend full support in this respect.

Q: We heard that out of the nine processing plants, eight were destroyed and one remained. What were the casualties of the workforce of those eight or nine processing plants? Human damage?

A: We lost three men working there, just three, at Ishinomaki? They didn't have time to evacuate to higher ground because Ishinomaki typically doesn't have much high ground.

Ms. Abe, Landlady, Hotel Kanyo: I am the owner of this hotel and I am very happy to welcome you here. Thank you very much for coming to our hotel. And I would like to explain to you what happened on the day of the earthquake. It was 11 March, 2:46 in the afternoon. I was at the lobby of this hotel and it was when I was receiving a guest arriving at the hotel that there was a big tremor and I gave directions to my employees to go to the different floors to guide the guests in evacuating from the hotel.

And there were older people living in this neighbourhood who were keenly aware that when there is a big earthquake, immediately after a tidal wave will strike us. Therefore, I decided to evacuate the people to higher ground where we have the dormitory for female staff which has their nursery as well. And we directed all those guests to move up to this dormitory.

Then looking at the ocean, we realized that the sea level was increasing and especially the water was going towards the direction of the city's urban area. Therefore, at that time we just prayed for the safety of the residents of endangered areas and hoped they would manage to escape to higher land. Fortunately, this place – this hotel – is located on higher ground; therefore, many people evacuated to this hotel.

As you observed, many houses were washed away and, in the same manner, bridges collapsed by the damage of the tsunami wave. Roads were also destroyed and filled with debris and so forth, and as a result this hotel became isolated from other places. There are many customers as well as residents who came to evacuate to this location so we have the responsibility of protecting those people. And, at that time, there were young girls and young people who had collapsed and started weeping as they looked at the situation around them.

Recognizing the situation to be very serious, we thought it important to establish a planned approach in order to handle the situation because all the utilities, including water supply as well as electricity supply were cut. We therefore faced a very tough situation and only had a limited supply of food. In order for us to manage for a week with this supply, we decided to establish a proper distribution system by planning the menu for breakfast, lunch, and dinner because we needed to feed the people who had congregated here. I also gave instructions to my staff that they should distribute food to whomever was there, both guests and evacuees. And every morning and afternoon, I held a meeting with our staff in order to encourage them and told that they have to stand strong and cooperate and support each other. I explained to my staff that even though we have a limited supply of food, we have to share it amongst ourselves in order to survive this disaster.

And also during the course of time, our guests as well as evacuees started to become concerned about the supply of pharmaceutical products because some people were suffering from diabetes, high blood pressure, and so forth. And because our place was not designated as a public shelter, we had a shortage of those drugs. Of course, we had regular medicine for colds or flu and so forth, but we did not have a supply of medicine for particular diseases and so forth.

It so happened at that time that one of the policemen stopped by to observe the situation. Taking that opportunity, I asked him about the possibility of procuring those medicines and drugs. He suggested that we move those people who are in need of medicine

to public shelters. As I mentioned to you earlier, the roads had been cut off and broken into pieces, and were full of debris and so forth. So we used our car in order to transport those people in question as far as we could, and then on the other side those the car from the public shelter tried to come as close to us as possible. In places where it was not possible to pass through, the people sometimes had to step over the mountain of debris in order to get into the other car to be transported to the public evacuation shelter. But by doing so, we could gradually move those who were suffering from various chronic diseases to the public shelter.

So the disaster happened on 11 March and at that time we had 350 people. Then we could manage to dispatch or evacuate people evacuated on 17 March so it took us about a week to safely move the evacuees to a public shelter. As I mentioned earlier, we came up with a plan for us to manage with our supply for a week and my judgment was correct in that respect. Based on our experience, we learned that not only individuals, but also companies needed to have some sort of contingency plan against disasters for then at least they would be able to manage for three days without receiving any supply from the outside.

After we managed to send the older people out from here, it reached the stage where our staff needed to return home, because our staff had stayed here in order to look after those evacuees during the course of one week. But, of course, some of my staff were concerned about their homes so they just went back home on that day walking over mountains. But anyway, we needed to dispatch all the staff so that they could return home. At that time, no cell phone communication had yet been established. And some of my staff who had been commuting from faraway places sometimes took about one hour by car to get here. So for those people who had to walk home on foot, it would take a long time for them to reach home. Therefore, during that period we were very worried whether they could manage to arrive home safely.

Another situation was the blackout situation because the electricity supply was cut off, so naturally we couldn't watch TV. So the only information source available to us was the radio that used batteries. However, if we turned on the radio all the time we would end up without having any information if the batteries died. So we set up a plan to listen to the radio during a certain time window in order to get updated news. At that time, shops as well as bridges had been destroyed so there was no means for us to get additional batteries. Therefore, based on the limited information source that we had we knew that there was not only earthquake damage, but also tsunami damage. Subsequently, however, we learned that there had been fires and so forth in Kesenuma. So with limited supplies as well as limited information, we were worried and concerned about the situation.

We went through a period of confusion in the aftermath of the disaster, but when we talked to the residents around this area some people said, "Oh well, we only lost one member of our family so we are in a better position." Some other people said that they were okay because they at least could find the corpse of their dead family members and so forth. Also some people just walked around all over town in order to look for their missing family members and so forth. That was the situation after the disaster. And on the top of that, it put us in a very difficult situation because we could not get a supply of water for four months. So that was a very tough situation we were in at that time.

The central part of town was in such confusion that even though the city authorities managed to make the water supply van go around the town, it was difficult to get water. However, because of the difficult road situation and so forth, it so happened that the water supply van came to our hotel. Therefore, we tried to make a bath available to the neighbours and so forth. But in order for that many people to have a bath in our facility using the limited water supply, we didn't have enough water. We therefore placed a request with the city authorities to send water to our hotel more frequently so that more people

could bathe here.

Originally, our bathing facility required 300 tons of water, but we placed a very strong request with the water authority and could manage to be supplied with 80 tons of water. With that, we could offer our bath to 600 residents in this area.

So from the very first day of the disaster, we were very much reminded of the public nature of our hotel/facility because we could make ourselves available to a lot of residents who had taken refuge in this hotel and make a public bath available. And we could shelter as well as feed them and give them a place to sleep because we run a hotel business. So I felt from the first day that this kind of public functions of a hotel is very important.

And while we were taking care of the residents who took refuge here, we decided to give priority to caring for those households or families with younger children who attend school. It is because they are the ones who will carry on the torch for the country since reconstruction of the community will take about ten or twenty or even a hundred years to completely recover. So we have to sustain the life of those young children.

And second priority is we have to recover the lives of the owners of businesses, because they are the ones who will employ those affected by the disaster. And if those business owners go to other locations or cities, there will be a lot of unemployment in this area. So we do these things because we realize the importance of taking care of and retaining those business owners and enabling the young children to live in comfort. Even to go grocery shopping everyday, we had to go to the next town and that takes about 40 minutes, I think. So it was a very difficult situation.

And in the initial days after the disaster, the first thing expressed by the residents who were here was concern over the children and their education, especially their mothers. They were very much worried that their education had been completely disrupted and they were so angry that their children could not continue with their school education. After hearing this, I decided to open the hours of study inside this hotel. At first, these school learning sessions were conducted on a very small scale and started with about ten students or so. However, we continued at this level and right now they are 130 students who are registered to study at this venue.

So we made it open to the public. All those young students wanted to continue with their education on the eighth floor of this hotel, and of course that was made possible by the participation of a lot of volunteers, basically the college students. The children were very happy to receive lessons from those volunteer college students because they were young, and very kind and nice. And those children who experienced a distressful situation received so much encouragement and comfort by having lessons with those young college students.

So right now, in addition to these study sessions on the eight floor, we decided to launch a new type of lessons, basically in English conversation. Unfortunately, we cannot communicate directly in English with you people. But then, the young people who came to study English conversation here will grow up and speak English. So when you come back, they will talk directly to you in English.

So after the disaster, there are a lot of people who visit us from all over the world, including Japanese people. And we have been very much encouraged by how those people have paid so much attention to us and are willing to help us. We have had much support and cooperation rendered to us from all across Japan as well as all around the world. When you come to visit us, you learn a lot of things about the kinds of prevention measures and disaster preparedness that should be made in the future, and you can take back what you learned from visiting the Sanriku region.

At the beginning, we were very much concerned about preventing the population from moving out to other regions. However, at this point we are very much aware of the

importance of increasing the number of tourists and population inflow of visitors to this region. To have a very active information exchange and that kind of activities are quite important. In this Sanriku area, we are willing to continue talking about what we have experienced as survivors and that we should not let this disaster be forgotten after a period of time. I believe it is the responsibility of the survivors to keep on talking about this disaster for the sake of those who lost their lives. So that's the end of my talk. Thank you very much.

Q: Regarding tourism in this Minamisanriku, what is the recovery rate in this region? Is it back to normal?

A: To that question, the answer is 'yes,' business is back to normal. However, weekday business is at the level of 70 per cent to 80 per cent of the normal capacity. And what is especially ideal is the increase of group visits in order to study what really happened during and after the disaster just like you here today, and that kind of study talk.

Also, we are very much encouraged that there are visits by families who bring their children to learn about this disaster and the disaster recovery situation. And moving ahead, what I am hoping to see is the development of organized school trips. I think our schools and children have to learn what happened in this region and also what the meaning is of having disaster prevention drills and evacuation drills. Because there is absolutely a purpose for having those drills and exercises. Because here in this region, when the disaster occurred, even the elementary school kids knew they knew needed to run for their life. They have to protect their own lives without depending on anyone. That is the kind of lesson that was learned here.

In addition, I would like to mention what kind of impacts we suffered. The association of hotels and Japanese inns consists altogether of five companies. Other than those, there are other small players, but unfortunately they suffered enormous damage and went out of business.

We don't have any comparable data available for the tourist situation because the city office was completely washed away, and all the data went down the drain as a result of that, so we cannot give you a comparative picture. However, we used to even have a bed-and-breakfast (B&B) that operated on a very small scale. We don't know exactly how many of them there were before the disaster. Right now, including those small-scale B&Bs and then Japanese inns, I think there are seven or eight that survived and are operating their businesses.

Q: First of all, thank you very much for your wonderful talk and I was just humbled by your extraordinary contribution to the community, which is absolutely amazing. You are a private entity. You are not a government entity, but you took it upon yourself to shelter the community. My question is after you ended up talking with the authorities here they able to provide you with some assistance such as water, food, and medicine to continue your efforts? And then is there continued planning today to ensure that organizations and companies like yourself, individuals like yourself, are provided support from the government to offer these extraordinary systems?

A: Yes, we were designated as a secondary refugee shelter starting from 5 May. After that, we started receiving government subsidies and support.

And that type of public assistance was given to us on the basis of per capita. I mean, we had 600 refugees. So for each refugee, we received so and so amount of subsidy from the central government. However, that continued only until the end of August. So it was something like about three months and what was received was a monetary subsidy. In terms of having access to the necessary goods and food and other materials, we were designated as a secondary shelter, so government gives priority to primary shelters and then us. That is the reason why we had to struggle a little bit in order to have access to the necessary

materials. But then there were voluntary organizations that supported us in having access to daily goods. The community was completely destroyed and it was very difficult to get them. So someone like Mr. Shimizu, volunteer, who was working in a private organization helped us obtain those goods.

So this time we learned a very important lesson. The city office was completely washed away, and therefore the authorities who were supposed to intervene and help our residents was not functioning and they couldn't help the people in need. And that's where powerful and well-organized volunteers came to help us and that was particularly helpful. So moving ahead, we really have to think about that. When the city authorities themselves have been completely destroyed, someone else has to come in.

Comment: Personally, we all congratulate you on your work. Your work was very much needed as well as the volunteer work, and we need more people like you all over the world.

I am very, very proud to have had the chance to stay at your hotel. But you have emphasized the importance of disaster preparedness. I am not an expert, but I think Marilyn is an expert, but I have lived in two areas; one prone to earthquakes and the other to hurricanes. So I am always a bit more ready than other people.

I support your interest in continuing this kind of work and this is the kind of thing that we can do.

A: Thank you very much for your kind words as well as encouragement. I appreciate it very much.

Q: How much time passed between feeling the initial earthquake and the first wave of the tsunami? Was there any warning over the radio or public warning system, and has any system been improved since then?

A: The time between the first earthquake and tsunami depended on the location. However, in the case of Minamisanriku it was about 30 minutes – half an hour. There is the positive as well as negative side when we say about 30 minutes. One positive aspect is that we had enough time to evacuate to higher ground. However, because of the half-an-hour allowance, some people went back their homes to take other family members to higher ground or they went back to get some valuables and so forth. So there has been pros and cons incorporated into these 30 minutes.

Even in the past when we experienced tsunami damage, it was said that we have to look after our own lives. Therefore, it is our individual responsibility and that is what we learned from the past tsunami incident. So if we can educate the people in that way, we will probably be able to reduce the number of victims of a tsunami disaster.

Now, talking about the warning that we received; the warning came through wireless communication from the disaster prevention section of our town office. But, unfortunately, the wireless was cut off immediately after the disaster. Therefore, despite the effort made by the young staff or by the town office, their warning was cut off in the middle.

Comment: I would like to make one comment on the private school run by the student volunteers because that is a very positive idea. There is one very good success story as well as good example in a remote village. Because they suffered damage, they started running a private school with university student volunteers and it continued for many years, with the school receiving a very good reputation. Therefore, pupils from even outside that village came to attend and the number increased by not only the children of the village, but also from outside. So that is the sort of success story that we had. And I'd like to say is that we appreciate your great effort in running the private school here. I hope that sort of effort will be continued over a lengthy period and you will establish a very good reputation so that many pupils will attend your private school hoping that having the education here will make it possible to pass the examination to enter a top-class university in the future.

A: Thank you very much for your comment. This is the spring entrance examination time

in Japan and all the student passed their examinations for the high school or university they hoped to enter. So that is a very good result and we are very much pleased with that.

There is also another thing which I would like to mention. Before the disaster, if you asked an elementary school kid what he wanted to become in the future he would have answered simply saying that he would like to be a cake shopowner, baseball player, or that sort of thing. However, now even such children have a clear vision of what they are to be and in order to realize their vision and dream, they know what university they have to go, what they need to learn, and so forth.

So even the elementary school kids have been motivated, and they now have a very clear vision and they know what needs to be done to realize their dream. That is the positive aspect of our private school education.

There is also another positive side. There are many old people or old residents living in this area and the experience of the disaster must have been very tough for them, mentally as well as physically. Some of them lost hope to live. But those kids as well as young students will be able to give hope to the aged people to continue living. For example, if their grandchildren get a very good mark at school or manage to enter a very good university, then those elderly people would become very happy as well as be pleased and encouraged to continue living. So in that respect we experienced a very positive effect from running the private school. Therefore, we intend to continue this kind of private school going forward as well. Also, I mentioned the English classes and I think we will positively realize the project of inviting non-Japanese foreign volunteers. Prior to 11 March, there was a scarce number of foreign visitors because our town was not that famous and there were no tourist spots like in the big cities. Therefore, it was very difficult to attract foreign visitors. But now after the disaster, we are receiving many foreign visitors like you from all over the world, so even the young children as well as small kids realize the importance of learning English.

Mr. Omori, Reconstruction and Planning Department, Minamisanriku Town: I have my colleague with me Mr. Daisuke, who is also from the same department.

Please refer to the handout material. Now please compare the two photos. The upper one is before the disaster and the bottom is after. You can see that the location of this photo is over there. So this is the centre of Minamisanriku town. Before the disaster, there were 2,000 households in this area. Almost all of those houses were washed away. In addition, public buildings were all washed away, including the town office, fire brigade, hospital, and so forth, and all public services as well as functions were halted because of that.

I am going to relate to you what we have done following the 11 March disaster. There are three to four activities we have focused our efforts on following this disaster. Especially during the one month that followed, we made the effort to ensure the safety of the residents and we checked who survived out of the over 2,000 households and who died. So that's the first thing we did. We also had to visit all those emergency shelters and deliver food and other living necessities. And it was still very cold when the disaster hit us. So we had to ensure that those shelters had sufficient fuel to burn, and in order to provide power to the shelters we had to secure emergency power generators because there was no power, gas, or water supply.

When April came, we started to make the effort to bring back civic functions that had been completely lost in March. Among other things, we worked very hard in building temporary shelters. In order to do so, we had to first secure land to build the shelters. And this effort continued from April until the end of August. So the very first temporary housing was built at the end of April and this effort of rebuilding and constructing temporary shelters went on until the end of August.

In terms of food provision, by the end of April, we had a sufficient supply of food on hand. However, the problem was the provision of water. Our water supply system had not recovered at that time. So we had to resort to asking for Japanese support as well as support from all over the world to give us water as well as rice.

So all along we have worked very hard in building temporary shelters. And a substantial number of people have refuge in the community centres and schools. So we had to make sure that they had enough provisions at those places, although there may have been certain cases where they were insufficient, but we still did our best.

By the end of August, our functions within the municipality had gradually been recovered and in September we took it upon ourselves to start a new initiative involving talking to the residents who had taken shelter in the temporary housing as well as the community centres and schools. The explanation on the collective relocation of the community was quite clear to everybody. Those people living in the temporary shelters would of course have a final place of residence at higher ground. We started to explain the initial situation or ideas to the shelter residents and our plan for reconstruction. That kind of discussion has started to take place with the prefecture and the central government, especially the reconstruction agency which was launched in the wake of the disaster. We have a very broad idea as to what will happen for the reconstruction, but the details have not been yet worked out.

We have figures available, so I am going to give you some numbers.

The registered tremor on 11 March was 6 here at Minamisanriku. We sent out an alarm of the possibility of a major-scale tidal wave arriving at 2:49 pm through the public address system. The metrological agency warned of the probability of a tidal wave of the height of 6 meters striking, as of 3 o'clock. So the very first tidal wave arrived at the Minamisanriku was registered at 3:25 pm. Of course, there was a slight difference between the coastal area and township, but it was about 3:25 pm. But the height of the tidal wave that hit our city hall was 15.5 meters high. And the highest tidal wave registered was at the area called Utazu and the height was 19.1 meters.

Now, I am going to explain the physical damages, especially regarding the buildings. All across the township, 3,142 houses are completely washed away. Largest scale and half-scale damaged houses numbered ninety-four, and partially damaged houses totaled seventy-five. So altogether, that number was 3,311.

And now we come to the human damage as of 13 January. Of the total resident of Minamisanriku, that total was 499 and missing 299. So when we add them up, the number was 798.

And we also have the data released from the police. Because there was some inflow of workers outside of Minamisanriku, the total death toll including this inflow population was 565. And the missing was 303. So the total was 868. However, this number is gradually growing because police are still looking for those missing.

So as for the total population of Minamisanriku, at the time of the national census which took place two years ago, the total population was 17,431. In terms of households, there were 5,295 households. As of the end of November, the data available shows that the total population of Minamisanriku is 15,523, and there are 4,890 households.

The total number of emergency shelters are fifty-eight, and the total number of units constructed was 2,163. So the total number of units constructed by Minamisanriku town as well as Miyagi Prefecture that came to support us in the construction is 2,195.

Q: Are they basically prefabricated houses?

A: Yes, temporary housing. Well, some of those temporary housing are wood construction, but not many.

Q: Are they all together in one area or were they built at the place of the previous site of

residence?

A: As a matter of fact, the fifty-five locations I mentioned are not exactly in the vicinity of their original residences. Naturally, they had to go to higher ground. However, in this neighbourhood, there was not much higher ground available for the construction of emergency shelters. So what we kept in mind was for the residents of small communities who took refuge, for example, a fishery community, should get together and take shelter in the same location. So that's what we did and the locations where they have constructed those emergency housing was basically on the premises of schools, typically playground and sometimes they have taken refuge in neighbourhoods that were not affected or the premises of a shopping centre they had a very large parking area outdoors.

Q: Please refer to the material; on the back of this material, on the right-hand page, there is reference to the construction plan which was formulate on 18 September last year. Could you briefly touch upon this reconstruction plan?

A: So using this material I would like to briefly explain about our plan going forward. Please refer to those two figures on this particular page. The upper one is how it was before, and the bottom one is after implementing the kind of plan we have. (map as attached)

Next, please refer to the top figure. According to this figure, you can tell that Minamisanriku is a town for fishing as well as has a fishery processing industry. Therefore, naturally those facilities have been located very close to the sea and coast as well as the individual residences. After the disaster, we took a survey of the residents of our area and 70 per cent of the respondents expressed their wishes of wanting to relocate themselves to higher ground.

Please refer to the bottom figure; going forward we would like to leverage onto higher ground as much as possible. However, as mentioned earlier, our town is dependent on the fishery business; therefore, without utilizing the lower land close to the coast, it would be very difficult. So we decided to use the lower ground for the processing plants. And public offices and public facilities as well as the houses for residents and so forth should be relocated and moved to higher ground. Please look at the lines; there are A and B lines indicated. A means the height of tsunami this time. We are going to relocate those houses and public services above the height of the tsunami we experienced this time. Thank you.

Q: I would like to ask you about this particular plan. Is this the final plan or not? That is the first question. And if that is the case, then when do you think that you could complete this project by relocating all the buildings?

A: The basic policy of relocating various services and buildings to higher ground has not been changed. However, we are still coordinating with our residents in order to establish our final plan taking into consideration their needs. There are opinions from the residents that we should effectively utilize the lower ground closer to the coast and that might be necessary. That's the sort of things being said and these people feel that accessibility as well as safety needs to be balanced even if there may be some risk of having buildings as well as houses at lower ground. We should take into consideration how to best utilize those sites as well. So at the moment we are trying to have a discussion with the residents as well. The suggestion is that probably we may be able to locate those tourism facilities as well as some commercial facilities at lower ground, and together with that a certain portion of the residential houses, I suppose. That discussion is still continuing with the residents in order to come up with the final plan.

Q: Yesterday we visited another building which also had a housing plan. The gentleman said that the central government would provide about \$60,000 maximum amount per house. But the houses were going to cost them more. So my question to you is are you also facing the same challenge? And if you are already having solutions established to help finance,

please explain about those schemes.

A: There are various government schemes at the moment that are under the livelihood reconstruction financing scheme where there are some type of subsidies and grants that individuals can receive. For example, if the individual wishes to build a house, then they can get a subsidy of 2 million yen; 2 million yen is just under \$10,000 divided by 80. Also, additional support is if the individual would like to get financing from the bank in order to build a home, the person can get a subsidy on the interest needed to be paid up to 7 million yen.

So altogether, the actual subsidy is not having to pay 2 million yen for building the house and also the interest subsidy of up to 7 million yen. The basic central government policy is that housing is private property. Therefore, there is a reluctance to subsidize to private property which will be ultimately owned by the individuals. So that is the scheme for livelihood reconstruction support.

And immediately after the disaster, there were many people who wished to build their own house on upper ground. Approximately 30 per cent of the residents wanted to relocate their homes. And then another 30 per cent had the wish to live in city public housing offered by cities and towns and so forth.

However, as time passed the number of residents hoping to build their own homes declined and many people now wanted to be accommodated in public flats, apartments as well as houses because they realizee it would be very difficult to get housing loans under the present circumstances.

Q: So you mean to say that interest subsidies is interest free or is the interest paid by the government?

A: The interest is going to be paid by the government.

Q: Do you have any timeline about the reconstruction plan? You said that the brief timeline at the moment is that, in the case of the reconstruction of the central part of the town, it may take some time because of the grading of the destroyed land as well as rezoning of land because quite a lot of private properties and private land were involved. So in order to come up with a plan and start building those necessary buildings, it would take over three years. In the case of small villages like fishermen's villages and so forth, we could take it up – start commissioning our plan earlier, probably within this year or so, so that we could start procuring the necessary land space. Leveling the ground could be initiated within this year.

Mr. Miura, Fish shop: I would like to talk about the days after the disaster. I took shelter in some temporary emergency shelter that was very close to some industrial zone, industrial park. I saw a delivery truck stopped very close to this industrial zone and it carried a lot of livelihood goods. So we decided to unload those goods from the truck and then deliver them to the residents who had taken shelter in this area.

Following this, a lot of people had taken refuge in the bayside area and I started helping cook rice that was distributed to the residents.

It so happened that everywhere we took refuge, we found lot of people who had run fish shops. So we got together and decided to help the residents in the shelter. Those who still had cars drove to the nearby stream and they then had water that we distributed to the people in the shelter.

I learned that there were a lot of emergency goods that had arrived from all over Japan and throughout the world. However, they did not really reach the needy people. So I decided to chip in and help them.

Mr. Shimizu, Volunteer: If I may, I'd like to give you a little bit of detailed information about what happened immediately after the disaster. Mr. Miura and his colleagues had

a very big supply, so he had grilled 1,600 pieces of saury and distributed them to the survivors. In that area, there are elementary schools, junior high schools, and high schools and playgrounds of those schools where are lot of survivors had gathered. And as Mr. Miura mentioned, he helped out in unloading the truck that had a lot of goods. And some of the goods were really expensive products such as the abalone you enjoyed last night. He decided to take them to those survivors at the elementary school, junior high, and then high school. But, curiously, some of goods disappeared on the way. Of course, that was a day of life and death, so there were probably some shoplifters.

Just to give you a background of the relationship between Mr. Miura and myself. I happen to know him through the purchase of octopus. He is the best producer of the best kind of octopus in the region, and I myself live over two hours away from this Minamisanriku; I live in Sendai, which is the capital city of Miyagi Prefecture. And on the day of the disaster, my house was damaged. Everything was in disorder and everything was destroyed. And the lifeline supply was completely stopped up until the beginning of April when power, gas, and water came back. So during that time, I was very much preoccupied with putting my life back into order again. But then when the lifeline came back and I was sorting out things, I happened to find the business card of President Miura. Prior to the earthquake on 16 February, I held a birthday party for my wife in Minamisanriku. And that time I visited Mr. Miura, so I had his business card.

So on that day, when I found his business card I wanted to call him, but naturally the telephone lines were not back up yet. But I really wanted to see him and, of course, I wanted to eat his fantastic octopus. So what I did was I resorted to the Internet, and through the Internet I realized he was working very hard to support all those residents in the shelters. There was even a picture posted on the Internet. On the same day, I hit upon the blog of a professor of Waseda University who had launched a project to support East Japan, which is called the Fumbaro East Japan Project. And this blog featured his mobile phone and telephone number so I immediately called his cell phone and asked what kind of goods they needed, and he told me what they were. At that time, even in Sendai, goods were in short supply. It was very difficult to get our hands on them. But fortunately, I had a very good coordination network with people outside of Sendai. So, from outside of Sendai those goods flowed into Sendai, and everyday, I sent those goods to Minamisanriku.

The very first time I visited Minamisanriku after the disaster was 6 April and after that I went back to Sendai. And then my second visit was on 10 April. At that time, it was very difficult because even if we wanted to deliver goods to those shelters and people were in need, there were not enough vehicles available. And when I was visiting Mr. Miura during the second visit, I ran into a volunteer who had come all the way from the southern part of Japan, Kyushu, to help them out. He had been staying with Mr. Miura for about twenty days, and had difficulty getting out of Minamisanriku because there were not many cars available. But he had to leave. So what happened was I have been staying with Mr. Miura since 10 April till today.

At the beginning of April, there were a lot of goods which had been sent from all over Japan and the world. Those people in need would come to the distribution site for goods. What we saw was a big fishermen who had lost everything by the disaster, and he scarcely had proper clothing on him and he didn't have footwear either. He just had women's slippers and was practically barefoot. And it was very, very cold at that time and everybody was rushing to get the handouts of those livelihood goods. I felt it was like a tiny drop in the enormous ocean in terms of the amount of distribution that we could make.

But then coming to the May-June time frame, the situation had completely changed because by that time this kind of very needy situation had improved. Those goods then were reaching those people in need. Now, the people's mentality have changed. Instead of

sharing things among all the survivors, they have start sensing anxiety when thinking of the future. They don't know what the future will bring.

So whenever they have their hands on the goods, they start accumulating, even cornering them for themselves for their uncertain future. So those of us who are in the position of distributing those goods would like to distribute them in a stable manner to those in need, to just give them the amount necessary for survive day to day. That's what we wanted to do. But on the receiving side, their mindset had completely changed. So that added to the anxiety of community.

The situation saw further developments. Let's look at the June-July time frame. During that time there were lots of fishermen who had approached us and asked if there were any fishing boats available that had been donated. I told them it wasn't possible to find giveaway boats and they had to find it. There are so many people asking about the resumption of their businesses it meant that they needed to have boats. So we decided to set up a support group especially targeting the fishery group, fishery people. As you know, 70 per cent of the population of Minamisanriku are engaged in the fishery industry in one way or another. So the very first thing we did after starting this support group was check the radioactive exposure of the fishery products of this region.

So there were some voluntary divers who had come to support us from Tokyo. The first thing they did was take samples of fishery products such as silver salmon and seaweed such as wakame. They sent those samples to a very famous third-party analysis facility called the Japan Analysis Center and they measured the level of radioactive exposure of those products. The reason for this is that in order to resume fishery activities, it is very important to appeal to the consumers that their products are safe.

In order to ensure that the results of the measurement of radioactive dose show no radioactivity without a doubt, we conducted three analyses. One was conducted on 6 July and another one in October; the last one was conducted in January this year and all three analyses detected no radioactivity. However, even prior to taking that kind of action, we prepared for emergency cases in the event that a high dosage level had been detected. We thought of appealing to the members of parliament as well as lawyers and so forth to come up with some countermeasures. I suppose, however, that kind of preparation as well as concern was necessary. Therefore, we distributed the good results to the fishermen so that they could go back to business with peace of mind.

I also mentioned to you that we started a construction association and our name has started to be known. The number of people who are showing an interest has started to increase and we have started to receive donations from various people, including the president of the Taiwanese government, Mr. Lee.

So having said that, what's been needed was fishing gear as well as fishing boats. We tried to get new boats; however, it was very difficult because no new boats were available at that point in time and it would take one to two years to build a new one. Therefore, we tried to start looking for used boats. But the situation was, in terms of the Minamisanriku residents including fishermen, they are Internet illiterate and therefore hardly use the Internet or cell phone mail. Therefore, it must have been very difficult for them to get any information. So on their behalf we started looking for used boats as well as fishing gear needed such as ropes and fishing baskets as well as weights such as sandbag and so forth by searching through the Internet. And we tried to gather information on what the fishermen needed during the drinking sessions we had every night.

Through that sort of effort, we could manage to get the first fishing boat through Yahoo auction. I showed the photo of this fishing boat to a fisherman and he was like, oh that's great and he fell in love at first sight just by looking at the photo. The person who was selling the fishing boat was in Mie Prefecture, located in the middle of Japan – central part

of Japan. The fishing boat required by this area has specific requirements, and it is not the case of any fishing boat being acceptable. Therefore, the person in Mie learned about the specific needs of the Minamisanriku area for the fishing boat and now, as of today, he has manage to find eleven fishing boats for us.

However, for the fisherman in this area, the fishing boat is not provided for free. They have to pay a certain amount of money; however, as far as transportation cost is concerned, that is supported by the association. They are financially supported by the association. And thanks to the cooperation of the town authorities, those fishermen who purchased those fishing boats can get a certificate of being a victim of the disaster so they could get preferential treatment even when buying those used fishing boats. Normally when you buy new vessels, it could cost over 1.5 million yen. However, that fisherman could get a used fishing boat for one-tenth the cost of a new vessel, probably between 150,000 yen to 200,000 yen. However, the demand for fishing boats is so enormous that as soon as we find an available vessel, it is booked and reserved by the fisherman for purchase.

Let me now go back to the story involving the supply of sundries and other goods. Six months after the disaster, say around August or September, there was a decrease in the number of supplies arriving here. Before that, we had been receiving over 100 boxes of supplies and other things every day.

So there were less number of boxes but the life of the evacuees remained the same. Some people started resuming work. However, in order to get consumables and other necessary items for daily life they needed to travel a long way. At that time, the Fukushima story was being spread all over Japan. Therefore, the minds of the people in Tokyo were probably filled 95% with the concern about the dispersion of radioactivity. And the remaining 5% in their brains may have sometimes remembered the disastrous situation in our area because of the shortage of life supply as a result of the disaster. We started taking action to appeal to companies all over Japan. We wrote letters as well as sent email to many companies asking for needed supplies. And, at the same time, we got information from the evacuees and refugees as to what would be needed at that point.

I would like to give you some information. As far as the town authorities are concerned, they made a statement to the outside world that life supplies are now plentiful and it was no longer necessary to send them. But probably what they thought was that by receiving those life supplies from all over Japan that they would require manpower as well as a lot of time would be taken to sort them out for distribution. Also, on the top of that, it has to be a fairly based distribution without any discrimination, and that's why the town authorities announced to the outside world that supplies were sufficient.

However, the truth is that even at that time we were facing a shortage of life supplies. The town authorities at that time told us that if we continued to receive life supplies from outside, it would prevent us from becoming independent. That was the excuse of the town authorities for not accepting supplies from outside. But as far as the financial situation of the residents in this area is concerned, for example, they get approximately 120,000 yen monthly income, and from that they have to pay rent as well as purchase other necessities. This monthly income is not enough at all to become solidly become independent. And some of the families decided to restrain themselves by having only two meals instead of three meals per day.

But anyway, the situation has improved to the point that the people can have enough food to survive. Because of that kind of situation, we are still continuing to receive material supplies from outside. This includes not only the basic necessities but also, for example, beer for fathers so that they can sometimes have beer instead of low alcoholic drinks. Also, the kids might have wanted to have some toys, but they were not really in the situation to get toys. So we tried to give something additional so that they can start enjoying their life

as well.

What we are doing right now is every day we visit temporary shelters at fifty-eight locations; 2,020 households, altogether totaling about 5,000 persons. We prepare a small pouch filled with daily necessities such as seasoning for cooking and shampoo and other daily items.

So in retrospect, I believe what has driven me to stay for such an extended period of time in Minamisanriku and try to reach out to the survivors is an incident in my childhood. When I was very small, we lost our house in a fire. We lost almost everything in my house, my toys, clothes, and everything. At that time, children in the neighbourhood helped us. Even the children in the kindergarten and elementary school came to visit us with small daily items. And I was very much happy to receive those goods, which encouraged me.

So probably that experience from my childhood has brought me back to this site of a major disaster. Because I just simply don't understand why I have been staying here for such a long time. But I would like to return this to those children for the help I received in my childhood and talk to the volunteers and to the children living in this area so that when they grow up, if another disaster strikes someone in Japan – I hope that doesn't happen – but if such a thing happens, they will become adults who will go and reach out to those people.

So it's been almost one year since I came to help survivors in this township. And all along, we as NGOs and as volunteers, have run many different projects just to help support the survivors and alleviate their pain and suffering. For example, we cooked rice balls and distributed items for their daily needs. In addition, when there was the coming-of-age day when all the people across Japan who reached 20 years old celebrate in very special clothes, the traditional kimono, in order to celebrate that day, there was a donation of kimono from Niigata Prefecture. Of course, there weren't any cameras so cameras had to be brought in to take a picture of the young adults in beautiful kimono. Therefore, we ran from projects for daily needs to ceremony-type projects.

But as volunteers, I really feel that we are coming to the point where what volunteers can do has reached its end. So in making a step we step towards the future, what we must have is strong leadership and intervention of the administration, which must show to the township and to the survivors what kind of future they are envisioning. At least those people have to be given some sort of clearly defined milestones, not very faraway in the future. Ten years or five years down the road, they need more clear, near future milestones, one or two months down the road. Although the town authorities showed this reconstruction plan for rebuilding the town, it's such in the faraway future and not yet final, not yet approved. So from this point on, we need the strong leadership of the central government and prefecture to show us the way to go.

Another serious problem we are looking at right now is the decrease in township population. I am often asked by a lot of people and groups outside of this township as to what we need right now. For the time being, we have a sufficient amount of life supplies. But a serious problem is how to prevent this outflow of population. Right now we have lost 9.6 per cent of the township population and we have a potential loss because 17 per cent of the remaining population have voiced their wish to move out of this town. And Minamisanriku was the hardest hit of all the disaster-hit areas and cities. We were the hardest hit and we are a city and town that has lost the most population compared with other cities and areas.

So as the madam of this hotel mentioned earlier, it is very important to generate traffic to this township from outside in order to exchange information, in order to experience how it is to be in Minamisanriku. So we hope people will come as tourists, as volunteers, as part of a study tour. By doing so, each one of the visitors will learn from this city, witness

what is happening, and then take it back with them. When they go back to their homes, they will relate this experience to others and then that will further increase the exchange with the outside. That's going to be very important.

Ms. Abe: So that's really a serious issue we are facing right now, that of losing our population. Some local businesses are opening on a very small scale and our fisheries and related activities are resuming their activities, although on a small scale. So what I am afraid of is if we continue losing our population, how can the local businesses and local merchants survive this situation. And if our population drops further, the inbound population will drop as well.

So what we might see in this township are chain restaurants, chain stores which come from the outside with very big capital. The small merchants will completely lose out to those big players who come from outside. So even though the two may be recreated and rebuilt, still what you will see is only the flourishing of the people from outside. I don't want to see that.

Q: Mr. Miura, was your shop combined with your home?

A: No, they were separate, but now we are in temporary housing so the shop is not combined with our shop.

Q: And looking at this reconstruction plan, they are going to relocate shops and housing to higher land, and and you will be able to reopen your business in a building with your house combined. It will take a long time before that is materialized. So can you manage until then?

A: Fortunately, I happen to have a warehouse on higher land, so now my family live in it. However, the dilemma of a lot of people who took refuge in temporary housing is that they don't have employment. They lost their jobs. Even if they might have a job, some people happen to live very far away. They may have found a temporary resident, some two hours by car from Minamisanriku, but in the course of time they may opt to live and find a job in a faraway township; that can happen. Right now, the people are motivated to stay closer to this township because their children's schools are here. But once their children grow up, they may lose the motivation to live in this township.

Another example is from right after the disaster. There was a plan to rebuild the shopping area much earlier by the end of October last year. Shops were supposed to reopen in a temporary building. However, it has been delayed by almost three months. So while we were waiting, a lot of small merchants who initially had the intention to rebuild their businesses once again did not want to keep waiting, and lost their desire to do so. This will also add to the loss of population.

Comment: I must congratulate the speaker. He speaks the truth. This is his experience from his childhood, what he learned and now what he has been practicing following the disaster to save the people, to save them from suffering. This is the long history he narrated. I hope for the best.

[Visit to the Disaster Area of Minamisanriku Town]

Ms. Mika Miura: As far as the hotel is concerned, on the day we were hit by the tsunami, our hotel's first and second floors were inundated. Fortunately, our hotel lobby is located on the fifth floor so it was okay. At that time, approximately 350 guests were staying in our hotel and they all evacuated to the nursery of our hotel.

So, the people evacuated to our hotel, and at that time there were no utilities, including electricity, water, and so forth. One of the most difficult things we had to endure were the lavatories because they couldn't flush.

You will see the apartment block on your right. You see there are brown and white buildings. Those are part of an apartment block. One of our employees at the hotel

evacuated the residents to the roof of that building. However, even the roof was inundated to the level of people's necks. Also, he had a 4-year-child so all the way through the night he had to push the child up by holding him with his two hands.

On that day, there was a celebration for the elderly so people over 60 years of age were there to attend some sort of event held in that building. Approximately fifty elderly people were in that building.

So that building which you saw is owned and run by our sister company. The elderly people's celebration was being held. However, a tsunami wave just came into that building and that building was inundated by a pool of water. Therefore, the staff of our sister company just stood against the door in order to stop the water coming into that building.

We will be coming back and getting off the bus around here so you can take photos later.

This area is the central part of the town. It was full of shops as well as private houses with small gardens.

Many people believed that the water would not go up to that area during the recent tsunami. Therefore, when they were hit by the tsunami wave, they just tried to run and escape to the border just before the forest.

The people escaped to that corner around there, but unfortunately the water just came over those barriers and they had to escape further by climbing up the slopes.

These garages and shops were also damaged by the tsunami. However, they were quick in recovering their businesses as well as shops.

The water came up to that hill as well.

Before that, we assumed that the water would not come this far. Therefore, the distance that the people covered to escape was not good enough. Due to that, many people died because they couldn't manage to escape from the tsunami.

This is the highest point in the town.

This is the highest point which the tsunami did not reach. However, you can see the small corner just by going down the slope.

From that point on, it never flooded when a tsunami came.

As you can see, there isn't any water that can be seen from here.

So everybody thought that as long as they could manage to escape to this area, that they would be safe. That was the general mentality of the people living here.

The speed of the tsunami wave was so quick. Also, the volume of water was so much that this place was quickly inundated by the tsunami wave.

Around here as well it was flooded so the houses as well as cars were swept away to this area.

I am going to take you to the community where I lived before the earthquake.

I have been working at the hotel, and was also working during the time of earthquake. Therefore, I needed to tend to the hotel guests as well as children in the nursery. I stayed at the hotel after the earthquake and the tsunami for five days so I could only manage to return home five days after the tsunami disaster.

You can see those cars piled up.

You can see the same scenery of cars piled up.

I have a friend who is specialist in waste. I learned about the type of waste as well as debris which we have around this site. Lately, there there have been many fires from the debris and waste. The reason being is that some oil is still left in the debris and waste and that naturally activates fire from them.

You can see the damaged railway track. However, there isn't any plan to restore that railway track at the moment.

At the time, trains were running and it is a miracle that nobody was hurt, neither were

the passengers of those trains hurt.

There were train drivers as well as attendants being trained in tsunami preparedness education. Therefore, when they detected that an earthquake as well as tsunami might hit the area, they immediately stopped the train early on because it is well known that tsunami can strike this area. So those attendants expected the tsunami to reach this area.

Okay, now we are coming to Utatsu district.

Some bigger townships consists of two smaller communication systems put together, and one of them was Udatsu and the other was Shizugawa town.

I used to live in this Utatsu District.

We now have a complete view of Saikoji Temple.

Unfortunately, this temple was completely washed away by the tsunami, and not only the temple, but also structures around the graveyard, tombstones everything were washed away.

A lot of survivors were very much distressed by this site because there were a lot of human casualties, lot of deaths, and they didn't know where to bring the bodies of the deceased and have a proper Buddhist ceremony.

As the community was in a state of distress, there was help offered by the organization called Freemasons. I think you know about Freemasons better than the Japanese do.

You may have heard about the Freemasons when you read the Da Vinci Code.

You are fully aware that Freemasons is an organization of stonemasons.

Those Freemasons gathered here to rebuild the Buddhist temple. In a matter of several days, at an amazing speed, they completely rebuilt the temporary temple structure.

This is a really good example of people joining hands regardless of race or religion in times of need. The people of Utatsu were so thankful for the efforts rendered by the Freemasons.

So we are going to visit that area.

[Visit to Saikoji Temple]

Mr. Ozawa, Chief Priest, Saikoji Temple: Thank you very much for visiting us today. My name is Ozawa. I am the chief priest of this temple.

After the earthquake and tsunami, this place was completely washed away by the tidal wave. Then what was left behind were mountains of debris. Nevertheless, there were a lot of people coming to visit this temple and paying tribute to the souls of the dead standing right in front of the debris. It was a pretty pitiful situation and I decided to talk to the local authorities to ask for help to remove the debris so that those worshippers would be able to pay a visit here and mourn the loss of their loved ones. The local authorities sought volunteers to chip in their help. Ninety people gathered to remove the debris.

After the volunteers completely cleared away the debris, this site was put in order and no longer had mountains of debris. However, those mourners kept coming back here though, of course, there were no traces of the structure of the temple, just the remains of what used to be a temple. They would gather and then pray, and then cry. I really came to be reminded of the importance of having the structure of the temple so that it would serve as a place of mourning for the dead and for people to let out their deep sense of sorrow. That's the reason why I decided to reconstruct this temple and have the statue of Buddha and all other surroundings reconstructed.

So I had the intention of rehabilitating this temple in mind. However, what I did was I went to Hosenji Temple in the next town because the chief priest of Hosenji Temple is the representative of the assembly of the Soto sect, which is one of the Buddhist sects in Japan. He had some political influence among the congregations of the Soto sect. He asked me what I wanted. So I said that I wanted to rebuild this temple. The Soto sect has received a

lot of goods and supplies donated from all over Japan and the world, some of which came from the Freemasons. When I talked to the chief priest of Hosenji that we would like to have this temple rebuilt, he agreed to become the go-between me and my temple and those religious organizations who are giving support to this entire region. Preparations were under way without even my knowledge as to what was really happening.

Initially, I thought what I could come up with was a very simple sort of makeshift-type temple. However, as you can see the results are fantastic; it is a beautiful temple. At the beginning, when the donation and efforts offered by the Freemasons were received by us, there were some who questioned exactly what were Freemasons. We investigated the matter and found that it was some sort of secret organization. There were some people who were quite concerned as to whether we should receive donations from some sort of dubious organization. We didn't even know what they were doing. But then I said to those people that if they are offering support in times of need like this, they must be people of good heart and it is surely a very good offering so we have to accept it.

As a matter of fact, there was a Japanese Charter of the International Freemasons Organization. Whenever they make donations or give support to any organization in need, they make it anonymous. They don't disclose that they are Freemasons, so maybe that is the reason why they are always considered some sort of secret, dubious organization because they don't disclose who they are.

Regarding this temporary temple, we made it clear that it's very important that the Freemasons identify themselves in having rebuilt it. That was the opinion of the chief priest of Hosenji and the results are there. You see on this Japanese national flag is written Japan Freemasons. It so happened that the wife of the representative of the Japanese Charter of the Freemasons in Tokyo works at the US Embassy so we got those signatures from the embassy.

Freemasons' support doesn't stop here. They continue to support us in one way or another. The next project that they envisaged is the acquisition of fishing boats. Also, they have a project to build another temple in Miyagi Prefecture. Each time, the representative of the Japanese Charter of the Freemasons comes to visit us. He is a gentleman by the name of Mr. Fir. He always visits us with some TV crew or reporter from a newspaper so that they can cover the story. How wonderful the activities are that the Freemasons are engaged in!

[Visit to Minamisanriku Town]

Ms. Miura: Fire station, power generation using, probably, coal – a coal-fired power station. The tsunami reached here. Very close to the sea, the Pacific Ocean. Please look at the right hand side and you might be able to see some debris. Let's talk about the tsunami damage.

It's the sort of village that was severely affected by the tsunami.

You can see on the right hand side a village that was affected by the tsunami.

There used to be coal-fired power generation plant. However, that plant was also very much affected by the tsunami and it destroyed the dike as well.

There were many firefighters who died or lost their lives.

As I mentioned to you, this area is called Utatsu, but not only here in Utatsu but also throughout the Minamisanriku area evacuation as well as evacuation drills were carried out in order to prepare for tsunami as well as earthquakes. But in the case of this particular area called Utatsu, this area is close to the ocean. Therefore, the first thing that they had to do in order to prepare for those disasters was to relocate the fire brigade as well as the city or town offices to other places.

As you can see, there was quite a lot of damages caused to this area; however, there

were no deaths in this area because they carried out thorough evacuation preparedness training as well as drills.

The central part of town is called Shizugawa. In that area, there were many casualties of firefighters as well as town authority officers and so forth. People wondered why in the Utatsu area there weren't any deaths or casualties. The people thought that probably not enough preparation was done in Shizugawa.

Therefore, an investigation was carried out as to why there were so many casualties in the Shizugawa area. However, more or less, we came to the conclusion that we had trusted the weather forecast at the time that said the tidal wave would only reach the level of 6 meters. Therefore, the town officers just trusted the weather forecast when they came up with the disaster plan.

Please look on your right side. I mentioned to you before the natural ignition of those debris and waste and those are the areas – naturally those debris and waste were ignited.

The kinds of debris included broken up fishing boats as well as cars and so forth.

This area is called Heiseinomori where the temporary housing has been built, in which I live at the moment.

I am going to take you inside my temporary house. However, I feel so ashamed because the place is such a mess since I didn't have the time to clean up the place yesterday because my 14 year old son had stayed there. So please don't look too closely..

Okay, you just saw my current house, my temporary house, and now I am going to take you to where I used to live. I would like you see what happened to my house.

I told you that getting temporary housing was by lottery. I had to apply nine times, so eight times I failed and on the ninth time bingo!.

You will see a convenience store.

The tsunami reached up until this place.

This convenience store was completely carried away by the tsunami. As a matter of fact, this intersection was the confluence of the tsunami waves gushing from three directions, from behind, from the front, and from the right side. Because of that, this convenience store was completely destroyed.

Now please pay attention to the trees on the right. You can see the different colors at the roots of the trees. They have become brownish. That is where the tsunami submerged the trees and at the tip of the trees, you see a greenish color. The tidal wave did not touch that part.

We cannot have access to my house because the road to my house was also washed away.

You see the direction our car is going; there used to be road running up to my house. There used to be a lot of houses in this neighbourhood.

You can see that there is a little bit of open space in between the two wooded areas. That is where my house stood, but it's now gone. You see no trace whatsoever of the structure that used to be there.

Before the earthquake, I was convinced that even a very strong tidal wave would not reach here. However, what happened was far from my imagination and the tidal wave swept through these mountains and hillsides. Those woods were submerged, and then the water came from two different directions. There was some sort of flow of waste which completely carried away my house and others as well. Have you ever seen the archaeological sites of Mohenjo Daro? This area has been reduced to exactly like the archaeological site of Mohenjo Daro.

This used to be a refuge site if the event of disasters. However, those people who took refuge here at only slightly high ground lost their lives.

You see some sort of marshland here, don't you? You can see there are still reminders

of the tsunami.

So there used to be an agglomeration of houses in this neighbourhood, but you don't see anything anymore.

On the left, you see a torii shrine, with a red structure as its gateway. This is not the gateway to the Shinto shrine that remained after the tsunami but was newly erected.

My parents' house used to be here on the right. All of the soil, ground was washed away on the right. When you lose your foundation as well as the ground on which the foundation stands completely due to their having been washed away, it means that we have lost all of the documents for registration of land and property. So if we don't have the home and registered, we won't be able to make a claim for land exchange.

Right in front of us, there is a small bridge and this bridge used to connect this side and the other side of the village. However, the village was completely isolated when this bridge was destroyed.

It's okay, although small, this bridge can withstand the weight of our bus. Our hotel bus will go here.

You see on the right here that a part of the mountain was completely destroyed. We don't see any mountain anymore.

There used to be a mountain of forests here with red soil, but it's gone.

So you can see that the water gate right in front of us was completely destroyed and the breakwater was also completely destroyed further down. You can see that this part was completely destroyed.

You see the enforcement of sandbags on the left. Right now, the tide is low. However, when the tide is high, the tide will completely reach this embankment up to the sandbags.

You see that those rocks and fish nets.

Far off shore, you can see a white ship. That boat is looking for missing people.

And this road that we are on sunk after the earthquake. So this is another case of subsidence.

Okay, please take a look behind. Here, young people have gathered and are trying to re-build this community that had broken apart.

This small point used to be the base for culturing aqua products such as Wakame, scallops, and Hoya. Thanks to their activities, marine products are starting to come back.

When they start shipping those cultured products, please be sure to buy them because that would be the best support for us.

Please look to the front and you will see that there are cracks on the road.

We are now passing through low-lying ground. On the road, you can see marks made in white chalk and that shows that right below the surface, it's empty because of subsidence.

Those apartments are empty because the water reached till the second floor though they are on a little bit of higher ground.

Now we are going through Utatsu town, so it's different from the Shizugawa area.

This is another district where all the houses were washed away.

All the children were safe. They came all the way up here.

Utatsu district has two shelters. One is this kindergarten. And supplies has been transported by helicopters. In this district, there are many places where roads were destroyed and bridges fell. Many communities became isolated and who was it that helped them out? The American army. What they did was arrived off this coast in a military ship, reached the shores, and then walked through the debris to the homes of isolated individuals and helped them. Of course, those American soldiers had no knowledge whatsoever of Japanese. However, while they were coming here on their ship, they were taught only one Japanese word, and that is tomodachi, which means friend.

When they walked through the debris and reached out to those isolated people, they said told them, “Tomodachi, tomodachi.” Of course, people understood that.

So this is the origins of the very famous military operation which was a big success in Japan, and that is Operation Tomodachi.

So we have come back to where we started. You remember that this was the confluence of three tidal waves and this Family Mart was gushed away by the waves.

Okay, from this point on we are heading to the bayside arena. What we are going to see at this bayside arena is a temporary hospital and the temporary administration of this township, but we won't have much time at this facility. We only have five minutes.

Now from this way all the way down it's a pathway to the junior high school.

This road goes up to the junior high school. The tidal wave ascended down the hill. There were a lot of people who were swept away by the waves, so sometimes we stumbled over a body.

Even the junior high school students might come upon a human body, but now they are not surprised, not too shocked.

They feel very proud to have found someone who died, like a boy who came to me reporting today that he had found someone.

So this has become a matter of fact thing everyday. Even if we stumble upon someone's body, it is nothing unusual nowadays. Of course, they are burying those bodies. They are not really bodies, they are skeletons. How are they identified? They have to resort to DNA identification or maybe they may be carrying something on them, like some ID or belongings.

Immediately after the earthquake, we didn't have cars and fuel either. So I had to walk back and forth between the hotel and my shelter. One way would take three-and-a-half hours.

The problem with driving even if your car had survived the tidal wave is there were debris everywhere. So the roads were completely blocked. In addition to that, fuel had become very rare and expensive, even if you had access to it. For 20 liters of gas, you had to pay something like ¥10,000. It was a very, very expensive commodity.

Of course, a lot of things disappeared. For example, like alcohol and tobacco. Those are things that completely disappeared. So it became stressful for those people who enjoyed them.

They became available in July or so last year, and hotel staff decided not to serve any alcoholic drinks at hotels that were also used as evacuation shelters.

You can see the passage over there for pedestrians. But who is going to walk through the pedestrian passage because there is nothing except for that pedestrian walk.

On the right hand side as well, the pedestrian walk is very much reinforced and properly built. However, looking at the roads, we can that they have been repaired except for the pedestrian walk.

This is the seven wonders of the Minamisanriku area because only the pedestrian walk remained. Because nobody walked. There was a scarce number of people. There were so many traffic lights that had to be reconstructed.

Also, if you go to a metropolitan area like Tokyo or Nagoya, there are places where the traffic light crashes because there is hardly any traffic there. However, in the case of Minamisanriku, all traffic lights either stay green or red and change colors, but do not crash even when there isn't any traffic.

On the right hand side, those trees were submerged by the tsunami and had to be cut down because they were damaged.

We are going towards the bayside area. We have been promoting sports.

This is one of the fishery processing plants of Abecho Shoten Company. The president

explained about this processing plant to you. This is the one that was left undamaged. He said that there were nine plants and eight were destroyed, and one was left undamaged.

Probably, there was no mention about three of them by the hotel owner. Those fish processing facilities were damaged by looters who broke down the doors of the plant to get some food from inside the plant or from the vending machines, I suppose.

But despite the situation, the hotel owner just tried to rescue food that had been stored at the plant to be taken to the hotel where there many people had evacuated.

On the right hand side, this is a temporary hospital. It is called Shizugawa Hospital and is run by the town.

As my son aged around 14 evacuated from the first tsunami wave, he carried an elderly lady who was handicapped because of her legs on his back all the way up to the evacuation shelter. However, she wanted to go back home to get valuable photos. There was a digital camera so after the first tsunami wave she went to get the camera; however, the second wave came 15 minutes after the first wave. Therefore, even though he rescued her, she lost her life by the second tsunami wave. My son was so disappointed and shocked that for some time he couldn't really get over that incident.

It is so interesting that in cases of people rescuing other people, grown ups tended not to bear the burden of helping others because they felt that they would lose their lives. However, in the case of junior high and senior high school students, they were courageous and tried to extend their hands to help others. For example, those children helped many firefighters and helped other people using ropes and other types of support.

Further down there is the site of the original town office. The office administrator tried to issue the tsunami warning using the wireless. Also, they use a green cross to show the site of the hospital. We are going to get off here.

Those are the remains of the city office.

This is the disaster prevention office, or originally it was. The city government officials got together here and made an announcement urging people to run away, but this office itself was destroyed. Many people died, city government officers died in this building. The announcing official's body was found; the official had announced, run away, run away, run away, but was killed. So this the place where the city government office was located, but unfortunately destroyed. It is a monument, a strong monument which tells us to never forget the tsunami.

Ishinomaki City, Miyagi Prefecture 1 March 2012

(6) Ishinomaki City, Miyagi Prefecture

[Workshop at Ishinomaki Senshu University]

Mr. Ito, Chairman, IDRAC: Good afternoon, ladies and gentlemen. I am Ito, the Chairman of Ishinomaki Disaster Recovery Assistant Council, or IDRAC. I welcome you all.

Just to say a few words about our council, this council is a consortium of many different NPOs and NGOs following the 11 March disaster, which hit our region of Ishinomaki.

Today, I'm going to give you an overview of what kind of damages we suffered. That's the first thing. Then, second, what kind of activities we at IDRAC have been engaged in. And thirdly, what kind of recovery plan we have.

This line that I have just indicated. That shows human damage. The death toll reached

3,024, and missing persons 595. In addition, some families have notified the authorities that their family members are still missing. So, in addition to this 3,000, we have to add another 1,000. That is the level of human disaster.

And Ishinomaki has an inundated area of about 73 square kilometers.

This slide presents an overview of the damage to infrastructure. Totally and partially destroyed houses totaled 53,742. And those affected by this disaster amounted to 149,400.

In this table, we have indicated the level of damage to industries. The first line shows the damage to the fishery industry and its facilities. Almost 100 per cent of the fishery industry's facilities have been damaged. The second line represents fishery, aqua product processing plants. Again, here almost 100 per cent were damaged. In addition, the embankment was also destroyed; and also the immovable fish nets and aquaculture facilities were also washed away.

About 90 per cent of the fishing boats were damaged or washed away. Fishermen have lost their means of livelihood.

In this table, what we are showing is the size, magnitude of the waste generated from the disaster. The estimated total amount of debris is about 6.16 million tons. However, this 6.16 million tons doesn't give you a clear picture of what it is like. On the second and third lines, 27.4 per cent is indicated. This is almost one-third of the total disaster area of the three prefectures put together. That comes from this Ishinomaki area; one-third of the total area hit by the disaster is from here.

This was the situation. IDRAC originated inside the volunteer centre in Ishinomaki.

Following the disaster, there were a lot of people from NPOs and NGOs who came to support us. There were a lot of overlapping, redundant functions that those NPOs and NGOs were offering at that time. So there had to be some sort of coordinating function. That's what we were supposed to do. That's the reason why we decided to form IDRAC.

We started very small, but then gradually grew large, and then came to what we are right now. We then adopted the name, IDRAC.

So, the volunteer centre continues as a coordinator for individual volunteers, whereas we at IDRAC became the coordinator for the groups, the many different kinds of NPOs/NGOs.

At the top of these three circles is the city administration, Ishinomaki administration, particularly the disaster countermeasure headquarters. And the coordination and liaison between this disaster coordination headquarters and the volunteer centre and IDRAC worked out really well. That's the reason why we are considered to be an excellent disaster coordination model – the Ishinomaki Model.

I will give you some idea as to what kind of organizations we have under the umbrella of IDRAC. IDRAC is not a pyramid organization; rather, it is a cluster organization.

What happened is there are a lot of organizations that are registered with IDRAC. All those different groups and members sit together to hold an overall group meeting.

Every day, those different groups sit together to hold a daily briefing and share information and update the situation. After that, those member groups split into groups to hold their individual meetings.

For example, if there is a specific issue to be shared, then some sort of project will be set up. In order to cope with the problem of ticks, we came up with 'Tick Busters'. This Tick Busters combats ticks. Team activities are shared between those different groups. Or if there is a festival or special event all across the city, then those groups will participate.

This is the situation of IDRAC, and how it has been organized. As of 31 January, the total number of groups and the organizations who are registered with IDRAC totals 330.

Coordinating briefings have taken place 250 times so far.

Here, this number 146,110; this is the total number of volunteers that IDRAC

mobilized so far, IDRAC alone.

Our members participated in the emergency cook out; and prepared rice balls and distributed them to the survivors. Of course, the kind of food we are going to cook for them, what kind of menu, and where the food should be distributed have to be decided within IDRAC. So far, we have cooked 807,890 meals.

Under IDRAC, we have twelve subgroups. Each one of those subgroups have a specific team which is directly linked to the everyday needs of survivors. For example, you can see at the very top the 'emergency cooking' and 'medical' subgroups, and so forth – 'relaxation,' 'mental care' and so forth. They are all for the purpose of supporting the daily life of survivors.

This is a chart indicating the trend of the total number of volunteers over time.

The green part represents the trend of the number of volunteers belonging to the Volunteer Center, whereas the red area represents volunteers belonging to IDRAC.

Just looking at the distribution of the number of volunteers, you can see that the number of individual volunteers peak during weekends. However, it is very important to normalize these peaks and drops to something more stable, so that we can always have volunteers on hand. That's where IDRAC plays a very important role.

Probably you noticed looking at this chart that there is a point where the number of volunteers show a sharp drop. That is 11 October. That's the point when those victims shifted from emergency shelters to temporary housing. Up until that point on, you could see a lot of volunteers that we mobilized. They had been involved in the improvement of people's daily lives in emergency shelters as well as shoveling mud and so forth.

This is the situation of the town before and after the disaster.

Because of our activities as IDRAC, there is coordination among the different groups such as between NPOs as well as NGOs. And sometimes we also coordinate with the Self-Defense Forces as well as coordinate various other events.

On top of that, not only among the NGOs or NPOs, but we are also collaborating with the residents of the Ishinomaki area in joint projects.

This is the activities of the Tick Busters in various locations.

This is the support for the public bath. While the Self-Defense Forces were located here, they rendered bathing facility services. However, after they left this area, upon the request of the city authorities, IDRAC was consigned the work of providing bathing services to the victims.

Currently, one of our major activities is to support the people living in the temporary housing.

Going through that sort of practices, we realized that in order to deal with this kind of disastrous situation, human power is the most effective because it has been said that though those suffering people have money, there isn't any place where they can shop. Also, though they have some material supplies which have been donated from many places, there isn't enough human resources and there isn't anybody to decide where those supplies needed to be distributed. Furthermore, we had very well-built social hardware systems as well as computer systems and so forth. But in this kind of disastrous situation, such things are not effective unless human intervention takes place.

So far, the cumulative number of volunteers mobilized, not only by us but by other organizations such as the Volunteer Center, amounts to 260,000 people. However, going forward, we have to consider how to get enough volunteers, not only individuals but also we should probably invite volunteers from companies and so forth. We'd also like to establish a framework so that people on study tours would be able to visit Ishinomaki. That sort of framework needs to be established.

So IDRAC itself has already taken the initiative to invite people from outside of

Ishinomaki. One project is in the form of study tours, as I mentioned to you, volunteers from companies and so forth. But IDRAC just came up with a tour combining both; namely, at certain windows during the duration of their tour, they render their help as volunteers and during another window they can participate in the study tour and receive disaster education.

Also, IDRAC took the initiative to activate commercial operations here in the Ishinomaki area because many shops started to resume their businesses. Therefore, we started conducting recovery fairs or festivals to invite people to those commercial areas.

At the moment, we are having independent activities such as inviting people from the outside by organizing study tours and so forth; and at the same time, locally, we hold local events and festivals. We are now thinking that those various events need to be integrated as well as coordinated so that even visitors from the outside would be able to benefit from the local events as well.

Also, I'd like to explain to you about the kind of support for restoration and rehabilitation of area will be undertaken as we go forward, and briefly touch on what kind of plan that we are thinking of at the moment.

We have already participating in a project whereby the city is trying to establish a restoration plan. Therefore, we are also participating in that city initiative.

There are various activities going forward in order to contribute to the restoration of the town, not only cooperation with the city authorities, but also the inner-city restoration council that we established by ourselves. We also try to organize events as well as come up with some plan to invite industries to operate here in this area. We have already started that sort of projects. Also, another project we are thinking at the moment is opening an outdoor restaurant and stores, building a sort of restaurant alley in the destroyed area. And also, another plan we will probably implement is opening a store in the Tokyo area as an 'antennae shop'.

We are trying to combine the various activities we are carrying out. For example, we are also trying to organize volunteers and so forth so, as indicated at the bottom of this slide, various restoration support programmes as well as events have been established and we encourage volunteer participation. Volunteer support and participation are indicated in that very thick arrow.

As I mentioned to you earlier, one of the schemes we carried out is the establishment of the 'inner city rehabilitation council' and our goal is to make this city a compact one. We call it "Compact City in Ishinomaki". In order to build that kind of city, we are working in collaboration with the Chamber of Commerce.

Mr. Teruo Ogata from the Ishinomaki Chamber of Commerce and Industry will now explain this vision as well as project to you briefly.

Mr. Ogata: Not only Ishinomaki, but other regional cities as well are faced with the problem of 'hollowization', so to speak, the town centre becoming hollow. About two years ago, we were designated by the central government as a city to be reactivated.

Those cities which are under the designation of state rehabilitation or reactivation scheme number over 100 cities at the moment.

After the disaster, we focused on rebuilding as well as reactivating the central part of the city, and then under the supervision of the council, we are trying to design the landscape of the central part of the city as well as town. So the design concept needs to be established.

Another idea that we have is conceptualizing what kind of town we are going to make. In order to do so, we need to have the Ishinomaki brand. For example, in the case of the town called Kawagoe, that is in the outskirts of Tokyo, it is famous for being a traditional warehouse town. In such a way, we need to have the branding of Ishinomaki.

Also, another project which we are starting considers how we are going to build the township because most of the buildings inside the town were destroyed. We must establish integrated buildings inside the town in order to reactivate city activities.

Also, we are aiming for combined town activities so commercial as well as residential activities need to be integrated and combined inside of the city. At the moment, approximately 20,000 households are living in temporary housing. However, after two or three years, they need to leave those temporary housing and move to permanent locations. Our plan is to let those people come back to the central part of the city; therefore, we would like to establish residential areas and commercial areas next to each other. If we can increase the number of people living in town, then commercial businesses would be reactivated as well as flourish.

As was mentioned to you, our goal is to establish a compact city, so our detailed plan is that very close to the station, we are going to build a city-owned hospital as well as a large commercial complex. In the vicinity of those commercial areas, we are going to build housing complexes and so forth. Therefore, everything will be in a very close proximity. People would be able to walk to the hospital as well as go to shops and schools. That kind of compact city vision is what we will pursue as we move forward.

Mr. Ito: This slide deals with what kind of vision the Chamber of Commerce has for Ishinomaki. He explained that there are three major pillars of the revival plan. IDRAC as well as other NGO/NPO members have participated in those meetings so that they can share the opinions and understanding among the different groups.

This is one example of a lot of different players and sectors of the township and city coming together to formulate some idea as to how we are going to rebuild this town, this city.

Now, at this time, we see a new role that IDRAC can play in this community; that is, promoting corporate CSR volunteers.

What we have come to realize over a period of time is what has happened to this city and this disaster will disappear from people's minds if only CSR activities are undertaken.

The second example is a very successful case of companies establishing some sort of business activity in this city and employing more people. There is a company called NTT Data, a telecommunications operator. It established a data centre in this city, and thus employed local people. It would like to expand the operations of this data centre.

We are asking those companies that are dispatching staff for volunteers and to stay for a certain period of time, rather than for a short period. We are saying, 'Please don't stop there. Please give us those volunteers so that they can conduct R&D and search for some possibility of developing local businesses here in Ishinomaki, and stay here for a long period of time. In this way, they can make a positive contribution to the revival of the city.

What is very important for us is to support those corporate volunteers coming to stay here. We are going to make some sort of very nice matching up between what they do as businesses and they will probably be able to tap into the potential of this city, and stay here for a very, very long time, not just do volunteer activities. Eventually, we hope they will take their root in this city. That would be a very, very good contribution to the recovery from disaster.

I believe, as IDRAC, we will be able to make a very good contribution in this matching up of corporate volunteers and the possible relocation of their businesses in the city. So we will support that R&D by serving as a go-between, along with the Chamber of Commerce of this city, and the Tourism Association.

Thank you very much.

Q: Thank you, Mr. Ito. This is an amazing model. I think the strength is that you have voluntary agencies who are in support of the government, and the emergency managers

addressing the immediate response needs of the community. And you've also taken on the very difficult responsibility of managing unsolicited spontaneous volunteers, so that model is exceptional.

My question to you is; number one; where do you receive your funding and number two; you alluded to the fact that you should go through the emergency phase, the activity shift. So now that you are into recovery, this partnership with Chamber of Commerce is exceptional from a commercial commerce's perspective. Is there any thought of IDRAC being involved in the recovery of individuals from a mental health, emotional, spiritual perspective, all those unmet needs that come to the surface after a while? Is there discussion to include other agencies that might participate in that collaboration in supporting those needs?

A: In order to answer those questions, it would require a long time. The first question, about the funds, the sources of funding are multifold. We, of course, have donors from abroad, and we have public assistance in making funds available. Using all those small pieces and bits, we create one big fund source. Second, from the very beginning, from the early stages of the disaster, we have set up a team specializing in the mental health care of the victims.

This mental care team consists of medical professionals because we cannot solve by ourselves getting to the bottom of the problems because we are not experts. This team has come up with a report of the situation of the mental and physical health of those survivors. At the root of their problems are economic factors. They have said that their anxiety comes from the fact that they don't have jobs. They lost their jobs. They lost their houses. Even at the very early stage of giving emergency relief to those victims, we knew that business recovery was a quite urgent need in order to alleviate the suffering of those people.

From the very early stages of the disaster, we were fully aware that the problem of mental stress was directly linked to the problems of the economy. On the way to recovery, we have to have a very smooth link between this economic distress and mental distress. We are working in coordination with local social welfare association to find a solution to the real pain and agony of the survivors who have lost their family members, because whatever we may do, the pain and suffering of those bereaved families are very deeply rooted.

For them, what we do is give a referral to the experts and professionals who would be able to talk to them, and in doing so, we cooperate with some local groups who will identify who lost their family members, who are acutely suffering, and kind of situation they are in those emergency shelters as well as temporary housing. When we find them, we give them an introduction to those doctors and experts.

Q: I wanted to thank you both for the presentations and thank the city of Ishinomaki for their invitation. It's quite an honor. I would like to commend you and the plan for the Compact City that the gentleman at the Chamber of Commerce – I'm sorry I did not get his name – presented for the Compact City because I think in the times of gasoline prices rising, energy is going to become a major issue, especially in Japan. Also, young people who you want to attract to your city like compact cities. They like walkability. They like living near shops. They are more likely to support the downtown that has these features.

My question is how can you balance redevelopment of the downtown area? Will you get rid of all the old buildings or will you try to keep a balance between maintaining historic buildings and certain features, and then redeveloping other parts of the downtown? Is there a plan for it? It's probably too early.

A: That's right. It's a little bit too early, six months too early to raise that question. As a matter of fact, you might have noticed that the majority of Japanese houses are made of wood, and wood structures are very vulnerable to salt. Once under the water, wood absorbs the salt and then over time, they become very fragile. Therefore, although some

old structures might have survived, sooner or later they will give way to some sort of shock or something. But the majority of the houses in the city are not so old. They were basically constructed in the 1960s, 70s or 80s. So they are not really historic per se. But then, you are right in saying that there are some historic buildings dispersed in some points in the city. So we have to keep them, even from the perspective of landscaping that is very important. So moving ahead, when we engineer the city landscaping and city engineering, we have to keep in mind to keep some balance between preserving some old historic monuments or buildings with new structures and new houses.

Comment: I think you should take this on the road and tell all the Japanese.

A: Already, there are activities that we have taken up because we are invited by local authorities and municipalities all over Japan. It is said that in the Kanto district, that means the vicinity of the Tokyo metropolitan area, the probability of having a large earthquake is pretty high. Therefore, those local authorities are very concerned about the disaster prevention countermeasures they need to establish. Therefore, we are invited by those local authorities to explain about our experiences as well as plan going forward.

Q: There is one question about the volunteers dispatched from corporations. My question is; what kind of volunteers they are, and also what is the origin of the companies dispatching those volunteers?

A: I think that the mindset of the corporations towards social responsibility have shifted because in the past, corporations felt that as long as they contributed financially, that was fulfilling their social responsibility. However, as time passed, they started to realize that money is not enough, and that they should do something else. They realized that this was their social responsibility. That sort of mindset was particularly triggered by the Hanshin-Awaji disaster some time ago, even though at that time there wasn't any specific term called corporate social responsibility. However, their mindset was that they needed to do something in order to support those suffering from the disaster, so from that time they started to dispatch their human resources. That sort of mindset has been retained and maintained till today. That's why they feel that not only money, but also human resources should be rendered as part of their support.

Q: I have a question. For such an organization to begin, it requires a very special type of leadership. What I was wondering is, if you try to replicate this somewhere else – I don't know you probably learned a lot through this process but it seems to me you need a leader or a leadership that's able to pull this together. What's your sense of this in terms of why it was established here?

A: This is my personal opinion. The necessary quality to be a leader in order to establish as well as lead this kind of restoration organization is the love to their birthplace. I think that is very important. Also, attachment to their birthplace because based on my background, I think that it's a very important quality as well as disposition to have for starting anything at all. Also, another quality which would be required is an understanding of volunteer activities. That would be also very important. Also, you have to have a confidence in your own city or municipal administration.

Those three important qualities were taken into consideration for my acting as a leader in initiating these activities. The most important part of my character and the quality I have is an attachment as well love of my birthplace. But it is also important to be in an environment where the volunteers are willing to come and support us because even though the volunteers might come here, if there is no place where they could make a contribution, it would be a shame.

Therefore, I am trying my very best to create a welcoming environment as well as to generate fields as well as areas where the volunteers would be able to contribute in a positive manner. That kind of thing is my mission and role as a leader. Those may be the

necessary qualities for a leader.

Q: It was simple question. I'd like to hear under what status is IDRAC being governed?

A: We do not have a direct relationship with any government at all. We are a nonprofit organization. However, we are collaborating with the municipal administration. Therefore, we are invited by the city authorities to participate in their disaster countermeasure headquarters as a committee member.

Q: Very, very nice project and job, I think you are doing. I have a couple of detailed questions. The first one is related to the corporations that are sending volunteers. Were they salaried? Is the company paying their salaries or living expenses, and for how long? The second one is related to; I noticed that the average number of volunteers for you has decreased from about 500 to 250. Is there a reason for that? How do you explain it?

A: Answering to your first question, the the salaries of the volunteers dispatched here from corporations and so forth are continuously paid while they are staying here. Also, the duration of their stay here is for a very short period like three or four days, so during that time, their expenses are being paid in most of the cases by corporations. They treat those volunteer activities as a short business trips, so to speak. Also, some of the volunteers take 'volunteer leaves,' and according to organization have different schemes. Therefore, whether during that period they are paid or not, we are not sure. It depends on the rules and set up of the respective companies. Some take leave for working as volunteers.

Also, answering the second question, of course the need for volunteers has decreased at the moment compared to other disaster-affected areas. Probably as you could see along the way, the volume of debris is now quite less compared to other areas. Also, work to sweep out the mud and so forth, those have already been completed. Therefore, under the present circumstances, we do not need that many volunteers. That's for sure.

Mr. Ogata, the Chamber of Commerce and Industry: The Chamber of Commerce and Industry is an economic organization so to speak, so from the perspective of the Chamber of Commerce, one of the important areas we need to restore is the economy of Ishinomaki as well as businesses.

To start with, we need to establish or generate a very good chain effect, namely, starting the resumption of corporate as well as business activities. That would lead to increasing the number of employment here in Ishinomaki, followed by an increase in the number of people who will stay to live in Ishinomaki. By doing so, ultimately, Ishinomaki's entire area will be reactivated.

Before the disaster, the GDP of Ishinomaki was said to be 1.1 trillion yen.

Of this total GDP, disaster-related damage or loss is estimated to be something of the level of 470 billion yen.

The damage was enormous to our community. However, all players of the fishery industry joined hands to overcome this terrible situation.

The fishery industry is quite extensive.

When we talk about the fishery business, you may think that fishing boats come to the fish market and unload their catch. But that's only a part of the industry.

Once the catch arrives at the market, there are the wholesalers. They will buy the fish, pack them up in a nice carton or whatsoever, and distribute to whatever destination.

The fish caught will be distributed throughout Japan in many different modalities. Some are distributed in fresh form, the other in frozen, while the others are processed.

The fish market of Ishinomaki recovered much later than the other fish markets of Kesenuma or Shiogama.

There were several reasons as to why there was such a delay. The first thing is we wanted to ensure that the fish market was safe and secure. That was the first thing. And

also, even if the fishermen might have been able to catch the fish, if the retailers and packers were not there to receive the catch, what would be the point of having the fish arrive at the fish market?

Japanese consumers are especially demanding in terms of safety and security of the products they intake.

Even for processed marine products, big retailers at the supermarket will not going receive their products unless they have complied with CCP standards.

Right now, the recovery rate of the fishery industry, especially the processing industry in Ishinomaki, stands at about 50 per cent, so it is half.

In terms of sales, only 10 per cent or 20 per cent of what it was before the earthquake and tsunami.

You may ask why the sales level is only 10 per cent to 20 per cent of what it was before the disaster. That is because of all those big supermarkets; they cannot keep their shelves empty for those merchants. So while waiting for the recovery of the fishing business in Ishinomaki, supermarkets fill their empty shelves with fish and processed products of some other companies or processing businesses. Once taken by someone else, it would be very difficult for those shelf spaces to be reclaimed by local processing companies.

If we decide to take our products to faraway markets, say, the Tokyo market or supermarkets, we are very confident that they would sell quickly because a lot of consumers are very aware that they have to give support to those disaster-affected areas and will buy. But that would have a very short-lived effect. That kind of support will not last a very long time. If we would want to sell our products in a market like Tokyo, we really have to take into consideration that it may not last for a long time.

Another big issue of our local producers of fish products are the negative rumors circulating all across Japan in the wake of the Fukushima nuclear power plant accident.

As you know, fish are migratory, so they don't stay put in one location in the ocean. Consumers are very much concerned that our catch of fish may have radioactivity from the Fukushima power plant. Each time we receive the fish, we have to use a Geiger counter to measure the contamination level of radioactivity.

We are very concerned that if there is one isolated case of radioactive contamination or if they detect Cesium from the catch, even if it may be an isolated case, everybody would consider that the fish of every company located in Ishinomaki or even all companies in the entire prefecture have been contaminated. That is the big headache we have right now.

Our Chamber of Commerce worked very hard last year, especially in November and December to file for subsidies which were granted by the Japanese Government for processing companies that had lost their processing plants and manufacturing equipment due to the disaster.

Thanks to our efforts, about 200 companies have received a total of 37 billion yen.

Unfortunately, although those 200 companies have received subsidies, the problem is the ground where their processing plants use to stand have sunk. So right now it is impossible to build new structures on top of it.

If they are to build a new plant on this land, what they have to do first is elevate the ground, and then consolidate the ground. They can then start building on top of that. That would push back their operations by one or two years.

I don't want to criticize the work of the central government; however, the procedures to file for those subsidies and ask for deregulation and so forth are so complex and very lengthy. I'm hoping that they will be able to streamline the procedure.

Of course, we are not going to be daunted by the enormously big task ahead of us. We are going to aggressively sell our products in big cities such as Tokyo and we are going to actively participate in local food festivals and fairs so that we can sell our local products.

Q: The first question is; coming back to the slide shared by Professor Ito, he said that the total number of marine product processors are 200. Are you saying that all the food processing companies, 200 of them, have had access to this 37 billion in subsidies?

A: As I said, this industry is quite extensive. Including other companies such as ice makers, fishermen as well as packers, there are many, many companies. Including all the major companies of the fishery industry, 200 of them had access to this 37 billion yen.

Q: The second question is about the problem of this ground that had sank. You said that in order to build something on top of it, you would have to elevate it. But does the local government or central government impose some sort of restrictions on building anything on top of such land?

A: It does. Before anything takes place, it has to be clarified as to what kind of regulation or restriction is applicable to that particular area.

Q: Isn't it the case? That was the question.

A: Restrictions on the condition of the buildings came to term at the end of November last year. So there is no applicable restriction on the construction. However, following that, there was a new plan on land utilization that was applicable to this land, and this plan is based on the city reconstruction plan.

Comment: His answer makes everything very simple, because we visited Sakanamachi, remember? All of the fishery industry is located. That area had no restrictions whatsoever for construction to begin with; meaning that there are no restrictions even today.

Q: In relation to reconstruction restrictions that had been imposed by the city authorities, I'd like to just add a question because some of the areas are subject to those reconstruction restrictions. So under the town or city redevelopment plan, their hands are tied so that they are no longer allowed to build until the plan is established because those restrictions have been, as well as I understand, terminated; however, the restrictions have been extended another five or six months so that even now certain areas have been subject to those restrictions for building construction. Therefore, what I'd like to ask is because of the situation, some of the businesses as well as commercial entities are unable to build their facilities and buildings. Is that the case? That is the question.

A: Yes, that sort of restrictions are imposing some hardship on the commercial operators. And regarding the city restoration development plan, even though that particular area has been designated as having building restrictions, as long as the facilities are temporary, they are allowed to be build those buildings as well as facilities. The problem is, for example, that some stores have been partially damaged by the tsunami. However, they have managed to repair their shops in order to re-start their businesses. But because the city government has not yet decided on area allocations, at a later stage they might be told to vacate the place because it is subject to the new plan. This is the sort of problem we have at the moment; only temporary facilities are allowed to be built.

Ms. Honami Yoshida from the Harvard School of Public Health, and Ms. Yukari Matsumoto. Ms. Yoshida as well as Ms. Matsumoto will give us a presentation based on their perspective as working women.

Ms. Yoshida: Thank you very much. It's great to be able to come here and present how we support mothers and babies. First of all, our top priority is strengthening the focus of prenatal care in a highly aging society. Later on, I will explain to you what are the needs of an aging society. Do you think it's good for mothers or babies or the younger generation to live in an aging society? Next, we will address the constraints to local groups in community health and motherhood.

The next priority is preventing generation inequality in healthcare. I will also cover Japanese long-life expectancy and the aging society system. Sometimes, the younger

generation or expectant mothers and newborn babies are neglected in society. Mothers should play an important role in empowering women to becoming leading supporters for the next generation because they are very sensitive about living space and human relationships and support each other in the community. Mothers should be leaders for community health.

We have been working on these concepts ever since the 3.11 earthquake.

Our mission is delivering high quality healthcare and supporting women to be community health leaders. What I learned at the Harvard School of Public Health is, in terms of emergency preparedness, we don't learn just disaster medicine. We learn so many different perspectives, including not only leadership, but also politics, gender, violence, and so on. This is my commitment and my mentor's. Also, I had my fourth baby in Boston here. We had a great stay in Boston with my kids. I was a mother, a student, a researcher, and a patient as well. This is meta-leadership, that is what I learned at Harvard. It was very, very practical for emergency preparedness. I learned that connectivity and meta-leadership were important for not only the political or medical fields, but also so many other fields.

Also, I learned how international reproductive health/disaster management is established, like this. If we have a disaster in any part of the world, we can access and get reproductive health care for birth control pills or neonatal care unit kits. I learned what the US did after Hurricane Katrina. Only 2 per cent of those affected were pregnant women, but they were transported by helicopter and sheltered in trailer houses after the hurricane struck. I learned a lot from the experience as to how to focus on mothers and babies as the next generation. I suppose you know the infant mortality rate. It is a very good number for explaining the medical health level of each country. Japan is proud to have the lowest infant mortality rate and maternal mortality rate. This is very good. Very, very good. We have the number one long-life expectancy whereas we were not so healthy just after the Second War. However, it worked out very well so that now we have the longest life expectancy. However, in another aspect, sometimes Japanese don't think that giving birth or having babies is dangerous. It's safe. It's normal. Sometimes we forget how dangerous it is during pregnancy and when giving birth.

This is our aging society. In this case, we had 3.11. We had a tsunami and earthquake. We are always thinking about these people. Of course, how about the children or the elderly? We forget about the pregnant or mothers and babies. In the media, there were so many elderly people on TV or the news. However, no pregnant people, no mothers were shown. In this situation, mothers and pregnant women suffer cold treatment or face very severe situations. Just after the earthquake, we made an important rule for helping pregnant mothers, expectant mothers with the disaster medical team from Israel. They thought it was natural or normal to have a delivery or give birth during the disaster. We helped these kinds of pregnant mothers at the evacuation centre. This lady was 8 or 9 months pregnant and had a family. But she couldn't have anything but a rice ball a day like the others. Pregnant women are not highly respected, not treated specially, and not given priority for living conditions. So we strongly pointed out that we needed to have a younger generation in Ishinomaki or in the affected areas because they will be the source of energy for rebuilding this Ishinomaki, and the younger generation is our hope. We would be building this city in order to give the next generation a new and happy life.

These are the midwives that we worked out together. Pregnant women should not be thought of as no-risk. There is low-risk pregnancy and high-risk pregnancy, but there is no no-risk pregnancy. Mothers may not express their feelings or complaint a lot, but they are really important people to be cared for. After the Hanshin-Awaji earthquake, we saw so many bad health outcomes in the form of neonatal and maternal mortalities.

In this Tohoku area, we had a very high birth rate in private clinics, but not at the large central hospital. Almost half of the births were at private clinics. Then, after 3.11 in Miyagi, almost 71 per cent of the private clinics were closed. Only big hospitals were left. Pregnant women in Ishinomaki or in Miyagi are at a loss as to where they should have their baby. For example, in Ishinomaki, clinics which can handle births decreased from five to two. This is a map of Ishinomaki. However, this “A” is Ishinomaki Red Cross Hospital which is the biggest hospital for handling births. The rest of the hospitals in Ishinomaki were washed away. Our team dispatched someone in order for one clinic to keep working.

We’d like to propose the need to save the next generation. This is our top priority – rebuilding a happier, new, and more supportive city for mothers. Following delivery, no midwives had been dispatched. We strongly argued the need for a prenatal healthcare expert to be sent. So we sent OB doctors to help the OB doctors here at private clinics. There was only one obstetrician at the private clinic in Ishinomaki; Dr. Abe. He was at the point of exhaustion after having to see so many patients after 3.11.

This is the Israeli medical team. We strongly argued that we should get pregnant women or mothers and newborn babies to safe areas. Later on, Ms. Matsumoto will tell you about how we connected or kept in touch with the pregnant women and mothers. Next, we need to empower mothers. These are our members from the Ishinomaki mothers’ leaders and midwives. We received funding from UNICEF as well as from AmeriCares, Red Cross, HOPES, and so on. The care to which the funding goes is crucial for supporting mothers.

Next, we will present mothers’ voices.

Ms. Matsumoto: From here, I’d like to convey the voices of the mothers who are raising their children in Ishinomaki. According to the original plan, Ms. Yumi Araki was supposed to present their activities here today. However, unfortunately, her zero-year old baby is suffering from the flu and influenza. So she couldn’t come here. Instead, I’m going to present to you the situation baby-raising mothers are in at the moment.

On your right, the lady with a baby, Ms. Araki, represents the circle for mothers who are raising children. She has two children. You probably are not able to see the zero-year old baby on her back. Ms. Araki just established a kind of a group for mothers raising children. That was after the disaster, around May of last year.

One of the reasons why Ms. Araki decided to start up a mothers’ group is based on her experience during the disaster because at the time when the disaster occurred or even after the disaster, mothers as well as pregnant women were placed in a very vulnerable position and on top of that, they didn’t have any place where those mothers as well as pregnant women could get together to encourage each other. Therefore, in order to give help and support to mothers in need, she decided to start a group and set a specific place where mothers with children could get together for communication purposes.

Ms. Araki heard as well as got information that this kind of event was going to be held with the participation of experts from all over the world. Therefore, she thought that this would be a good opportunity for her to convey the vulnerable mothers’ view to people from all over the world. The message which she wanted to convey is as follows. She stressed the importance of reflecting the perspective as well as needs of mothers in coming up with the development and restoration plan for the town and city. That would be very important; especially in order to revitalize the destroyed city; mothers’ voices are very important and need to be incorporated into the city’s development plan.

The reason why that she is saying this is that corporations as well as companies are focusing on women, and they try to fulfill the needs of the women because those companies are realizing that in order for them to have a very strong brand as well as enhance their

awareness so as to ultimately be able to improve their sales, women's viewpoint is very important, and it has to be reflected in their products.

Those commercial organizations are very clever to realize that as long as they focus on the needs of the women, they will be able to increase their sales because, for example, women like to have comfortable lives and seek comfort. As long as corporations can provide comfort to women, behind those women are other consumers such as husbands, their children, grandpa and grandma. As long as the corporation can get women as the core customer, then other consumers who are behind those women will follow. So taking this example, she is making the appeal that in order to develop a new town, it is important to include the women's perspective.

Now, I'd like to talk about the working women's status here in Ishinomaki, and what sort of trade or professions they are in.

In terms of level of skills of women living in Ishinomaki, the level is very high because even before they bear children, they have a very professional occupation such as an interpreter or they are very good at using personal computers and they have a very good command of Excel, Word, and so forth. Moreover, they were professional health care workers and beauticians. Also here in Ishinomaki, there are many apparel-related factories like sewing factories and so forth, so some of the women are very good at sewing, and their levels of know-how as well as skills are very high.

Even before the disaster, the mentality of the people who lived in Ishinomaki was that women, after having babies, should retire from work and look after their children. But it became all the more when these women were faced with more difficulties after the disaster because all the places they could have worked were destroyed, and they couldn't find employment. And even if they found one, there isn't any nursery where they can leave their children. Those women are faced with twofold difficulties on top after the earthquake.

Against this backdrop, not only women but others as well are faced with such a situation of not having employment, nor any role they could play so such people are under great mental stress.

Ms. Araki's concept is not just establishing the group as a friendship group to exchange information, but also as a group that could become a place where women can earn some pocket money. That is the kind of group she conceived.

How will those mothers earn money? Very fortunately, this circle has funds available because this year through to next year, there has been a fund established thanks to donations coming from abroad as well as Japanese organizations. On the basis of the fund, this circle is going to plan many different types of events, and they would like to mobilize the mothers with children to become staff who will organize and operate those events. They will be paid daily wages appropriate to their level of participation.

Another plan underway is publishing some sort of information magazines to be circulated in the community. If you have that kind of medium that is circulated, then there will always be some companies or businesses who would like to advertise activities. So, from revenue coming from advertisement, the circle will be able to pay wages to those mothers who have participated in the publishing business.

And in addition to this paper medium which is under preparation right now, in October last year, the circle launched an electronic mail. It's called Kizuna bonding e-mail. This is addressed to mothers and expectant women.

This e-mail magazine is distributed to pregnant women and it has a lot of useful information for them such as how to maintain good physical and mental health, as well as what kind of points or what kind of things they have to keep in mind in order to deliver a healthy child.

She is taking advantage of this electronic e-mail system in order to solicit some

advertisement of local merchants or businesses or even from individuals so that it can become a means of generating revenue.

From this point on, I'd like to change gear and focus on what kind of needs or requirements expectant mothers have.

These are the requests of expectant mothers. First, they would like to have a park with grass that they can walk on. Second, they would like to see the new Ishinomaki be barrier free, without many different levels. Then the third point is, they would like to have parking lots so they can park their cars inside the city. The fourth point is they would like to have more spaces in public facilities to breastfeed their babies and change their diapers.

This circle has high hopes for the new Ishinomaki City to embrace some of those requests and requirements of expectant mothers.

After experiencing the disaster last year, she came to realize that there are a lot of vulnerabilities on the part of pregnant women and this slide deals with that. First, she realized that those pregnant women and mothers with little children who don't yet go to kindergarten or elementary school, tend to slip out of the social safety network and people tend to forget about them because they are not directly integrated into the social network such as in a business, company, or school system. So they are the very last to receive donations or handouts or emergency relief.

Thank you very much.

Ms. Kaneko: My name is Kaneko. I have just distributed this handout from the Ishinomaki Revival Support Network. We have been engaged in many different activities, but all across different activities what we can say in unison is that women's position regardless of if they have children or not, have been weakened after the disaster – they have lost their jobs.

We really feel it's urgent to find jobs for mothers with children. We came to implement some activities such as promotion of community building, at the bottom, creating jobs worth living for. That's what we have been focusing on.

Thanks to these activities undertaken in order to create jobs for mothers with children, they have been very much invigorated.

However, for the time being, the type of jobs we created is for the short term, and on a part-time basis. So we have to work very hard to find more full-time employment for those women.

There are many women with talent, regardless of being married or not. Therefore, given the opportunity, I'm very sure that they can exercise their talent in many different areas. So we are hoping that there will be more opportunities available for those women. We would be happy to answer your questions, and would be happy to have your comments as well. Thank you very much.

Q: We just had an excellent presentation regarding IDRAC, and their role as a partnering collaborative entity within the community in bridging agencies coming together as well as the government. Is your group part of that group because you represent the very vulnerable population? Clearly that's not the only one of the population. So I'm wondering if there is a connection with this already exceptionally collaborative coalition in your community. Are your efforts completely separate?

A: I'm going to speak on behalf of the founder of our circle, Ms. Araki. This circle started as a purely private organization of small circle activities. However, in April last year, the circle was designated as an NPO organization. Therefore, she is hoping to network with other public organizations or agencies or even the municipal government. It has just started to network with other public organizations.

Yes, we are connected. We started out as a very small organization participated in by

local mothers, but it started out as a purely grass-roots level of organization. So society at large didn't know about our activities very much. We had this will of networking with other organizations. To that end, we decided to become an NPO. Now, we are accepted as an NPO. Ever since, there has been a much better level of recognition of our activities, and we see a lot of young women who would like to exercise their talents or professional skills. So we are trying to help them out right now.

Mr. Sakata, President, Ishinomaki Senshu University: My name is Sakata. I'm the president of Ishinomaki Senshu University. Welcome to our university.

Good afternoon, ladies and gentlemen. I'd like to welcome you to this workshop. About 1,000 persons were accommodated at this university just after the earthquake and tsunami.

Let me introduce our university. Our university is a private university established in 1989, after having received the strong invitation of the local governments of Ishinomaki, Onagawa, and Higashimatsushima. That means they donated the land for this campus, which is a huge area. All the staff of this university know that we owe something to the local people. This is the background of our contribution.

We have approximately 1,800 students in total at this campus and ninety-four academic staff and about forty administrators. It's a small-scale university. Our motto states "Service to society". I always ask freshmen to strive to acquire the ability to properly handle difficult questions related to this disaster which they had never experienced before. We want them to provide full information, and not fragmented information.

On the left is our downtown area on the day following the tsunami. Here is the central station. They are all gone. This is water, by the way, there is my house. This campus, the white line shows the campus area, including the hill behind. There is the river. The water came to this line, but we were barely dry. So we are the only university that is on the front line of the tsunami disaster, and fortunately we were safe on this campus. I was not on campus. I was in Sapporo that day. But we were in the middle of spring vacation, so here are only approximately 200 students on campus. All the administrators were on campus that day, and a very limited number of teachers were working. That was the situation.

There was the earthquake, and we had a kind of manual to deal with that. There was a broadcasting via loud speakers for the evacuation of all people to outside the buildings. Then, we numbered the students, and identified who had evacuate and, who had not. Next came the tsunami alert. So everyone was moved to the upper floor of the main building. This is actually my room on the third floor of the main building. Most of the academic staff were here, observing the tsunami coming up along the river. They told me, it was not a wave, but a huge mountain of remnants of houses, boats, and cars.

As I told you, we had students on campus and we somehow were able to accommodate them because they were not able to go home because of flooding. There was water on the other side of the river. We were not sure if the bridge was safe or not. Fortunately, we had some stocked food and water donated by the parents' association to the university. We could store it for three years. Then residents and people who lived nearby came to the campus because we have been on friendly terms from the beginning. We were not yet assigned as an official evacuation place. It might have been illegal to accommodate outside people. But our colleagues there decided to accommodate them because of the stated service to society. There was no other option. So we accommodated and distributed the stocked food and water to these people on our own will.

It was very difficult to confirm the status of students, if they were safe or not, dead or alive. It was on the 13th of March when we finally got the results. Six students had died, and one student was probably dead. These was damage to the houses of a number

of students' parents' houses. Please remember that we have only 1,800 students. These are the numbers of students' parents' houses entirely damaged – one half damaged, partly damaged the number of students of whose flats were ruined.

These were a number of students who no longer could depend on their parents' income, either due to the death of a parent or loss of a job. We decided to exempt the tuition fee totally or by one-half or partially based on the situation. The number of these students total 642. This means that one-third of our students are victims of the disaster. We face a very special situation among Japanese universities.

Our staff also suffered. As I told you, we have about 135 staff. Forty-five people either lost their houses or they were very seriously damaged. Again, it was one-third of the staff that had their houses very severely damaged. By the way, this is the situation inside a house of an academic staff – myself. Refrigerator, fixed to the wall, came out. You see there is a very strong reflection. This is a flooded room. Water came up to 85 centimeters from the floor. There were shrimp dried on the window. Very strange.

Fortunately, this building complex is very sturdily built, very strong. You can see there is no crack on the wall. The damage to this campus was fortunately at the minimum. We are situated on a riverside; that means we were built on the sediment, which is very soft. But we dug a very deep pile beneath the bearings, about 50 meters deep. For the next building, about 35 meters deep. This is a very expensive building, but it worked.

It took quite a long time for recovery of the lifeline on campus. Electricity, eight days; usual telephone service, eleven days, network connection as well; water supply, on the 4th of April; gas supply, 13th of April. Fortunately, we had rather strong power generators, three, in total 83 kilowatts. We were able to light this building. People here were able to charge their mobile phones. Automatic vendors were functioning as well, which was quite popular, by the way.

We thought of giving up on our graduation ceremony. It is very important at Japanese universities and was planned for the 20 March. We were already preparing for it. But as I told you, we had accommodated evacuated students inside the campus, about 200 students. Out of them, we had fifteen students expecting to graduate. I had been on campus since the 17 March, in my 'president's suite'. Very cold by the way. I chatted with the students and asked, "Would you like to have some kind of ceremony?" They replied, yes. So we did. Most of the people were wearing rubber boots or overalls. I got my suit from my house. Fortunately, it was on the second floor. Then there came a lot of students, day by day, knowing that there might be some kind of ceremony or graduation certificates to be handed personally by the president. This is my uniform.

It was very difficult to conduct the entrance examination because in Japan we have some kind of electronic download system from the central centre of the national examination centre. We had no network connection, but managed somehow. Another very difficult problem was the number of flats available to the students because, as I told you, most of the area where students were living had been flooded. We estimated that about 170 flats or rooms would be short at the beginning of April, and it was very difficult to find any flat owners or real estate agencies because they had also evacuated.

So we asked via the local FM radio station and net cable TV station to have some kind of flat or accommodation service for the nearby residents. We also booked fifty rooms in front of Furukawa Station, which is about 30 kilometers west of Ishinomaki, trying to accommodate our students. But finally it was no use because most of the flat owners returned and restored the flats.

The most difficult thing at the moment is traffic. There is train connection between Sendai and Ishinomaki, which was severed. Restoration shall be completed by 2015, at the earliest. We added a new bus service to carry our students. We are a private university.

We also made a new line as a substitute for the damaged railway service. Of course, this was a very heavy burden on the university budget. It will cost approximately 80 million yen this year.

We also postponed the start of the summer semester by one-and-a-half months because we had no means of transport nor accommodation available. So we started on the 20 May. Fortunately and incidentally, the railway connection between Ishinomaki and Kobota, the westward mainline station, was restored on the 19 May. This was sheer coincidence. I had never planned it. We shortened the lecture time from 90 minutes to 75 minutes because otherwise they would not be able to reach the first lecture in the morning on time, and wouldn't be able to go home.

It was a very difficult problem caring for the students, mentally and psychologically, because university students are mature enough, over 18 years old. That means they were at home. Most of them were at home when the disaster happened. So they saw people being carried away by the tsunami, for instance, people who they might have rescued. This left an emotional scar. Also, some of them were asked to identify corpses because they were considered old enough. Of course, this was a very trying experience.

We tried out best. First, mainly the administrators were asked to listen to the students if they wished to say anything. Then we approached the parents – we usually hold a parents' gathering during summer vacation. But we held it earlier at the end of April, the beginning of May instead, and asked the students to come together with their parents to the meetings which were held in nine places in the Tohoku area. Teachers and administrators went there and explained the situation at the university, and tried to answer their questions or provide consultation as far as possible.

We also held a seminar. The administrators and teaching staff got together and invited experienced psychologists who had much experience in disaster psychology, because this is a very real problem for us. We teaching fluid dynamics, for instance. We have to teach about the flow of water. We have to teach about earthquakes. We have to teach about tsunami. But how should we teach those who had been victims? This was a very useful seminar. The question-and-answer period lasted for 90 minutes.

The moderator told you that this university functioned as a hub or centre during the recovery phase. We wished to contribute during the reconstruction phase as well. What we did first was open up our campus's facilities and conduct activities. First, we opened this wing to the residents. It is nearly impossible to give you an accurate count because people moved very quickly. But we estimated more than 1,000 that week, plus 200 students. This is the date on which it was opened. The aid station of the Red Cross hospital was set up in the gymnasium. The Self-Defense Forces were accommodated here, too. They used our ground as a heliport. A volunteer centre was also established here.

Here in April was a huge camping area, with more than 300-400 tents. Some people are barbecuing. Very good smell by the way. Using the university as a site for the camping of these volunteers was found suitable. We were relatively well equipped with water supply, electricity, and as an evacuation site because there was an earthquake on 7 April, a quite strong earthquake. At that time, a tsunami alert was dispatched. So all the campers were evacuated to a high building on campus, which might be the only place where people can be evacuated safely.

Again, we were about to exchange an agreement to accommodate the volunteer centre if something happened. It was planned for the 13 March, so we had already agreed basically. So we did. This was as planned. That means the city agreed to follow or respect our university's rules about smoking, no drinking on campus – difficult thing; one-way traffic. This made the volunteers more or less disciplined, which reduced the friction between the volunteers and the residents.

We are still accommodating the school for nurses of the Red Cross in the other wing of this campus. We also housed a branch office of Miyagi Prefecture, with about 320 people working. Their branch had been flooded, so they began to use the gymnasium at the end of September. To be honest, we have been heavily supported by three local cities. We have never been supported by the prefecture. So we do not owe anything to the prefecture. But we knew that there was no other place where the entire branch could be housed, and we thought it would benefit the residents who had suffered from the disaster if this unit was in one place. So we decided to open our campus to them. On the first day, they asked us to do it for free, and we agreed.

An aid station, water supply from the local government or local governments of other places in Japan, a lot of vehicles and personnel were sent to help this area. They were very effective, and I think the help was crucial during this acute phase. So we were delivered 10 tons of water per day. People lived in wonderful lecture rooms like this room. Toilets were the most difficult problem. We had some water, about 120 tons on 11 March. But the sewage system had been damaged. One of our technical staff recognized that on that very day and personally readied six toilets at the beginning. Then the local government added more toilets.

These are the living places of our evacuated students. Actually this is the room where the professors' meetings are held. So they lived like this, and we asked them to be autonomous. They decide on their room. They managed their living. Of course, the food was delivered by the local government, but afterwards they distributed it by themselves. They cleaned up by themselves. Mr. Ogata there, one of our administrators, their respectable administrator, was in charge of these students.

Many students volunteered. Many evacuated students volunteered to help the refugees. This is one of the students. He agreed to show his face to the public, so it's okay. Mr. Matsushita, an MSD student at the moment, helped to distribute food and helped the people who had evacuated.

This is the branch office of Miyagi Prefecture. This is the camping area on campus. What were the advantages of this campus for these kind of activities? First of all, this is a safe place; no floods. The buildings are very sturdy, and there are very large vacant space, rooms, and ground. It is a private university, so that means we can make decisions rapidly and flexibly. I was in Sapporo and I was told by the head administrator, "We are opening the university to the refugees" over the phone. I agreed. That's all. Very rapid decision making is possible at private universities.

All the staff of this university recognized and respected the coalition with the officials of the local government. We have been in close communication, from the building of the university, so we knew the faces of the city administrators. They knew us, too. So it was very easy from the start. We had a very respectable managing company which had taken care of this university in matters such as maintenance, cleaning, security, and all kinds of things. They are the ex-landowners of this campus. They love this campus. They're living nearby. They are neighbours as well. So they succeeded in maintaining and operating the emergency generator for nine days. The emergency generator is designed to operate for eight hours. They were excellent, so we were very fortunate. And we have our founding body in Tokyo, not in Ishinomaki. So the main people or the main body of organization is in Tokyo, and it functioned as a backup.

If we have something to improve more, it would be using natural energy, and having an independent water supply, independent sewage, and wireless communication. We are establishing wireless communication. Independent water supply, not yet. Independent sewage, not yet. I think I'd better stop here, but we are starting our project called "Fukkou Kyosei Project". This is shown in this leaflet, so it is a very good chance for you to learn

Japanese. We will be doing what we think is necessary.

As a frontline university with one-third of its staff/students victims, we are working together with the local people, not outsiders but insiders. And we do research. We conduct a lot of symposiums, seminars, and lectures. We have the local people. We have local industries. This pamphlet shows what we are doing at the moment. Fortunately, this activity was approved by the central government as a project. So we have been awarded 120 million yen for activities of the coming five years.

Thank you for your time.

Q: 120 million over five years; what is it that you actually will be doing?

A: Support our activities.

Q: Emergency management activities or just your academic activities?

A: There are three main activities. One is the activity to help the recovery of local industries. For instance, one is the development of safe cars, automobiles; the safe use of automobiles. The car industry is becoming an important industry in this prefecture, and we have a department of car engineering at this university. Also, we are supporting the local fishery industry as well. We are trying to establish a test plant to develop new food products, manufacturing food products, mainly fishery products.

Also, we are trying to make an open experimental station for these local, small-scale manufacturers. We are also trying to improve our resilience against disasters, like having an independent water supply. We are also developing a small-scale water supply plant which can be loaded on a small lorry that can be transferred to every locality because we have a lot of small communities nearby. We also are making a kind of repository of our experiences, what we did. We are publishing one booklet about 1 centimeter thick at the end of March this year. These are kinds of things.

Q: Are you ever going to see the funding to support your activities on the response side, how you housed the people and fed them? Are you ever going to get reimbursed for that?

A: Very good question. In a direct sense, no. In an indirect sense, something is smelly. As a kind of joke, we calculated how much it would. About 60 million yen. But as I told you, this land was donated by the local people. So we have no intention of asking for that from the city of Ishinomaki, for instance. No, we are just paying back.

Miyagi Prefecture, the central government, recognize our efforts. But it is very difficult to find any scheme because the central government is supposed to treat all universities in the same way, but no other university has suffered the kind of situation we have. There were a few private universities which had been taking care of evacuees, but one has already escaped the area and moved its campus to Tokyo. There is another university, but the staff went to Tokyo for the first two weeks. We are still here.

It's a very good question because in terms of economy or financial situation, we are facing a very difficult situation. We are one university of a set of two universities together. The other university in Tokyo is a huge university, so it's possible to survive at the moment. Of course, it is very difficult to recruit students to such a place as this. So this is the most serious problem at the moment. That is a kind of reflection of our income.

But fortunately, as I told you, we are exempting our tuition fee, a huge amount. But two-thirds of that cost will be subsidized by the central government. And many people from all over the world donated their support to our students as well. So I think we can manage this year. But we are supporting them next year, too. This is a very, very challenging situation.

Damage to equipment, which is not minimal – about 200 million yen, about 40 per cent of the damage was subsidized by the local government, but 40 per cent was left to us. Again, this is a very heavy burden for us.

Q: What is the average tuition per year per student, total?

A: Roughly speaking, 1 million yen per year per student. Approximately 140 million for the faculty of science and engineering, and 840,000 yen for the faculty of business administration. Roughly speaking, 1 million per year. A little cheaper for graduate students. Our university's income depends on mainly the tuition fee; about 85 per cent of the income comes from the students.

Q: You should start a disaster management curriculum programme. You have your experiences along with those students who come and learn about how to manage and mitigate future disasters. We talk about this portable water system you are trying to develop. The fact that you are looking to the future and trying to mitigate disasters would be a draw for people to come and learn about everything. It could be an international programme, not just for Japan.

A: Yes and no. Yes, we have a very special experience. We are not sure how this can be generalized. We are a university. We have to teach a general curriculum which can be applied in the long-term sense. In Japan, there are quite a few departments on such subjects. I'm not sure if it is reasonable to add another department on top of that. It might be better to improve them by feeding our experiences.

There was a meeting of the main staff of this university on 30 March. Universities usually observe subjects, but we decided to be the subjects that are observed, like lab animals. We thought it would be better. Of course, establishing a new department would cost a lot. As I told you, we are in a very difficult situation. But we are establishing a new faculties next year. One will be the education department, mainly for primary school and nursery school education. A lady told us there should be more nursery schools or places to take care of children and that we should support this idea.

And another department is for the society and culture of the local community, which we also think is very important. We reorganized two departments in the faculty of engineering and science to make one for food technology and environment. Another is biological science which is mainly to maintain and restore the natural environment.

Q: What is the difference between the right bottom side and the other.

A: The source of the money is different. The right hand one serves as a platform scheme. This is coming from other sources from the central government. We have already set up an office in front of Ishinomaki station inside the town hall to provide one-stop service for many different things like the recovery of industries, water environment, scenery, street rebuilding, marketing, those kinds of things. We accept proposals, reorganize them, and ask our partner universities to collaborate in carrying them out; we are making a consortium of universities in this prefecture, so we just organized the questions. This is shown on the right bottom side.

Q: So basically the citizens can go to this office and ask, and then you organize yourselves to respond to them?

A: That's right. So for this purpose, we employed very different people. One is an ex-CEO of a food manufacturing company. One is an executive at the vegetable-fruit market here. One comes from a local bank, and one is a colleague, who is a very good organizer.

Mr. Goda, Peace Boat: My name is Goda from the Peace Boat organization. As far as Peace Boat, our organization, is concerned, our structure is different from groups that have already given presentations to you. Our headquarters is located in Tokyo, but we are an international NGO.

I attentively listened to the presentations by Mr. Ito as well as President Sakata, and I reaffirmed my belief that as an international NGO, it is very good to have strong local partners. That's why we could undertake our role.

The disaster occurred on 11 March. However, we were dispatched from Tokyo with a

large quantity of supplies on 15 March.

At that time, the whole country was in a confused state, and there was a shortage of precise information. Therefore, when we departed Tokyo, we did not know exactly where we should go because the damaged and affected areas covered a very wide area, starting from Aomori up north of the main island of Japan to the Chiba area that is very close to Tokyo.

However, while in that confused state, the reason why we decided to come to Ishinomaki was that they had disseminated a statement as well as information to people outside this area. At that time, we understood that there was a receiving organization of support material at Ishinomaki as well as this particular Ishinomaki Senshu University and that they were taking an active role as a coordinating centre for the evacuees as well as in accepting relief operations.

Even though we were going there from outside the area immediately after the disaster, we were pretty confident that as long as we went to Ishinomaki, we would be able to communicate very well because communication seemed to have been established up to certain level in that area and there was easy access to disaster information. Also, we believed at that time that as long as we went to Ishinomaki, we would be able to establish and locate other support organizations. That's why we came here and stayed until now.

As the name of our organization indicates, we use boats for promoting international exchange as well as education on the importance of establishing of peace. We are recognized as one of the ECOSOC organizations of the United Nations.

Our organization has been in existence over thirty years, therefore even when the previous earthquake struck Japan in 1995, the Hanshin-Awaji earthquake. Since then, not only in Japan but also all over the world, we have undertaken support activities in disaster areas.

In the case of Kobe in 1995, we went there to render our support but had to leave after three months because at that time we were wearing two hats; one was our main mission of international exchange and international communication, and the other as peace education and so forth. So it was rather difficult for us to continue to support the Kobe area.

We learned a lesson from our support activities at the time of Kobe earthquake, and we didn't really want to repeat the same thing. Therefore, we established another organization specializing in the support of disaster areas, and that is the Peace Boat Disaster Relief operation.

We are working under the umbrella of IDRAC at the moment, and among the supporting members of IDRAC, we have been handling the largest number of volunteers.

At IDRAC, they handled a cumulative number of 140,000 volunteers. Out of them, 50,000 volunteers are registered under the Peace Boat organization.

In order to send those volunteers, we have dispatched 400 buses from Tokyo up until now.

We have sent many number of volunteers. Therefore, the areas which we have lent our support through volunteer activities are extensive. However, I'm not going into detail. I will just show you some photos of those activities.

We are supplying hot meals.

We are cleaning, just getting rid of the mud out of houses and so forth.

Temporary public bath.

Support was given to evacuation shelters. We operated Tick Busters and other activities.

This is an area called Onagawa. To those temporary houses, we distributed some support material.

Also, we extended our help to businesses and corporations by cleaning the inside of

their factories and production facilities.

We supported the fishermen as well.

And helped with aquaculture activities.

Last year, in order to help those fishery industries, we dispatched approximately 10,000 volunteers in total.

Also, we issued and published a community paper in order to disseminate necessary information to those living in the temporary housing.

Landscaping of the temporary housing sites, building benches as well as containers for flowers.

Also, quite a lot of households grow their own vegetables. Therefore, we not only helped the fishing industry, but also helped to recreate vegetation areas for individual households.

One thing which I'd like to add here is that we have extended various types of support activities but that support was not only provided by Peace Boat. We collaborated with other support organizations and we just allocated their respective roles so that we could harmonize our support and respond to the needs of the communities.

As I mentioned to you, we have dispatched many volunteers from outside this area. However, there was some criticism about the sending of volunteers because there was an opinion that sending volunteers to areas in a state of confusion would add to further confusion for the people who are facing a difficult situation. But based on our experience in Kobe, we knew that as long as we could dispatch those volunteers in a systematic and organized manner, the more volunteers the better.

This is a scene from around. We set up base camp here on the premises of this Ishinomaki Senshu University. We put up our temporary tents and so forth in order to accommodate the volunteers.

Of course, for example, if 400 volunteers came to our base camp at the same time, it would have been very difficult to coordinate their respective assignments.

What we had already done was invite the volunteers to meetings at different places and, allocate them to different teams in Tokyo.

One team consisted of five volunteers, and among those five, one was selected as the leader. Therefore, it became easier to communicate with the individual groups, and we could establish a very consolidated communication line as well as network by doing so.

Also, there were not only Japanese volunteers, but also some volunteers from outside Japan.

Therefore, for volunteers from overseas there was language barrier. If we had sent those foreign volunteers directly to the affected areas, both parties would have faced difficulties – the receiving side and those volunteers. Therefore, we had interpreter volunteers. For those groups where there were foreign volunteers, we included interpreter volunteers in order to establish communication with them.

The portion of international volunteers was just under 10 per cent. However, looking back at other disaster cases, they tended to be pushed out most of the time because of language barriers.. It was a shame to not have been able to utilize their skills and talents. But this time, because we took an organized approach, we could manage to effectively utilize the talents of overseas volunteers.

Thanks to our culture of giving them a briefing in advance in Tokyo before those volunteers were sent to the respective sites, although a very large number of volunteers were sent it went very, very smoothly. They had been allocated responsibilities, depending on the group: Group one would do hot meals and a second would do other tasks.

With such a big number of volunteers available, we opted for the pyramid type of organization.

At the very top of the pyramid were experienced people who were brought in to support those disaster-affected areas. Under this, people with specific skills and talents, for example, cooks and other experts.

What was very good and important for this type of system to work was, as I mentioned before, one group consisted of five people, and one was the leader. But there was a leader above those leaders who coordinated them called 'leader's leader,' and those people stayed on over the long term, say, one month or two months, compared with those team members who stayed only two days to one week.

If we had more 'leader's leaders' who could stay the long term, we would have been able to mobilize more volunteers.

One of the tasks of the 'leader's leaders' is, before reaching the actual disaster site, he has to make sure the site is safely approachable for the volunteers. We organized training sessions for 'leader's leaders', starting from November last year.

We believe it to be very important that those trainees not only listen to lectures, but also have on-the-job training. So they have to be hands-on. They accompany the 'leader's leaders', already in the disaster-affected area as an observer so that they can gain on-the-job training.

This is a picture taken from the outside training session. Of course, these people are 'leader's leaders,' and assistant has to pitch his own tent, but then pitch the tents for other purposes like headquarters and warehousing. By having such exposure, they are able to build up their skills.

Trainees who become safety officers go to the actual sites and learn what kind of checkpoints are going to be very important in order to ensure the safety of those sites.

And first-aid activities.

At the end of the day, they have to bring back what they learned during the daytime, and then share those experiences so that they can accumulate such know-how.

In order to make best use of what's learned in the field, we have adopted the case study approach. Those 'leader's leaders' will bring their own experiences of success and failure in the course of the last twelve months, and we share and learn from them.

I think it's quite meaningful that there are a lot of 'leader's leaders' who were trained and nurtured in Ishinomaki. This is one of the disaster-hit areas that received a greater number of volunteers than any other place. Now those leaders have moved on from Ishinomaki to Niigata Prefecture on the Japan Sea side of northern part of Japan where there was very heavy snowfall. They went to those rural communities to help push down snow from the top of the roofs.

Japan is a disaster-prone country that experiences many typhoons and earthquakes. Therefore, there is enormous demand for volunteer activities. So, Ishinomaki is going to be the ideal place to train and develop future leaders. I think that's a big task of the Peace Boat moving ahead.

Thank you for listening.

Iwaki City and Fukushima City, Fukushima Prefecture 2 March 2012

(7) Iwaki City, Fukushima Prefecture

[Visit to Iwaki City]

Mr. Kitase, Representative, Inenokai: About four years ago, I came to settle in Iwaki City along with my wife because Iwaki City is her birthplace. Although Iwaki City is

located in the northern part of Japan, the climate is very temperate and it produces a lot of very high-quality vegetables and other agricultural products. I have been very happy to make that discovery.

The first place we will visit is called Namakiba Farm.” This is an agricultural farm which specializes in the production of agricultural products without using agrochemicals. It’s organic agriculture.

Through my work experience with this farm, I came to get involved deeply in the federation of agricultural producers and commercial merchants, especially with this farm. I have helped them to apply for subsidies.

So there a lot of members in this federation. Each one of the members has their areas of specialty in agriculture and production. I am trying to disseminate this information throughout Japan so that these activities can develop further.

It was just when this effort of trying to establish the federation’s activities when the major disaster hit this region. So our efforts have shifted a little bit towards how I am going to help the members of this federation get back on their feet following the disaster.

What happened after the disaster was those farmers came to realize that their soil had been contaminated with radioactivity. They went to the elementary school and borrowed a Geiger counter. Then took the Geiger counter to every part of their agricultural land and measured the soil. After that, they removed the topsoil of their land in order to remove the radioactivity.

As a matter of fact, to remove the topsoil of the land was not such an easy decision to make because the top surface of the soil is very rich in microbes and lot of nutrients are concentrated on the surface. Therefore, some farmers were quite reluctant to do so. However, seeing that the top part was quite contaminated, they had to remove the topsoil.

In this you can see that a lot of volunteers had gathered here, especially in April and May. For example, volunteer centres and other organizations mobilized a large number of volunteers. However, when we asked for help to remove the topsoil from our farmland, those organizations declined our request saying that they could not dispatch volunteers to take care of private land.

Do you know that there was a flood of donations coming from donors all across Japan? There were some individuals and members of the federation who had access to these donations but didn’t know how such a pool of funds should be used and distributed.

Since our Inenokai consists of a lot of elderly members and I am one of the youngest, I decided to take the initiative to use the Internet to try to solicit some volunteers who would be paid from this fund. At that time, when I was doing research on the Internet, I hit upon the unique activities launched by Professor Nagamatsu of Kansai University. This project is called “Cash for Work.”

So I immediately contacted Professor Nagamatsu and asked him if it would be possible to recruit volunteers for cash. He responded saying that he was scheduled to visit Tohoku, and in no time he came to visit us in Iwaki City.

He gave us a very good piece of advice saying that probably we could make use of those victims of the disaster who are without work and get them involved in this volunteer-for-cash activity. They would be able to coordinate the decontamination activities, and maybe some of them could get involved directly in the decontamination work itself.

Just around that time, there was an emergency employment subsidy available. So we decided to apply for it. In order to do so, we had to come up with a proposal and plan. We got the subsidy and it enabled us to employ full-time workers, two ladies in Iwaki City one of whom declined a job in order to do ours.

This is a photo taken of the volunteer activities involving decontamination of the top soil. This is the kind of activities we envisaged for this work.

We have featured those photos in our advertisement on the Internet. We also disseminated those photos through our blogs so that we would be able to solicit more participation of volunteers. This is a project called ‘The Removal of Grass and Top Soil to Clean Up Contaminated Soil.’

At first, we were apprehensive that the words “decontamination of radioactivity” might scare people away. However, there was a lot of Internet contact. We received many emails from people who said that they were interested in getting involved. What we had in mind at that time was for the two full-time employees, who we hired thanks to subsidy for employment, to serve as the window for receiving all those inquiries coming through the Internet and to disseminate information as well.

However, they were not knowledgeable about PC use and Internet technologies. At first, they could barely handle the computer, though they were able to use Word and Excel.

Those ladies are women in their 30s and 40s. We spent several weeks training them so that they would be able to write and receive email, and they also familiarized themselves with blog system software.

We thought it important that they also get involved in farm activities. So, we spent about two weeks decontaminating the topsoil and those experiences are captured in the blog. That information was disseminated to outside Iwaki City through Inenokai.

Once we disseminated the information through the Internet, the number of inquiries gradually rose and those inquirers came from as far as Hokkaido down to Kyushu, in the southern part of Japan. Interested persons were of a very wide age range, from young to old.

Since those volunteers would be working on the decontamination of private land, we decided to adopt the work holiday type of scheme, meaning that their housing, commuting, and meals would be taken care of.

It was quite surprising to all of the members that there were so many positive reactions to our blog and Internet solicitation. And the people of our community were so encouraged that they came to help us.

On 11 April 2011, there was a pretty big earthquake in this area, and especially the village community of Tono was hit hard. Tono is not the one we visited in Iwate Prefecture, but in the neighbourhood of this Iwaki City. This village is dependent on the river water for their water supply system which was completely disrupted and that has continued even to today. We have dispatched volunteers to not only remove topsoil on private land, but if there is a need, we will also dispatch them to help those small communities, especially in providing water.

So the people have been very much encouraged after receiving this kind of help from people who had come from outside Iwaki City. They came to accumulate their knowledge on radioactivity as well. So they started feeling more comfortable around that time.

The people of Iwaki live in a big family, and are very bright and cheerful people. So the volunteers were very much surprised to find that despite the disaster, they still lead very cheerful lives. It was quite encouraging even for the volunteers to see their very cheerful faces. The volunteers were so encouraged to find the Iwaki people enjoying their lives that some of the volunteers even confided in them about their private problems.

[Visit to Namakiba Farm]

Mr. Sato, owner of Namakiba Farm: The contamination level of the topsoil at that time in April last year was 0.45 sievert. Then we measured the Becquerel level of those soils, and soils up to 2.5 centimeters were 5,930 Becquerel.

We only removed 5 centimeters of the topsoil, and then after removing the topsoil we again measured the contamination level. No contamination was detected by the Geiger

counter. Therefore, we could drastically reduce the radioactive level.

However, depending on the area, between 5 centimeters to 10 centimeters of topsoil were removed. Because the land itself is not very flat, it depended on the area and the topsoil had to be removed manually.

After removing the topsoil, we tried to grow radish as well as Chinese cabbage. Then after harvesting those products, we measured the radiation level. Regarding the precision of the Geiger counter which we used, less than 30 Becquerel indicates that no contamination was detected. So that we measured the level of those products and, according to the Geiger counter we used, no radioactivity was detected, that means it was less than 30 Becquerel.

At the moment, the method the government is suggesting in order to lower the radioactivity level is not to remove the topsoil, but to mix the soil. For example, the soil is dug 15 centimeters and the soil at the top is placed at the bottom and vice versa, thus mixing them. By doing so, the radioactivity level could be reduced to 440 Becquerel, so that was good enough.

So not only decontamination by removing the topsoil, but we also tried the government suggested way of mixing the soil. We then planted potatoes. After cultivating those potatoes, we measured the contamination level and no radioactivity was detected. However, at the moment, we don't know if it was because that crop was potato, or if the situation would be different if we tried it with some other crop.

In this way, we tried to investigate how we would be able to cope with the situation, and after going through trial and error, we can now start producing crops utilizing our farmland in a fully fledged manner. According to the suggestion or instruction of the central government, all crops as well as products produced on the farms need to be measured in terms of radioactivity level. If no radioactivity is detected, we are allowed to sell and distribute those crops and products.

So far, we have tested as well as measured twenty-five types of crops and no radioactivity has been detected on those crops. This is the result of repeated tests and measurements.

Another type of product that we are producing is eggs. However, in our case, those chickens are not confined in a very closed area. We grow chickens in open areas so that they can run around all over the farm. However, according to an instruction by the central government, we should not leave those chickens in open places because they would be able to move around on the soil that is contaminated. Therefore, we conducted an experiment in which the chickens were left outside for forty-five days. After that, we measured the eggs produced by those chickens and there was no contamination detected from those chickens raised in open areas.

As far as our farming method is concerned, it is organic farming; therefore, no agrochemicals, no pesticides are used. Most of our customers come to us for products which are produced organically. However, after the Fukushima nuclear power accident, our customers became very concerned about radioactive contamination.

Also, immediately after the nuclear power station accident, not much information could be obtained and that cause confusion among the consumers. They began worrying about the safety as well as security of the food products produced by us. Therefore, in order to give them peace of mind we decided to close our shop here for selling our products as well as to stop farming so that we could focus on our efforts to decontaminate our farmland.

So for approximately one year, we decided to stop our commercial business. We closed this shop – however, the decontamination effort was completed on 10 September last year. Then after that, we started our trial cultivation of various crops. We became confident that our products could be sold and distributed. Therefore, from April this year, we are going to open our shop to sell our products as well as distribute them.

Let me explain to you how we undertook the decontamination activities in our own way. At the start, we imagined it would be really hard work for us to go carry out decontamination and that it would take about a year or so.

This is called modern agriculture. Here is a photo of the decontamination work being undertaken. It may appear to you that they are enjoying their work. However, we needed a lot of manpower in order to do the work, which required manual labour.

Being manual labour, we needed a large number of volunteers to carry out the decontamination. Therefore, we asked Inenokai to solicit volunteers for us as well as requested other volunteer organizations to recruit as many volunteers as possible for decontamination work.

Then the system we took was the working holiday type of system, so that all accommodations as well as meals were provided to those volunteers. Therefore, with so many people helping we could complete our decontamination work earlier than expected, because originally we thought it would take about a year.

There is a person called Mr. Yokota from the Japanese Agricultural Cooperative Research Institute. When we were undertaking the decontamination work, he visited us here to write an article for that book, so details of our activities are written in it. Those who wish to have those books, please take it to read it at your leisure. We have three copies.

Q: What is the distance between Fukushima and here?

A: On a straight line it is between 100 km and 120 km, to the nuclear power plant 45 km. At that time, wind was blowing towards the northwest so in that respect we were lucky not to be exposed too much by the radioactivity, and the radioactivity level was low. This is a radioactivity map of Iwaki City. Red indicates high radioactivity levels, and we are there. This farmland is located around here. The power plant is here. It is up here. The wind blew in this direction, not here because Iwaki City is located southwest of the power plant. So wind blew in the northwest direction and radioactivity was dispersed in that direction, not to Iwaki.

Q: Where does the soil go if it is contaminated?

A: We are going to take you there. However, at that time, when we were undertaking the decontamination of topsoil, we expected the government to take the contaminated soil to some storage place. However, that has yet to happen. Therefore, we stored those contaminated soil on our premises.

Q: Is there an accepted limit by the government?

A: The government has a standard, an allowable limit on an annual basis, 1 microsievert. So that is 1000 microsievert. In terms of hour, 0.17 microsievert per hour. From this standard, the level measured right now is slightly higher. It is 0.56 microsievert.

So now we are going to visit a new type of project called “Kleingarten” Project which was initiated in 2010. It was supposed to continue until 2011 because we received subsidies coming from the central government to promote rural tourism. This is the area designated for that project involving people from the city coming to stay at some small hotel and cultivating their own flowers or vegetables.

So that kind of agro-tourism type of initiative has been initiated here. However, after launching this project in 2010, what happened is in 2011 there was the 11 March disaster so no one wanted to come and stay here.

When you grow potatoes, the roots of the potatoes go much deeper than 15 centimeters and basically you see down to the deeper part of the soil. When the potatoes grow, the radioactivity should be less than 30 Becquerel and the absorption ratio 0.068 or below. So that’s fine because potatoes are okay. But it depends on the vegetable.

Not only potatoes, but any tubers grown under the soil are the same. But it is different for tomatoes or flowers and fruits that grow above the soil.

It's really trial and error because the absorption ratio of radioactivity depends on the type of crop. We really have to conduct tests, observe, and take measurements.

So immediately after the accident at the nuclear power station, the radioactivity reached here. So the vegetables grown at that time, of course, were exposed and their readings were high. However, after that when the topsoil was removed and crops grown, there was a much lower level of radioactive reading in this region.

This is compost making. We have raw material here and we take it to the other side for fermentation. We are looking at the final products over there. After that, we cross check.

There are several materials mixed to make this compost. First, there is okara (soy pulp), which is produced when making tofu. The second is the husk that is left when rice is whitened. Then there is also the dung of chicken, and pigs and cows. However, since the disaster, these has not been available.

Q: How many days are required to make this material into compost, the final product?

A: The whole process takes about two weeks, from putting in the raw material and fermenting it to final product. It depends on the season; during the summer, the whole process will be much shorter because the temperature is high, and fermentation will occur quickly. But now it's colder, so fermentation is delayed. Sometimes it takes three weeks. As a matter of fact, we are waiting for the Japanese Government's guidance on the use of rice bran. Those are the sacks of the rice bran. There is no guidance received yet as to what the safe level of rice bran is if it is exposed to radioactivity. So the directive is, if you want to make a voluntary measurement, please go ahead. If the reading is below the circle – if it's at a safe level, you can go ahead and use it.

Q: But what if the brans have radioactivity, the rice grain itself being radioactive?

A: There is a theory that if unpolished brown rice has radioactive readings of say 10, then the husk should have a reading of a much higher level of radioactivity of 60 or even 80. What happens is that in when you process brown rice, the husk is removed, and when the whitened rice is measured, radioactivity is hardly detected. Most of the radioactivity is found in the husk.

Q: Within the one-year span since the disaster of 11 March, has there been any cultivation of rice fields or has it been banned to cultivate them in this area or all disaster areas?

A: Yes, the government came up with some sort of threshold of radioactive reading of the 500 Becquerel. So when the soil is 5,000 Becquerel, that is the threshold for the soil. Then it should not be used to produce anything. What the government said is that if our soil has a reading of less than 5,000 Becquerel, we can go ahead and produce crops. But after the harvest, we must measure radioactivity. However, when those harvested crop are measured, if they show a reading of higher than 500 Becquerel, they cannot be sold. Beginning this April, this 500 Becquerel in crops as the threshold will be made stricter to 100 Becquerel because one major problem in this area was some of the Fukushima farmers said they had higher readings in their final products, their harvest.

If the government tightens the regulation, it will be a problem for a lot of farmers.

Mr. Kitase: Chopsticks in Japanese is pronounced 'hashi', which also is the pronunciation for bridge and that's why chopsticks can bridge people. That is the concept of producing chopsticks in that place.

According to Mr. Takahashi, he says their approach is very unique because they were producing chopsticks that were being distributed by themselves. So the vertically integrated operation they carry out uses the local cedar trees to produce chopsticks, from manufacturing to distribution. Mr. Takahashi says that their style of operations is very unique even in Japan.

Also, they design their own chopsticks. We have a particular kind of dishes which

is called kaiseki, which are eaten in a particular way, and for that he designed longer chopsticks.

What he claims is that their chopsticks are very unique and very high-end. So they are longer and there is also the fragrance of cedar. Therefore, it should be used longer. However, in order to re-activate his business, he is saying to please use those chopsticks probably two or three times, and then to please dispose of them so that customers can buy new chopsticks from here. That's what he is recommending.

In order to measure the durability of the chopsticks that are produced, they measure the bending strength. There is an organization housing autistic children and adults. He consigned the measurement of bending strength to this organization.

One of the good things about those chopsticks is that there are chopsticks covers which can be customized in order to meet the requirements of the customers.

You saw the sticker 'Eat East.' This was designed by a designer in Fukuoka after getting information about Mr. Takahashi through the Internet. So that designer just got in touch with Mr. Takahashi and offered the design of this sticker. Then on the top of that, he designer designed a logo for Mr. Takahashi. That design was awarded the forestry product award. So his chopsticks, with that particular logo, were awarded for their product designs.

As I mentioned to you, Mr. Takahashi tried to use local cedar to produce his products; however, that sort of operations is quite rare. One of the timber producers in Yamagata Prefecture, which is the next prefecture to Fukushima, got in touch with Mr. Takahashi about whether he would be able to produce some products made out of cedar that is grown in Yamagata.

Do you have this leaflet? At the back of the leaflet, there is mention of a kind of pottery just on the right hand side – right in the middle of this brochure. This particular pottery is being produced by the person who had moved to this area from Mashiko. Do you know Mashiko, which is a very famous place for pottery? You can see that this pottery has blue coating. It is produced using a specific soil produced in this area so in order to produce this blue color, he thought he had to move here from Mashiko, which is a very traditional pottery area.

There was some sort of project to promote this kind of pottery in the market. However, due to the disaster, all of those pottery products were destroyed. But before the earthquake, the people as well as producers of such pottery tried to promote this product as a specific local product out of Iwaki because Iwaki is very well known for having blue skies all the time. Therefore, this blue colored pottery matches the local features of Iwaki. However, that kind of project has been held up at the moment following the earthquake.

The reason why this potter could not really produce his pottery after the disaster was due to the effects of the contamination due to radiation. In order to produce this kind of pottery, the soil needed to be washed and dried outdoors, but this was not possible

In order to cope with the situation, he thought about sending the soil to Kasama, that is another pottery area. There is a facility there to purify soil for pottery. Therefore, he wanted to send the soil to Kasama, but there was an incident at the stone mine of those stones being contaminated by radiation in the area. Therefore, the government ordered that neither stones nor soil could be taken out of the Iwaki area. However, he negotiated with the Japanese government officials, and in the end, the government agreed that as long as the soil is measured for radioactivity and it is below the threshold, soil can be taken out of this area. So now it's okay for him to send those soils for purification.

I don't know at what stage of purification the soil is in, but if it has progressed and he was in the position of being able to produce his product, we may be lucky enough to drink coffee using the cup he made.

Please refer to the top left of the page that has a photo of some food. The name of

the shop is “Koreta” and this particular owner used to run an independent supermarket. However, the government introduced a sort of regulation promoting large-sized stores and supermarkets. After the introduction of that regulation, being a small shopowner it became very difficult for her to continue to run her small-sized supermarket so she gave up the supermarket business and started running a deep-fried pork restaurant.

However, after that, she had to go through the process of land readjustment. Therefore, again she gave up running the deep fried pork restaurant and changed her business to becoming the producer of pickles as well as take-away food. So now she is preparing the take-away food that we are going to have for lunch. Actually, her place is not a restaurant; she just opened a place for take-away food in the corner of her store.

The way she produces her take-away food is based on the concept of using local products such as those produced on the farms we visited, and also those without additives and so forth. That’s the sort of business she was trying to promote in this area in order to encourage local farming as well as local products.

However, she suffered from the great earthquake, and, her store was destroyed as well so she could not continue to run her take-away food business. But next to her original shop, that temporary shelter was established. Therefore, she acted as a sort of volunteer for cooking meals for the evacuees even though she herself was also a victim of the disaster. But now she has resumed her take-away food business.

So we are very close to the chopsticks place run by Mr. Takahashi.

[Visit to Kibo-no-Kakehashi (Iwaki Takahashi factory)]

Mr. Takahashi: We are using local cedar in order to produce our chopsticks products.

So this is a specific type of tree in Japan. If you look at the cedar forests around here, you might see those brown in color, and those are with pollens.

So we chop the tree and immediately produce chopstick products. It’s a sort of vertically integrated operation, from raw material to processing, and then producing chopsticks. There are probably only three producers that have this kind of vertically integrated operation.

They are all raw wood. They are taken daily out of the forest, you know that very thick forest there.

The skin is removed in this way.

Then this is after the removal of the skin.

Q: Is this a natural forest or planted?

A: If you go beyond the plantation, you will find part of a nationally owned forest.

Q: That would be a rented one from the government?

A: Completely owned by some private citizen or farmers.

Depending on the specification of a certain type of chopsticks, we have to cut the logs into different sizes.

We are going to cut this log into pieces.

Depending on the size of the tree, how many splits we make differ, but for this size of log, we would like to make it six sticks.

So you can see that the cedar has features that are very easy to square.

Then, I will saw the board.

After that, I will dry the sticks of wood.

In this particular area, we have a very good wind, so we leave them for four or five days and then they are completely dried.

This is just primary drying and secondary real drying takes place inside the building.

Q: How do they make the boards?

A: You will see that.

In order to do the final drying inside, we use this boiler and this is the wood chip heater.

So a lot of this kind of wood chip is fed to the boiler. We get those chips from the neighbourhood carpenters, and then use them for the boiler when we dry the branches.

Inside there is water.

There is a temperature gauge. Right now it is 82.

And 38 shows the temperature of the dry chamber.

During winter, it takes about one hour to completely dry those boards inside the building.

So what we are doing is we are trying to boil the water contained in this boiler, and that will be fed into the system inside.

We are looking at the dryer.

Actually, this is the freezer structure we are using. See that's how it is, the drying of those boards.

The hot steam comes to this drying chamber from the ceiling and then there is the radiator in the back, the blackish bags. This has been modified. That's originally the automobile radiator, and behind it there is a fan.

This fan behind the radiator will circulate the hot air all across this chamber and then it will completely dry those boards.

It takes three days to completely dry those boards.

You are not supposed to mention this and then post it on the Internet because this is a company secret.

Stay away because it's going to be very noisy and dangerous.

You see that opening; the logs will come from that opening.

So that is the angle that I will have to place the log. Okay, I will show you how.

This is the lubricant.

This is most dangerous machine that we have.

The system consists of zigzagged sawa on the top and bottom.

Q: Now they are making these boards; why are they making each in a batch? Why can't they use the whole log to make them instead?

A: There are reasons for doing that.

That is in order to show those lines, grains in a proper way.

Because this beautiful grain should be shown on the surface of the chopsticks. People appreciate the grains. That's very important.

So they will be dried.

Then from this board, we will cut specific lengths of chopsticks. So this is 52 or 53 centimeters long, I will cut into the required log accordingly.

There are altogether fifteen saws inside. So he will swing that board into this machine and the saw will cut those boards into the pieces.

You asked a question as to why we had to cut it into six smaller pieces. It is to show the beautiful grain this way. You have to cut the log into six squares.

[Workshop at Iwaki Meisei University]

Professor Sato, Iwaki Meisei University: Let me briefly touch upon what has been carried out in order to measure the level of radioactivity in the air as well as matters pertaining to removal of radioactive substances on the soil.

One month after the nuclear power incident, in April, we started to measure the air within this campus because it was considered a necessity for the university students and residents around Iwaki Meisei University. We assigned sixty monitoring points within campus. We continued to take measurements from April to July.

Immediately after the incident, the measurement level was between 0.5 to 0.99 microsievert per hour. However, after three months, it declined to between 0.15 to 0.35 microsievert per hour. Measurements were taken by me as well as staff and students of this university.

This is the measurement of radioactivity, but not the dosage level. First, we measured the iodine because the half deprivation time is the short period of eight days.

During the time, it came down to one-tenth of the original level in the case of iodine.

In the case of cesium, both 137 as well as 134, the half time or half life is not that short. Therefore, cesium levels stayed the same.

Also, we conducted a study on the level of radioactivity in the soil and its effects on crops that are grown in that soil. We calculated the transfer factor of brown rice at two locations; one is Nakoso town and the other one is Tairakubo town. We are taking the rice grown in those areas and trying to analyse the transfer factor.

The bottom column has to do with Becquerel level in the soil so you can see that we could measure the amount of Becquerel in the soil at both locations. However, as far as brown rice is concerned, we couldn't find any cesium concentration.

We concluded that the transfer factor that we were able to determine through the detection limit, was very low at 4.7 per cent at maximum.

Also, we conducted research on how we would be able to remove the cesium in the soil. In order to recover and restore businesses in this area, in particular agricultural production, the contamination needed to be removed.

In the case of removing those radioactive substances in water, it is not difficult because it is heavy and is in the waterbed. However, in the case of soil, it is very difficult to remove radioactive substances.

Based on our research, in order to remove those radioactive substances for the soil, we came up with the solution of using sulfuric acid, and by doing so, we could manage to remove quite a substantial quantity of radioactive substances.

So if we used only a sulfuric acid solution, then only 81 per cent decontamination was possible, and if we added some other agent, some kind of additive, then we were able to increase the decontamination rate.

Therefore, we feel that we would be able to utilize this kind of solution for the decontamination of the soil as well as sand going forward.

Mr. Ogura, Head of President's Office, Iwaki Meisei University: After the disaster, we tried to disseminate necessary information to the outside world from our president's office.

We have been acting on the university's behalf in order to recover in the aftermath of the disaster. Therefore, originally we are the president's office. However, the nickname of the president's office is now the restoration office.

We took various actions. As far as the location of this university is concerned, 45 kilometers away the Fukushima No. 1 power plant was severely damaged. So it is very close to the nuclear power plant; probably our university is the closest university to it. However, fortunately, because of the direction of the wind at that time, the damage caused by the high radiation level was very minimal. It was a kind of miracle being that we were the closest university to the power plant.

The place we are going to is Fukushima. That is our next destination and it has a slightly higher radiation level. However, don't be worried about that sort of situation too much because people are living a normal life there.

Immediately after the nuclear reactor accident, people living in very critical areas as well as areas those designated to be evacuated, evacuated to areas all over Japan. However, now people are coming back to take refuge here in Iwaki City.

We do not have a very precise number of the evacuees; however, it is said that approximately 30,000 people are from the areas very close to the nuclear power plant.

One of the towns critically affected by high radioactivity is the town named Narahamachi. The people evacuated from Narahamachi to Iwaki City and the temporary housing located very close to this university accommodate evacuees from there. We have been communicating with those people because their houses are very close to the university.

The original population of Narahamachi is approximately 7,700 people. However, 5,000 of them are said to have evacuated here in Iwaki City.

In April last year, there was a request made to the university as to whether Narahamachi's town office could be temporarily established within this university campus because there were so many people who had evacuated from that particular town to Iwaki. Up until then, they had a temporary office on the premises of an elementary school. However, they needed to expand their activities so they made their request to the university. The university has an entirely separate building used as a seminar house, so we rented that seminar house to them to establish the temporary town office of Narahamachi, and their office is still there.

There is a town called Hironomachi adjacent to Iwaki City, and of the 1st of March, their town office went back to their original place.

In the case of Narahamachi, the situation is extremely severe because that area is contaminated with a high radiation level. And Narahamachi is now called J Village, and lots of workers involved in restoring the damaged nuclear power plant have a base there. Therefore, even though the residents of Narahamachi wish to go back to their original township, they face difficulties in doing so.

This is true not only for the residents of Narahamachi, but also people who came from areas adjacent to the nuclear power plant. Even though they would like to go back their hometowns, they have found it difficult to do so for various reasons. They are suffering from mental stress and are having difficulty in maintaining a stable mental state.

Also, we are trying to accommodate the three high schools which are located very close to the Fukushima No. 1 power plant by relocating them in the premises of this university. We are working very hard in the preparations for that.

And we are going to make this university open to those three high schools to operate their centralized facilities.

You have seen now what kind of devastation this earthquake and the subsequent tsunami has dealt Fukushima Prefecture, particularly the enormous problem resulting from the radioactivity which was released from the accident at the Fukushima No. 1 power plant.

Our entire university is being faced with this unprecedented situation, but we would like to make the wishes of those evacuees possible. Therefore, they are saying that they would like to go back to their township as soon as possible. We would like to give full support to those people. And once they go back to their hometowns, we are hoping that they will be able to lead a better life. To that end, we are going to make all our effort to help them..That will take a very long time to achieve. Without your help, we won't be able to achieve such a dream. So I would like to ask for your continued support. Thank you.

Q: Dr. Sato, you are undertaking a brilliant project for the community. But I would be interested in knowing if you have assessed the overall contamination to the agricultural land in the prefecture.

So I suppose you are referring to expanding the area for taking measurements. What I understand is that such an effort is being undertaken not only by universities like ourselves, but by the prefecture as well. So we intend to centre our efforts on the vicinity of Iwaki City. And up north of Iwaki City where the contamination level is much higher than here,

it will be a joint effort between the prefecture and the central government to come up with a grid map, and then to take readings of the radioactive level at each point of the grid. The time for getting the cultivation fields ready for cultivation is nearing, but it could be quite tragic for the farmers depending on the circumstances. For example, in the same area, this part might be fine due to lower level radioactive readings, but right across the street, the plants might be highly contaminated. So I have heard that there is a degree of conflict even among the farmers.

Q: Just two clarifications; one is that when you use sulfuric acid to deal with the contamination, can you recover it?

A: Yes, it's quite possible to use sulfuric acid for decontamination of cesium and after that separating the sulfuric acid.

Q: Has this been tested at the farm level, on a larger scale?

A: Well, we have not yet tested it on actual agricultural land. So it is just on the test bench at the research lab. But then we have a plan to implement it starting from the new fiscal year that starts in April 2012.

The question is we have to do that on really huge agricultural land. So the question remains whether what worked on our test bench is really applicable to agricultural land or at a really massive level. That's a big question because there are certain unforeseeable factors at play. Of course, the farmers are very much worried about what will happen after that kind of treatment, decontamination is done because they have spent years getting the soil ready for agricultural production, nurturing those microbes, and so forth over here. So even if we may be able to get rid of cesium from the soil, still that won't change the fact that the chemical solutions had been used on the land. So probably they would kill those microbes, which are very good for agricultural production.

However, what happened is in the wake of the Fukushima accident was public trust has been shattered and completely lost. Therefore, as a scientist, we have to do our best in order to recover the lost trust of the consumers, farmers, and everybody. We are determined to do that.

Q: The question is in agricultural production, sulfuric ammonium has been used as one of the fertilizers for many, many years. So do you think you will be able to turn this chemical into some sort of fertilizer?

A: It's a very interesting endeavour. Therefore, we would like to try that on a long-term basis. However, sulfuric acid is a very strong chemical. Therefore, we do not yet have the technology established to turn this ammonium sulfate into fertilizer, but then we are interested.

(8) Closing Session

[Experts]

Mr. Yozo Mitani: We went around the three prefectures in the Tohoku area and met many people. One common factor that we all recognized is that it is going to take a long time to restore each of the areas. So in order to accelerate the efforts for restoring those areas, the important resources needed are human resources. Those people in each of the areas are trying to initiate restoration. However, they will need people to support them.

Since the Kobe earthquake, seventeen years have passed but during that period we experienced various seismic events in Niigata, Nagano, Noto as well as Fukuoka and Genkaijima island, and recently now in the Tohoku area. But for all those disastrous events, in order to restore the area I think we realize the importance of human resources to initiate restoration.

By attending this workshop, as a conclusion what I can say is that we would really like those people who suffered from the disaster to keep going and continuing to restore

their respective areas. As far as we are concerned, we will continue to support them from all over the world. So that is the sort of commitment we reaffirmed by attending this workshop.

Ms. Marilyn Shigetani: Good evening! My name is Marilyn Shigetani. I am from the Federal Emergency Management Agency of the United States. I have had the unique experience of responding to many large disasters, including Katrina, World Trade Center terrorist attacks, and many typhoons throughout the United States and the Pacific. I am both humbled and very appreciative of all the efforts and the honesty that was presented on behalf of you all. It's very difficult as a community impacted to share your story and so I do appreciate your efforts.

Your response efforts have been phenomenal and now you must look towards long-term recovery. I saw evidence of many many NGOs and NPOs working together and providing that unique assistance. If I could make any recommendation at all, it would be that there is more of a connection and interface with government. Government provides the lead, but it's the voluntary agencies and the private sector that have the know-how and the experience and the spirit to come forward and provide assistance to their communities. So I believe quite strongly that we need to work out developing the recovery framework that involves looking at unique needs of not only the workers, in case you are doing exceptionally well in corners and the redevelopment from an economic perspective. But there are those unique needs that will surface as the days and years go by; from the elderly, the young, the frail, and those with special needs and that's where you need to direct a lot of your efforts. So continue to do what you are doing, but more of a coordinated effort with government I think would be most important.

Mr. Mohammad Sharifur Rahman: Good evening to everybody. I am from Bangladesh. We also experienced Sidr before the tsunami and the earthquake in Japan. But through my practical experience in Japan while visiting the three regions, it was very shocking for me, first of all I would say.

The disaster in Japan involves not only reconstruction, but many phases of reconstruction; from shelter and food to water, everything. In order to manage these things, we learned during the last few days from the prefectural government and the university session about very great initiative to restore the situation.

I hope the time will come when everything will be all right and everybody will be in joyous mood.

Mr. Ranjith Mahindapala: Good afternoon. My name is Ranjith. I work for the International Union for Conservation of Nature. Unfortunately, this is my second tsunami experience within a matter of seven to eight years.

During the Indian Ocean tsunami of 2004, we lost nearly 250,000 people, mostly in Indonesia, Thailand, and Sri Lanka; which had the highest fatalities. The loss to infrastructure was huge. While it's not possible to get back the lives which is very regrettable, if you have funds, you can always get the infrastructure back.

The families suffered from the loss of their family members, but as you know the Indian Ocean tsunami struck developing countries, and in the context of their economy, they are still trying to rebuild their infrastructure.

There was a great deal of damage to coastal ecosystems during the tsunami, all these countries, but very happily they have all come back to normal now. In all these countries, the coastal ecosystems are back with almost 100 per cent normalcy with time and nature has itself done the job of bringing it back.

What saddens me is that in Japan, although the context is different and you have the necessary wherewithal to build the infrastructure, the damage to ecosystems due to radiation is something that I am sure is going to be a big challenge, including for the government. The restoration of habitats from radiation is something that I don't think anybody has a clear enough solution. I do hope that you will be resilient to bring it back to the normalcy. Thank you.

Mr. Luis F. Diaz: Good evening. My name is Luis and I am from the United States. My expertise is in environmental engineering and I could talk for a long time about this past week, but due to the shortage of the time I will make it very short.

I think what was most impressive to me was the mental strength, the resilience that I saw in many people who had been impacted. Not only the leaders of the community, but also the very simple people in different locations. I think that is what you need to come back to normalcy.

But I have two very quick and specific suggestions for you. One is to investigate why the soil continues to settle in the impacted areas. I think it's an important investigation for you to do before you can build on those areas. Number 2 – we can help you with that as well. I can help you with that – is the rebuilding of your top soil for your farming, removing the contaminated soil and rebuilding. And there are various ways to do it and I can help you with that as well.

Mr. Vaughan Levitzke: Good evening, everyone. My name is Vaughan Levitzke. I am from Zero Waste South Australia; it's an estate agency looking after recycling and waste management.

First of all, I just want to say what a privilege it's been for me to participate on this tour and these workshops and, in particular, pay respect to my colleagues who were a fantastic bunch of people, but also to pay homage to the people I met who are leaders in their communities and doing such fantastic work.

I am very encouraged by the work that you are doing to move your communities to a more sustainable footing. So looking at your waste streams and looking at the industry development which will co-exist within those communities, there were two things that struck me during work here. One example was linking major cities with small regional cities to help them with their redevelopment and their restructuring.

I think, too, that if you can learn from each other and coordinate your activities and support and trust one another, you will have a very much faster recovery. But I am mindful of the fact that this is not a race, nor a marathon that you are running. This is going to take time. But the more you can work together, I think the faster the result will be and the better the result will be.

Mr. Warren Karlenzig: Hello. I am Warren Karlenzig, president of Common Current which is a company in the United States that works with government businesses and NGOs around the world in planning and implementing sustainable cities and green economies.

I want to thank, first of all, UNCRD for organizing the trip, which was incredibly well done and well rounded to give us a complete view of the recovery of the economies and needs of the Tohoku region.

I was thoroughly impressed by the individual people and the entities we met during the tour and I think that they demonstrated an unbelievable amount of energy, resilience, and innovation in the face of such adversity.

In particular, I thought Rikuzentakata and Ishinomaki demonstrated the beginnings of coherent visions, yet I think that the greatest need for recovery will be in devising coherent

and integrated visions, first of all, for the people of the community, and secondly for the prefectures and the national government to understand the needs of the communities.

The question is will Tohoku rebuild like it was before or will it rebuild for new risks, new economies, and to continually improve the quality of life. And I think that the way forward is devising things like blueprints for renewable energy, green economies, and sustainable community development. Thank you.

Mr. Takeshi Yamamoto: I am an expert in financing, so I would like to make a proposal related to financing. I feel important that the budget for recovery and reconstruction consist of the funds received from the national government and local governments as well as investments made by the private sector. In addition, the significance of donations collected from around Japan and the rest of the world has been strongly recognized. I think that we will inevitably have to come up with measures to combine, or in some cases, properly mix, the three different sources of finance and make investments on a larger scale. The harmful effects of a vertically segmented administrative system have often been discussed. In the same way, if we hesitate to overcome the boundaries created by making a distinction between public financing, donations, and investments made by the private sector, investments that have to be made may be hindered. It occurs to me that flexible thinking is necessary.

Mr. Tetsu Hattori: I am from the Graduate School of Environmental Studies, Tohoku University. I work on activities at an NPO named Sustainable Solutions. The NPO has been advancing a green reconstruction project to facilitate reconstruction with diversity in mind. The NPO has been collecting data that is necessary for financing the green economy, and conducting monitoring activities. Notably, the NPO has been monitoring ecosystem services in collaboration with the national government to provide various types of basic data for reconstruction. In fact, the most important factor that motivated me to take part in the workshops was the issue of radiation. I came to Fukushima and heard what people have to say. In the world of nature, radioactive substances decay as time passes, and we can cope with radiation to some extent based on proper understanding. Nevertheless, people dislike or avoid use of products from Fukushima based on their feelings, resulting in damage from groundless rumors. So, the main focus of my interest is how to overcome this issue of radiation.

Although the time is limited, I would like to discuss two points in my feedback. The first point is the importance of vision, as mentioned earlier. In June this year, the Rio+20 Conference, which is a big international event hosted by the United Nations, will be held in Rio de Janeiro. The target is “The Future You Want”. People outside Japan are highly interested in what happened when the earthquake struck and what is going on in Fukushima, Iwate, and Miyagi. Indeed, people ask me questions when I tell them that I am going to attend the UN conference. I have been able to share information with members who are present today. I will share information with people in different parts of the world, including New York, and people who will be gathering in Rio de Janeiro, in an effort to further increase interest. I think that discussions on the details of information that should be disseminated will help create a grand vision. One main focus at the conference in Rio de Janeiro in June this year to achieve “The Future We Want” is a resilient society, that is, a society that is resilient against disasters. I want to disseminate information at the conference. In Japan, TV and other media, etc. focus solely on discussions in Japan or in communities, but I believe that we can solve this issue through collaboration with the rest of the world by sharing information globally.

Another point is the declining interest that I recognize in the course of diverse

activities with NGOs in Japan. I am not trying to say that young people do not have the intention to solve difficult issues. Young people simply do not have information nor have opportunities to consider such issues in the personal context; they are preoccupied with other events that have to be dealt with in their personal lives such as entrance examinations, love and marriage, or job-seeking activities. Young people do not place high priority on viewing social issues in the personal context. I think that an information desk should be established to help people do so. Specifically, such an information desk should help people who have an interest in gaining or sharing experiences. A lot of information has been disseminated about what has happened, from the viewpoint of individuals who disseminate information or writers, to express their feelings. I think that it is very important to present such stories and attract an audience, or to make stories and produce scenarios in Japanese and English and invite the audience to properly consider the local sentiments of Fukushima or Minamisanriku, for example, in the personal context.

To sum up, there are two points I would like to raise. First, a vision should be established to disseminate information to the rest of the world, towards “The Future We Want”. I strongly advise you to consider this point. Second, in the long reconstruction process into the future, I think that it is important to share stories, which may turn into legends, with people in other areas in Japan. We should share such stories across the world in Japanese and English.

Finally, it is obviously required to make day-to-day efforts, properly conduct monitoring, accumulate scientific data, and receive assessments on the economy. In advancing a green economy, I think that it is important to establish a vision and share stories, and promote storytelling, as part of fundamental efforts. Thank you very much.

[Local Representatives]

Mr. Tsutomu Nakai: I am Nakai from Rikuzentakata City. Thank you for inviting me to this meeting today. I have heard various opinions. I hope that we can move ahead based on these opinions. I believe that there are diverse difficulties and challenges ahead of us. Here, I would like to focus on two very important points.

First, Rikuzentakata will become deserted unless projects to raise the low ground are completed and new shopping streets are built as quickly as possible. Yesterday, a person who had been operating a glass store came to see me and made his farewells. He told me that he is 73 years old now and that he would turn 80 if it took as many as six or seven years to complete the reconstruction process and build his permanent store. So he gave up on building his store and continuing with his business, and will stay with his son in Matsudo City, Chiba Prefecture. Looking back over the past year, I have the impression that the pace of action taken has not necessarily been fast enough.

Second, the number of inhabitants has to be increased to advance town planning and build vibrant towns. Otherwise, shops would not thrive. I believe that every effort has to be made to create jobs so that the number of inhabitants will increase.

Lastly, allow me to add my personal wish. I hope that, before long, women will become conscious about their fashion and wear skirts again. I want to see women enjoying their life again as early as possible. Thank you very much.

Mr. Koji Ogura: My name is Ogura. I am from Iwaki City, Fukushima Prefecture. I am deeply grateful to people from so many countries for their extremely high levels of interest in the three prefectures that were most seriously damaged by the earthquake. Fukushima Prefecture, where our university is located, is in a very special situation due to the nuclear accident. Now, we are in Fukushima City. It is important to note that Fukushima is a large prefecture. Communities around the nuclear power plant are facing a very tough

situation, but in fact, there are other communities that have not been affected at all and where people live ordinary lives. It is our sincere hope that people do not have prejudice towards “Fukushima” as a whole. There have been some strong criticisms against people engaged in primary industries – agriculture and fishery, in particular – as if continued commitment to agriculture constituted a crime. Very unfortunately, some people committed suicide due to such criticisms. To prevent further tragedies, we will do our best to advance decontamination and set up a framework for screening food products available in the market. We would appreciate your continued support. Thank you very much.

Mr. Shuuki Ito: Good afternoon. My name is Ito, and I am from Ishinomaki City. My organization, Ishinomaki Disaster Recovery Assistance Council (IDRAC), serves as a coordinator of NPOs and NGOs. Yesterday and today, I have heard invaluable opinions from you. There were many things that I had not been aware of before. I would like to request that you go beyond the discussions and swiftly share the current situation of disaster-stricken areas across different sectors or among researchers. We coordinate players on the field. I hope that you, including individuals from academia, will increasingly disseminate information from your own standpoint, help connect our players with government staff, and introduce capable individuals to us. For example, IDRAC does not have enough financial resources for operation. If you have acquaintances who are building organizations or who have financial resources to donate, please let us know. IDRAC is a semi-public/semi-private entity, so we would like to advance activities through flexible operations for achieving reconstruction or bringing smiles back to the disaster victims as quickly as possible. Again, please help us get connected with diverse stakeholders. Thank you very much for today.

[UNCRD]

Ms. Takase, Director, UNCRD: During the past week, we were blessed with an opportunity to visit three prefectures in the Tohoku region and directly hear opinions of people there. I would like to express my deepest appreciation this opportunity and everybody’s kind cooperation. Your cooperation has made this event truly meaningful. As you have heard, this event has helped experts get findings and have discussions from various aspects. I believe that participants have also gained a variety of new perspectives, among others. In that sense, I believe that face-to-face talks with you have been truly meaningful. Thank you very much for sparing your time to attend the closing session and reception today. We do not intend to stop here. We will keep in touch with you, and do our utmost to support your efforts while ensuring communications with experts. I would appreciate your continued support.

3. Recommendations

After the Tohoku Workshop had ended, UNCRD put together the recommendations received from the experts. The key points are summarized as given below. The experts who participated in the Workshop came from diverse backgrounds. For this reason, these recommendations cover a range of issues. We hope that these recommendations will further stimulate discussion and will be applied in practical ways.

(1) Defining a vision in reconstruction plans

Defining a clear vision – opportunity to become environmentally friendly: By the end of 2011, all the cities in the affected Tohoku region completed the process of formulating reconstruction plans. In order to ensure building better communities, it is crucial to properly link a reconstruction vision with economic recovery plans that incorporate up-to-date technologies. In particular, if the objectives are building of eco-friendly communities and industrial promotion, it is imperative to focus on both themes from the outset. Communities in the Tohoku region are given the opportunities to aim for becoming environmentally friendly. In this context, Rikuzentakata City established clear guidelines for incorporating environmental aspects in its reconstruction plan. Meanwhile, Ofunato and Kamaishi have been designated by the national government as cities to work on the Environmental Future City project. The three neighbouring municipalities of Ofunato City, Rikuzentakata City, and Sumita Town have worked together to set out a smart community initiative. Kamaishi City has been working to build communities based on a biomass initiative by Nippon Steel Corporation in combination with renewable energies derived from wind power generation, among others.

Updating and reviewing plans through periodic community meetings: It is desirable to establish a process for defining a vision by involving stakeholders in communities, holding meetings with diverse partners in the course of reconstruction, and creating a more detailed roadmap for implementation. Here, it is necessary to constantly ensure coordination with economic recovery plans. For example, a “reconstruction office” can be set up at the site of reconstruction, outside a normal bureaucratic structure such as City Hall, as the centre for overall coordination of reconstruction efforts.

Measures related to industrial reconstruction: Community recovery plan and industrial reconstruction are related to each other and must be implemented in harmony. In community recovery plan, there is a tendency to give top priority to housing reconstruction. However, it should be recognized that regeneration of economic activities is indispensable for creating jobs for residents. Measures to extend financial support and create jobs should be taken at the same time. Under current measures, restrictions are placed on direct subsidies to individuals and companies; only those subsidies to business cooperatives and groups are allowed. More flexible measures should be taken to achieve reconstruction from such a major disaster as the Great East Japan Earthquake, in particular, to achieve reconstruction of local industries.

Speediness is the most important factor in both the planning and implementation of the reconstruction process. Notably, land-use plans have not been finalized in many cases, and projects to raise subsidized grounds have been delayed, which put obstacles in the path towards reconstruction.

Introduction and promotion of new industries: Reconstruction master plans formulated by the respective prefectures cover items regarding introduction and promotion of new industries, including eco-friendly industries. In this context, opinions were divided into two groups among the experts. One is that phases of recovery, reconstruction, and revival should be followed. The other is that the current phase of reconstruction offers a golden opportunity to start new industries. However, both groups also had common viewpoints. The intention of introducing and promoting new industries, if any, should be clearly reflected in the reconstruction plans; roadmaps for implementation should be formulated to lay the foundation. The roadmaps should be formulated with the participation of both the residents and the private sector, making sure that both parties will understand the benefits the plan will bring to the communities as well as the private sector. Planners are required to formulate plans so that the industries in question will benefit the communities, fit in the new framework of sustainable society, and create jobs in the future.

(2) Industrial reconstruction: recommendations regarding the respective industries

- Fishery

Fishery in the coastal areas faces particularly difficult situations. Fishery involves a wide range of industries from ice making to marine product processing, all of which have been damaged and affected in a chain reaction. Fishing vessels and fishing gear such as fishing nets are in short supply. It is also necessary to quickly achieve recovery of damaged fishing harbours as well as related facilities and industries, including fish markets and ice-making businesses.

It is necessary to focus more on reconstruction of the local marine product processing industry, which is expected to increase added value of seafood and create jobs.

New industries, including those given below, may also be taken into consideration.

- Health supplements
- Pharmaceuticals
- Cosmetics derived from locally cultivated medical herbs, etc.
- New marine products/processed products

- Agriculture

Agriculture has been affected by salt damage, inundation due to ground subsidence, and radioactive substances, among others. There are two methods to cope with salt damage: to remove the surface soil down to about 10 cm deep and fill the ground with organic substances (compost), or to mix soil with organic substances to improve land. As regards soil that has been contaminated with radioactive substances, the surface soil down to 15 cm deep will need to be removed, and the ground will have to be filled with organic substances. The soil that has been contaminated with radioactive substances will need to be put into containers and transported to designated sites for decontamination or kept in warehouses until radiation levels decrease.

As regards communities that have been affected by radioactive substances, there were concerns about damage from groundless rumors. In this context, the importance of communication was pointed out. Efforts to disseminate accurate information and, in particular, to show risks, in an easy-to-understand manner will help increase understanding of consumers. Also, efforts to accurately compile measurements for respective communities and present such measurements together with risks will help pinpoint high risk communities.

- Commerce/service industry

These industries are closely related to day-to-day lives of residents, and therefore early recovery is desirable. Due to their nature, however, the commerce and service industries depend on projects to formulate land-use plans and relocate houses to higher ground, etc. It is hoped that the plans will be swiftly formulated and implemented.

- Tourism

Tourism has been on the recovery track in some areas or depending on the damage conditions. However, there are many business operators that have decided to discontinue their business. Some business operators have been actively working on such tours as to provide tourists with opportunities to learn about disaster-stricken areas. These efforts are considered to offer important implications to other communities – in particular, communities that are likely to suffer major earthquakes in the future – when they formulate plans for future activities. Visits made by a large number of tourists will also facilitate reconstruction of related industries.

The points below are discussed from the viewpoint of introducing new industries. Related issues are described in “(1) Defining a vision in reconstruction plans” (discussed at the beginning of this chapter).

- Recycling-related industries

Production of organic substances (compost): Waste generated by fishery and processing industries can be turned into fertilizers and organic substances for agricultural communities. Such efforts will help diversify industries, lay the foundation for potential local industries, and create new and higher values. Production of compost will also advance agriculture involving communities.

Fiber for mold forming: Used paper such as newspaper can be utilized to manufacture packages and packaging paper in the mold-forming process. Materials can be collected via recycling systems already set up in communities. In the main processes, water is needed to produce pulp, and gas is needed to dry fiber. Potential manufactured goods include packages and paper products for fruits, vegetables, shiitake mushrooms, etc. that can be used in local agriculture, or gardening pots and egg containers. In terms of advantages, materials are locally available, and demand for processed products is expected. In terms of disadvantages, new businesses may face competition from existing fiber container manufacturers, and water consumption is large. Molding machines have to be specially designed, and the number of skilled operators who can competently handle molding machines is relatively limited.

Plastic processing industry: Films for fumigating soil and covering roots of crops, irrigation pipes, and high-density polyethylene materials can be recycled to manufacture the same products or high-density polyethylene chips and plastic timber, among others. At present, these materials are disposed of after use. By recycling these materials, recycling-oriented industries can be advanced. It should be noted, however, that recycling of these materials is a little expensive and it may be required to obtain technology licenses.

- Creation of an eco-friendly economy

It is necessary to increase the attractiveness of these communities with new industries. As part of the process to formulate plans, it is necessary to hold discussions with the local people. New industries will help the local people consider the following points:

- Clean technologies

- Development of renewable energies (biomass and wind power)
- Eco-conscious construction
- New design for vehicles and other products
- Utilization of rainwater
- Opportunities for ensuring harmony of industries (i.e., waste generated by a company or a process can be used as raw materials by other companies) and co-locating companies, including their respective supply chains
- Services for above items (e.g., urban planning, architects, civil engineers)
- Eco-conscious tourism

In creating these eco-friendly industries, the top priority is to give incentives to companies and residents based on plans integrated by planners, roadmaps for strategic industrial promotion, and systematic efforts to attract companies, among others. It is also important to consider attracting investments from outside communities and set up incubators as well as training and employment promotion centres. Promotion of eco-friendly planning, clean energy, and eco-conscious construction will motivate many other industries, including construction, waste disposal, and general manufacturing, as well as offices to become more eco-conscious.

- Commitment to industrial ecology

In connection with recycling industries that were discussed above, commitment to industrial ecology – that is, using waste from one industry as raw materials for other industries – will help reinforce the eco-friendly industrial sector. Disaster debris and other wastes can be used as materials for production processes and products, in particular, biofuel and biomass.

Biofuel and biomass can be used as fuels for local industries, and it may be possible to obtain patents on their development and applications, which can then be exported.

Other industries in the Tohoku region, including marine product processing, can also help promote industrial ecology to a large extent. Wastewater and solid waste from the fishery industry serve as inputs to give high added value to feedstuffs for fish and livestock, as well as inputs for bioenergy.

(3) Restoration of the ecosystem

It is necessary to focus on restoring the ecosystem. Based on the experience of the 2004 Indian Ocean tsunami, it is known that, in general, the ecosystem of coastal areas is highly resilient and capable of restoring itself to the normal state as time passes. However, such natural process can be further supported by several methods as described below.

- Removal of debris from coastal areas
- Growing plants in coastal areas
- Growing plants that are resistant to salt damage to mitigate damage caused by saltwater, and monitoring soil damaged by salt
- Restoring biodiversity
- Ensuring a balance between industrial activities/day-to-day lives of the residents and community recovery plan

Buffer zones: In formulating reconstruction plans, it is necessary to designate areas near coastlines as buffer zones where no building structures are allowed. Such buffer zones could have coastal vegetations, biodiversity refuge, recreational parks for visitation, among others.

(4) Collaboration with NGOs/NPOs

In the event of disasters, NGOs and NPOs play an important role in taking highly flexible action, as exemplified by IDRAC in Ishinomaki City. Collaboration with NGOs/NPOs needs to be expanded on the prefectural and national levels. Overall coordination between the national government and NGOs/NPOs on the community level will help advance overall reconstruction plans and implementation strategies. In ensuring such coordination, it is important to involve all representatives of the communities. Thus far, coordination has been achieved in the respective groups, such as storekeepers, fishermen, farmers, and NGOs/NPOs. A network connecting these groups should be established.

Such cooperation will further advance reconstruction efforts, making it possible to support communities in implementing reconstruction plans. If it is impossible to ensure cooperation, communities are advised to establish a steering committee comprising diverse representatives so that these representatives from groups in communities that are normally unrelated to each other, such as storekeepers, fishermen, universities, women groups, special support groups, and diverse religious groups, can gather together and possibly work as partners.

(5) Collaboration with the private sector

The private sector offers vast amounts of resources. For example, some hotels, such as Hotel Kanyo and Horaikan, served as shelters in the emergency. If similar facilities had been designated by the national government as “official” shelters, people would have been able to receive support such as fuel, pharmaceuticals, and food sooner.

The national government and the private sector need to conclude a memorandum of understanding to ensure such coordination. If plans are formulated and confidence is built, the private sector can demonstrate diverse capabilities on behalf of the national government in time of emergency. A memorandum of understanding that is concluded between the national government and the private sector before a disaster occurs will help promote cooperation in disaster management planning and clearly define responsibilities of both parties who sign such memorandum of understanding. Reduction in financial burden placed on the private sector in fulfilling tasks on behalf of the national government may motivate other companies to take action in the event of a disaster or fulfill their roles in the recovery process. In a major disaster like the Great East Japan Earthquake, it was necessary to input all the community resources.

Some entities such as Hotel Kanyo continued to extend support, including education services, even after the state of emergency was over. If such valuable services had been coordinated by the national government in advance, these entities may have been able to obtain support from the national government. In this way, action taken by the private sector is highly effective and therefore should not be underestimated.

(6) Collaboration among local communities

Activities for next generation, young people: There seem to be an urgent need for such actions as to set up CD shops and bookstores where the next generation, young people, can gather, or gyms and indoor sports centres where young people can exercise. At present, temporary houses have been built on places like playgrounds, where young people use under the normal circumstance. The proposal made by Junior Chamber International Japan to host sports events for children is commendable. It is hoped that sports and

communication centres will be set up at local universities so that local junior high/high school students can interact with university students.

Community business centres: Community businesses have been launched in different parts of the disaster-stricken areas to sell handmade products manufactured by local mothers and women in general. Women in communities have been encouraged, and have been able to earn an income, even if only a little. Sales of products also help introduce disaster-stricken areas in other communities. These activities should be implemented on an ongoing basis in an effort to revitalize communities. To this end, centres of activities need to be set up, such as planning and administration offices and work spaces. In some cases, elementary school buildings that were closed due to the declining number of children are utilized. It is worth considering the possibility of building industrial parks that accommodate community businesses altogether, including services for facilitating communication of volunteers, and take advantage of community resources and human resources.

Establishment of organizations to develop people who contribute to building eco cities: There are many cities, such as Ofunato and Kamaishi, that show commitment to becoming Environmental Future Cities. It is necessary to set up centres for developing people who can contribute towards building eco cities. One possibility is to provide volunteers, who visit disaster-stricken areas to extend support, with opportunities to learn, thereby encouraging them to live in these areas. In the Tohoku region, the percentage of senior citizens is high due to aging and depopulation; learning opportunities can be given to the senior citizens as well. Advancement in efforts to build eco cities is likely to attract many researchers and engineers and the like to these areas from in and outside Japan. Eco cities can serve as centres of research, information exchange, and communication for these individuals.

4. In Conclusion

In this Workshop, we were given opportunities to hold public meetings between the residents of six communities in three prefectures in the Tohoku region (i.e., Iwate, Miyagi, and Fukushima) and experts invited by UNCRD on the promotion of community-based industries and conducted site visits to places where activities and situations on reconstruction could be observed. As described in the report, views were exchanged with local people even during these site visits. Throughout this event, information was shared about community reconstruction from various viewpoints.

The Workshop was held from late February to the beginning of March in 2012, about one year after the Great East Japan Earthquake. Foreign experts with diverse backgrounds were invited from different countries around the world. Japanese experts specializing in different fields also participated and gathered in Morioka City, Iwate Prefecture. After paying a courtesy call on the Iwate Prefectural Government office that extended support to us, the UNCRD team took a bus to the coastal areas. During the period of almost one week, the UNCRD team traveled on a bus in areas where public transport systems have not been fully restored. In disaster-stricken areas, debris had been cleared from the community spaces, but was piled up on the outskirts of towns. Nevertheless, the local people kindly spared their time to attend public meetings held in different communities. We were able to learn their valuable experiences, the current situation, and future visions. The participating experts also listened to these presentations, asked questions, and expressed their views, with enthusiasm. At each public meeting, participants opened up to each other by the end of the session. Thus, the itinerary always tended to be behind schedule due to lack of time. The public meetings were held with interpreters, but all participants expressed their opinions and joined discussions with keen interest. Language barriers that posed concerns at the outset were not noticed at all. We felt thankful for human communication abilities.

In industrial recovery, diverse factors are involved. The Workshop revealed the fact that industrial recovery is not necessarily achievable only with support measures taken by the national government. The reconstruction process starts only when diverse factors are well coordinated – ranging from land and environment improvement, land readjustment, status of related companies, availability of materials, to the status of transportation means, job creation, and consumers' situation. A great deal can be learned from people who start to take action in the midst of difficult situations. Such people encourage other people in similar situations. In the Workshop, we saw many such people who have started to take action in different circumstances.

As regards involvement of NGOs and NPOs, we learned that these organizations have been actively engaged in every community that we visited to advance various activities. Notably, NGOs and NPOs have been working on community-based activities to meet the needs of the respective communities, while connecting governmental bodies with communities and bridging diverse gaps. Experts pointed out that NGOs and NPOs should work on a future challenge to fulfill their roles in coordinating views within communities. We believe that, in communicating with outside entities (e.g., negotiating with the national government, attracting companies), commitment with coming up with ONE coordinated view is the key to any communities that we visited in the Workshop. Some NGOs and NPOs have already fulfilled such roles.

We hope that readers of this report can share and learn from the diverse experiences and views of the people whom we met and recommendations made by the experts.

We wish to express our deepest appreciation to the people of the communities that we visited, for sparing their time to attend the UNCRD workshops in the midst of restless efforts toward reconstruction. We would also like to express our gratitude to the experts who joined the Workshop for making a long journey of one week with us, expressing their views and participating in the discussion with enthusiasm, actively engaging throughout the Workshop, and sending their recommendations to us after the workshops. Our heartfelt thanks also go to interpreters who helped us communicate not only in the public meetings, but also in the Q&A sessions during the site visits. Their commitment helped ensure communication between the experts and participants from the local communities.

While working on this Workshop, UNCRD has also been collecting case study data in the three prefectures in the Tohoku region. The data will be released on our website shortly. We intend to widely utilize information derived from this Workshop and the case studies in UNCRD's future activities. We will also maintain ties that have been established with people in the Tohoku region through the Workshop.

Lastly, we would like to express our appreciation to the Ministry of Foreign Affairs of Japan that has made these valuable activities possible.

United Nations Centre for Regional Development

Annex

Annex 1. List of the Participants

Annex 2. Background paper

Annex 1. List of the Participants

Resource Persons (International)

Luis F. Diaz

President, CalRecovery, Inc.

Warren Karlenzig

President, Common Current

Vaughan Levitzke

Chief Executive, Zero Waste SA

Ranjith Mahindapala

Programme Manager, Mangroves for the Future (MFF), International Union for Conservation of Nature (IUCN) Asia Regional Office

Mohammad Sharifur Rahman

General Manager, WWR Bio Fertilizer Bangladesh Ltd., Dhaka WWR

Marilyn Shigetani

Deputy Director, Federal Emergency Management Agency (FEMA), Pacific Area Office

Resource Persons (Japan)

Yuko Sakita

Journalist and Environmental Counselor

Yozo Mitani

Counselor, Kobe Convention and Visitors Association

Takeshi Yamamoto

Associate Professor, Faculty of Policy Analysis, Iwate Prefectural University

Tetsu Hattori

Director, Sustainable Solutions

Koji Yamauchi

Director, Entrepreneurial Training for Innovative Communities (ETIC)

UNCRD

Chikako Takase

Director

Katsuaki Takai

Senior Researcher

Tomoko Okayama
Consultant

Yoko Saito
Consultant

Interpreters

Yoshiko Tanzawa
Japan Convention Service, Inc.

Kazue Murayama
Japan Convention Service, Inc.

Profile of the Participants

Mr. Warren Karlenzig
President of Common Current

Mr. Karlenzig is president of Common Current, a US-based consultancy for green urban economic development working with government at all levels, the United Nations, businesses, NGOs, and foundations. He is the author or co-author of numerous books and studies in the field, including the United Nations, Shanghai Manual: A Guide for Sustainable Urban Development in the 21st Century (2011) and How Green is Your City? The SustainLane US City Rankings (2007). He co-coordinated the “Economy and Economic Development” section of one of the most famous US community-based sustainability efforts (San Francisco Sustainability Plan, 1997). Mr. Karlenzig has developed research and projects in varied sectors: eco-industrial parks, green buildings, comprehensive recycling communities, sustainable communities (including ecocities and mixed-use development), and information and communications technologies (ICTs).

Dr. Luis Diaz
President of CalRecovery, Inc.

Dr. Diaz received a doctorate in Engineering (with specialty in Environmental Engineering) from the University of California at Berkeley and has been involved in the field of waste management for more than thirty-five years. He has participated in projects involving waste disposal and processing for material and energy recovery, and has helped prepare feasibility studies and master plans in the US and in more than forty-five other countries. He has also conducted technical, economic, environmental, and institutional assessments of solid waste management systems for several private companies in the US and in other countries as well as for the US Navy, US Environmental Protection Agency, US Department of Energy, NASA, and other agencies in the United States. Dr. Diaz has also provided expert advice in environmental protection and in the development of non-conventional sources of energy to several international agencies such as The World Bank, Asian Development Bank, US Agency for International Development, the Peace Corps, and different programmes and funds of the United Nations (UNIDO, UNICEF, UNEP, WHO, and PAHO).

Throughout his career, Dr. Diaz has tried to maintain a balance between academic activities, research and development, and field work. As such, he was Editor-in-Chief of the journal Waste Management & Research (published for the International Solid

Waste Association) for eight years and then Editor-in-Chief of Waste Management, an international, peer-reviewed journal published by Elsevier Science. He also is a member of the Editorial Board of several journals in the field of waste management. Dr. Diaz has more than 400 publications in the field of waste and energy management. He has also authored and co-authored several books dealing with the disposal and treatment of solid wastes as well the processing of the organic residues for energy recovery and food production.

Dr. Diaz has presented a large number of lectures at colleges and universities in the fields of waste and energy management. He also developed and taught the Master's Program in Environmental Engineering at the University of the Philippines in Manila, and was co-instructor of a graduate class in Environmental Planning at San Francisco State University. He participated, with Harvard University, in a technology transfer programme on solid and hazardous waste management for developing countries in the Pacific Basin. In addition, he has prepared and presented seminars in Solid Waste Management to professionals from the People's Republic of China, India, Peru, Ecuador, Colombia, the Bahamas, and other developing countries. Dr. Diaz has provided assistance in the organization of several specialized training courses and has participated in more than 300 seminars and symposia throughout the world. He has presented lectures on various aspects of solid waste management at the following institutions: University of West Indies, Trinidad & Tobago; Pontificia Universidad Católica, Asunción, Paraguay; Spanish Waste Club, Madrid, Spain; Universität für Bodenkultur, Vienna, Austria; Technical University, Braunschweig, Germany; Rutgers University; University of California at Berkeley; San Jose State University; University of Wisconsin at Madison, and other institutions in the United States. He regularly teaches at Bauhaus Universität, Weimar, Germany and at Padua University in Padua, Italy.

He is the Chair of the Task Group on Solid Waste Management for Developing Countries for the International Waste Working Group (IWWG).

Dr. Diaz was a contributing author to the IPCC 4th Assessment Report, WGIII: Mitigation of Climate Change, Chapter 10: Waste Management. The work of the IPCC was awarded the Nobel Peace Prize in 2007. The prize was shared with Mr. Al Gore, former Vice President of the United States.

Mr. Vaughan Levitzke

Chief Executive, Zero Waste SA (ZWSA)

Mr. Levitzke established Zero Waste SA in 2003 and is the inaugural Chief Executive. Under his leadership, ZWSA has: developed and delivered grant funding schemes for local government, industry, and other stakeholders for infrastructure, recycled product market development, and improvements to recycling and waste collection systems.

Zero Waste SA has delivered a series of state and national firsts/significant initiatives such as:

- Two State Waste Strategies for South Australia, 2005-2010 and 2011-2015;
- The largest Australian council food waste collection trail, and initiated kerbside performance incentives for food waste collection in councils;
- With the Department of Trade and Economic Development, innovated SA, EPA, and SA Water, established the Business Sustainability Alliance (BSA), and coordinated assistance for businesses;
- With the University of South Australia (UniSA), the Centre for Sustainable Design and Behaviour
- Developed and initiated the first legislated plastic shopping bag ban in Australia;
- Developed and implemented South Australia's first compact fluorescent light recycling programme, 'Backlight,' in partnership with industry;

- Developed and implemented, in partnership with the Commonwealth Government, (partial funding) regional take back of TVs in response to the digital switchover across regional SA and Broken Hill (e-waste);
- Developed with EPA, the Waste to Resources Environment Protection Policy (EPP), regulations, and implementation;
- Developed and administered grant programmes for industry, not for profits, and local government;
- Conducted household hazardous waste and farm chemical collection schemes; and
- Implemented education campaigns for recycling household materials and business/industry wastes.

Prior to ZWSA, Mr. Levitzke spent ten years with the South Australian EPA in a number of roles, from regulation of tires, and composting to container deposit legislation, and industry eco-efficiency programmes. He has over thirty years' experience in government.

He is Ex-Officio member of the ZWSA Board; EPA Board sub-committee on waste reforms. Minister's representative on the Board of KESAB; Advisory Board member for the Uni SA's Centre for Sleep Research; Advisory Board member of UniSA Centre for Work Life Balance; Member of the Zero Waste Centre for Sustainable Design and Behaviour Management Committee.

Ms. Marilyn Shigetani

Deputy Director, Region IX's Pacific Area Office of the US Federal Emergency Management Agency (FEMA)

Ms. Shigetani currently serves as Deputy Director for the US Federal Emergency Management Agency's Region IX's Pacific Area Office in Honolulu, Hawaii. In this role, she is responsible for the daily operations of the office as well as disaster response coordination. Prior to assuming this position in 2010, Ms. Shigetani served as the Senior Emergency Management Program Specialist for the Pacific Area Office, beginning her tenure with FEMA in 1993.

Serving on FEMA's Regional and National Response Team, Ms Shigetani has responded to over fifty US Presidentally declared disasters in thirty-two different US states and in the four Pacific jurisdictions of Hawaii, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. Some of the larger events that Ms. Shigetani has responded to are: Hurricane Iniki, Super Typhoons Paka, Pongsong, and Chata'an, Hurricane Katrina, the Oklahoma City Bombing, the World Trade Center Terrorist Attack, the Northridge Earthquake, the Southern California Wildfires, and the Red River Floods. She has also responded to a number of disasters in the Federated States of Micronesia and the Republic of the Marshall Islands, serving as the US Government's team leader for damage assessment. In many of the aforementioned events, Ms. Shigetani was responsible for the management and coordination of FEMA's Individual Assistance Programs, as well as the coordination of the NGOs participating in the disaster response and recovery efforts.

As an additional responsibility, Ms. Shigetani has also served as the Acting Operational Branch Chief for FEMA Region IX from February 2009 to September 2009. In this capacity, she was responsible for providing the leadership necessary for the development of the Hawaii Catastrophic Hurricane Plan, the Guam Catastrophic Typhoon Plan, and the Southern California Catastrophic Earthquake plan.

Ms. Shigetani holds a Bachelor's Degree in Health and Physical Education from the University of Toronto and a Master's of Educational Administration from the University of Hawaii, Manoa.

Dr. Ranjith Mahindapala

Programme Manager, Mangrove for the Future, International Union for Conservation of Nature (IUCN)

Dr. Mahindapala is a biologist by profession, and has been engaged in agricultural research for about twenty-five years. During the last sixteen years, as an employee of the International Union for Conservation of Nature, he focused his work on biodiversity conservation initially, and then on ecosystems management. Since the tsunami of 2004 which affected South and Southeast Asia, Dr. Mahindapala's work has been focused on restoration and rehabilitation of coastal ecosystems, including lagoons and estuaries, with particular emphasis on improving the livelihoods of people who are dependent on coastal resources. He is currently working on a regional programme, the Mangroves for the Future Initiative, covering eight countries where these approaches are being implemented.

Mr. Sharifur Rahman

General Manager, WWR Bio Fertilizer Bangladesh Ltd

At present, Mr. Rahman works as General Manager, WWR Bio Fertilizer Bangladesh Ltd., Dhaka (joint venture CDM project with Waste Concern, Dhaka, Bangladesh and world-wide recycling, the Netherlands).

Dr. Takeshi Yamamoto

Associate Professor, Faculty of Policy Analysis, Iwate Prefectural University

Dr. Yamamoto was born in Tokyo in 1964. He joined Sanyo Securities Co., Ltd in 1989. After leaving the company in 1999, he enrolled in the Keio Business School and completed his Master's in 2001. In 2006, he received a doctorate in business administration from Yokohama National University. He joined Iwate Prefectural University in 2007 as a lecturer and became an associate professor in 2010. He teaches classes in finance, business management, and statistics. Dr. Yamamoto's main research theme is an empirical study of applied microeconomics (corporate finance), and case study on regional economics and regional industry.

Mr. Yozo Mitani

Councilor, Kobe Convention and Visitors Association

Mr. Mitani was born on 10 May 1950. He graduated from Hyogo High School and joined the Kobe City Government in 1969. From 2006 to 2011, he worked at the Bureau of Industrial Development.

He is also a member of the committee of rehabilitation, which was established following the Tohoku earthquake and tsunami in Iwate Prefecture.

He wrote Rehabilitation in Hanshin and Regional Industry in 2001, New Age of Supporting Facilities for Small- and Medium-sized Enterprises in 2001, and Regional Brand and Industrial Promotion in 2006.

Ms. Hiroko Sakita (27-28 February only)

Journalist

Ms. Sakita has been working as a journalist and environmental counselor. She is also president of several NPOs such as Genki Net for Creating a Sustainable Society, Net for Shinjuku Environmental Activities, and Environmental Business Women. She is a co-chair of the National Preparation Committee for Rio+20.

Mr. Koji Yamauchi (2 March only)

Director, Entrepreneurial Training for Innovative Communities (ETIC)

Mr. Yamauchi was born in Kanagawa in 1976. While a student at Waseda University, he joined ETIC. ETIC promotes social innovation by developing entrepreneurial leaders for the next generation. Activities include a long-term internship programme at start-up ventures, incubation programme for young social entrepreneurs, and social business ecosystem creation in local communities. He became the director of ETIC in 2000. After the Great East Japan Earthquake, they developed the “Disaster Recovery Leadership Development Project,” which dispatches skilled staff to assist those who are serving leadership roles in rehabilitating the Tohoku region.

Mr. Tetsu Hattori (2 March only)

Sustainable Solutions, and Manager of the Earth Summit+20 NGO Network

Mr. Hattori joined the NEC Corporation in April 1993. He received an MBA from the Globis Management School in August 2005, and received a Master’s degree in Environmental Engineering from Tohoku University in 2008. He served as Chief Producer of the Eco Japan Cup in 2006, and was a member of the steering committee for the Civil Network for Covention of Biodiversity Treaty in 2009. He was also President of the NPO, Earthday Everyday, in 2010, and is currently a board member of CEPA Japan and a policy team leader for Earth Summit 2012 Japan.

**UNCRD Workshop on Reconstruction towards Sustainable Communities:
Promotion of locally-based industries with all stakeholder approach
27 February – 2 March 2012**

Background paper

Background paper

Introduction

The Great East Japan Earthquake, which struck a wide area of East Japan on 11 March 2011, was unprecedented in scale and nature. The earthquake was the fourth largest in the world and the largest in Japan ever recorded. Subsequent tsunami hit the Tohoku region along the Pacific coast of Japan and washed away many towns and communities, resulting in massive loss of lives and property. Full recovery and reconstruction will likely take many years, but much effort has been made and the region is making substantial progress. There is a great deal to learn from this experience for future disaster risk reduction and sustainable regional development.

After eleven months, recovery work has been progressing steadily and now shifting to reconstruction. By the end of 2011, all municipalities submitted their reconstruction plans, which had been formulated through participatory processes. Although the scars suffered from the disaster have not been completely healed, activities for the reconstruction have gradually started. These reconstruction plans will be discussed between the municipalities and respective prefectures, and will be implemented. The Japanese Government has also formulated its Basic Plan for Reconstruction and passed several legislations to facilitate the reconstruction efforts of affected municipalities. They include establishment of special zones and eco towns. Therefore, we can see that the foundation for reconstruction has been cemented. However, as these are just starting, there is an urgent need to look into the issue of unemployment, in particular of the young and women, in the Tohoku region and to promote business opportunities.

Against this backdrop, UNCRD is organizing a workshop, consisting of site visits and discussion meetings with local municipalities and communities. Two issues of particular interest for this workshop are: (i) promotion of green business; and (ii) involvement of all stakeholders in reconstruction efforts, including NPOs and NGOs.

Objectives

The objectives of the workshop are manifold. The main objective is to learn from the experience of the communities affected by the Great East Japan Earthquake and Tsunami. By organizing discussion meetings with local representatives, UNCRD hopes that the group of experts assembled for this workshop can engage in the exchange of information and practical ideas that could assist local communities in increasing their economic activities, in particular towards building a green economy. In addition, in line with the Basic Reconstruction Plan of the Japanese Government, UNCRD hopes that the group of experts could also share ideas on engaging NPOs and NGOs in the reconstruction efforts. UNCRD will compile all the information gathered during the workshop in a report, which will be disseminated globally. UNCRD will also incorporate the lessons learned and good practices into the relevant training programmes that the Centre organizes.

Overall damages of the Great East Japan Earthquake and Tsunami

Date/time: 11 March 2011, 14:46 (Japan)

Epicenter: Depth 24km, 38.612 °N / 142.513°E (approx. 130km east of Sendai)

Magnitude 9.0

World's fourth biggest earthquake since 1900

1st: M9.5 Chile in 1960

2nd: M9.2 Alaska in 1964

3rd: M9.1 Sumatra in 2004

Human losses and damages (as of 14 February 2012 by the National Police Agency)

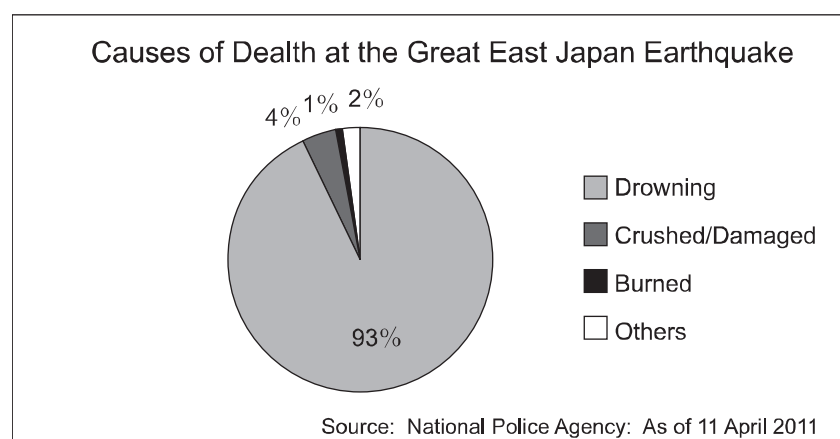
Death toll: 15,845

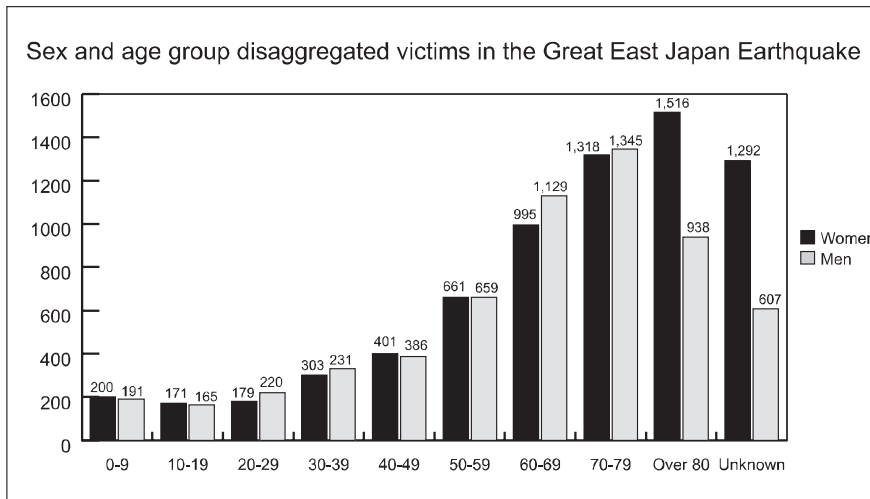
Missing; 3,282

Injuries: 6,011

Human losses by the affected prefectures

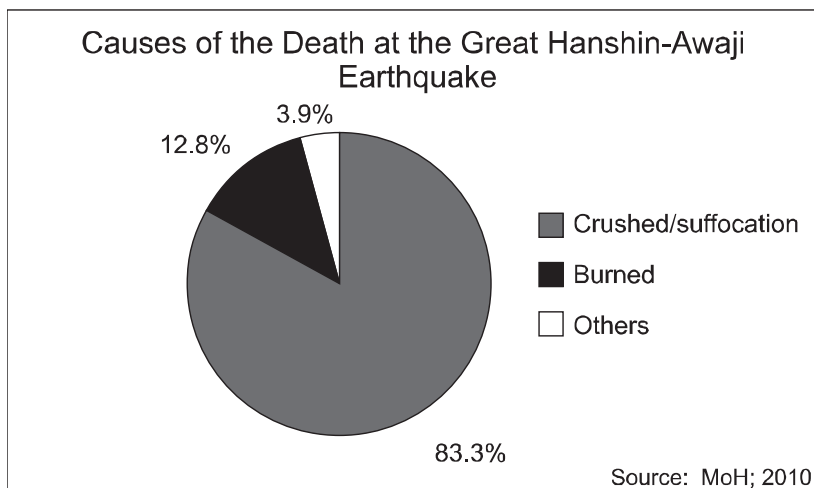
Prefecture	Death toll	Missing
Hokkaido	1	0
Aomori	3	1
Yamagata	2	0
Iwate	4,670	1,315
Miyagi	9,509	1,747
Fukushima	1,605	216
Tokyo	7	0
Ibaraki	24	1
Gunma	1	0
Chiba	20	0
Tochigi	4	0
Kanagawa	4	0
Total	15,845	3,282





Source: National Police Agency: As of 11 April 2011

In the case of the Hanshin-Awaji Earthquake in 1995:
 Death toll: 6,436
 Missing: 3

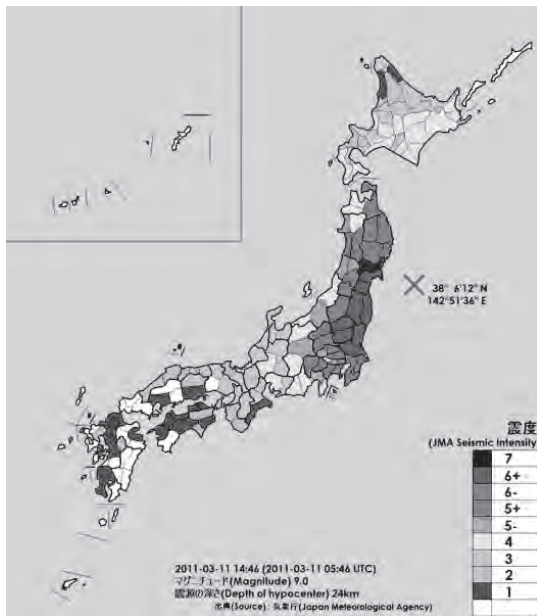


Source: MoH; 2010

Houses destroyed by the Great East Japan Earthquake and Tsunami
Completely collapsed houses: 128,479 houses
Half-collapsed houses: 242,513 houses
Partially collapsed houses: 670,522 houses

Registered volunteers
Iwate Pref.: 326,100 people
Miyagi Pref.: 448,600 people
Fukushima Pref.: 145,000 people

Map of the affected areas



(Japan Meteorological Agency)

Map of the cities visited during the workshop

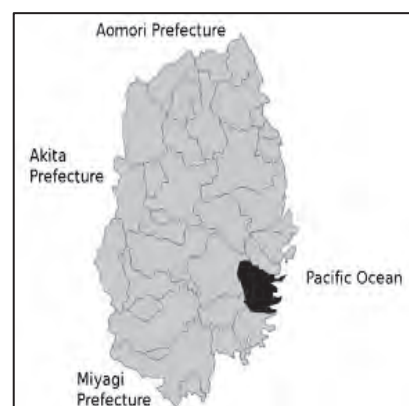


Brief information on the cities visited

Kamaishi City (Iwate)

Kamaishi is a small, historic city located on the Sanriku rias coast of Iwate. The city is well known as a steel and fishing town. After the disaster, it became known as the “Miracle of Kamaishi,” where 99.8% of elementary and junior high school students were saved as a result of the disaster preparedness education they had received.

The “Scrum Kamaishi rehabilitation plan” was formulated. It is a ten-year plan for the period 2011-2020 and has four basic principles and seven basic objectives as follows.



Scrum Kamaishi Rehabilitation Plan

Basic Principles

1. Drastic shift to building a resilient city
2. Rebuilding the basis of livelihood in order to continuing living in the city
3. Rebuilding the local economy by bouncing back from hardship
4. Creating the future and hope for the children

Basic Objectives

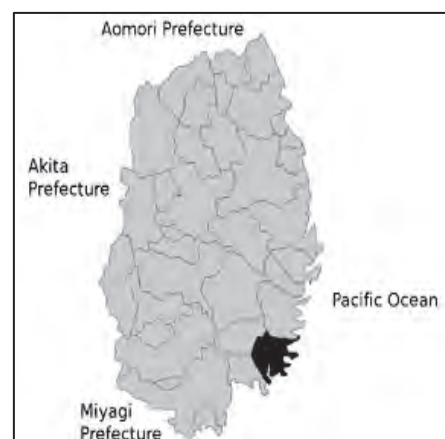
1. Making a city that gives emphasis to safety and the environment
2. Making a city that places importance on community ties and supporting one another
3. Making a city in which residents can live feeling secure
4. Making crossing points for people, goods, and information
5. Making a city where the spirit of craftsmanship is nurtured
6. Making a city that foster the growth of children who have the strength to survive
7. Making a city that is based on history and culture, and puts sports to good use

Population (National Census in 1990): 52,484
Population (National Census in 2010): 39,578
Ratio of Population over 65 (Mar 2010): 34.4%
Death toll (as of 9 December 2011): 885
Missing: 175

Ofunato City (Iwate)

Ofunato is a small, historic city located on the Sanriku rias coast of Iwate. The rehabilitation plan was formulated on 10 October 2011. It focused on the rehabilitation of citizens' livelihood, industry and economics, urban foundation, and disaster-resilient communities.

Population (National Census in 1990): 47,219
Population (National Census in 2010): 40,738
Ratio of Population over 65 (March 2010): 30.9%
Death toll (as of 30 January 2012): 339
Missing: 86



Rikuzentakata City (Iwate)

Rikuzentakata was one of the hardest hit cities in Iwate. It used to have a very beautiful coastline with more than 70,000 pine trees, which were planted in the Edo Era, but all of the pine trees were washed away by the tsunami, except one. A rehabilitation plan was formulated, and it said that the basic foundation for the rehabilitation project will be completed within three years, and the evolution period of rehabilitation will be implemented within five years.

Nagoya City is assisting Rikuzentakata in all aspects of this work.

Population (National Census in 1990): 27,242
Population (National Census in 2010): 23,302
Ratio of Population over 65 (March 2010): 33.5%
Death toll (as of 9 December 2011): 1,544
Missing: 298



Minamisanriku town (Miyagi)

The town formulated its rehabilitation plan on 26 December 2011. They aim to complete their rehabilitation plan within ten years. During the first three years, they will build temporary shelters and other basic facilities, and create jobs through rehabilitation works for the affected people; the rehabilitation phase starts in 2012 and runs through 2017; and the development phase will cover the seven years from 2013 to 2020.

Population (National Census in 1990): 21,401
Population (National Census in 2010): 17,431
Ratio of Population over 65 (March 2010): 29.3%
Death toll (as of 9 December 2011): 566
Missing: 311



Ishinomaki city (Miyagi)

Ishinomaki city is located at the mouth of the Kitakami River. After being designated as a new industrial city in 1964, the Ishinomaki industrial port was opened and displayed dramatic growth, as Ishinomaki developed into an industrial city. The city was the most severely affected by the disaster. One elementary school, Okawa Elementary, was completely destroyed, killing 75 of the 108 students and 10 of the 13 teachers and staff. The teachers and students were evacuating from the school when the tsunami hit and were swept away while crossing a nearby river bridge.

Population (National Census in 1990): 182,911
Population (National Census in 2010): 160,704
Ratio of Population over 65 (March 2010): 26.8%
Death toll (as of 9 December 2011): 3,181
Missing: 651



Iwaki city (Fukushima)

Iwaki city has a rich natural environment and a relatively temperate climate that attracted a large number of tourists throughout the year before the disaster. Located in the south-eastern corner of Fukushima Prefecture, Iwaki is one of the largest cities in Japan in terms of land area, and the second largest city in the Tohoku region, after Sendai in terms of population. The 3.11 Earthquake and Tsunami affected the coastal area of Iwaki and an aftershock of M7.0 hit Iwaki on 11 April 2011. The city is now accepting many of the people affected by the Fukushima Power Plant. The tourism and agriculture industries have been damaged by harmful rumors as a result of radiation contamination.

Population (National Census in 1990): 355,812
Population (National Census in 2010): 342,198
Ratio of Population over 65 (March 2010): 24.4%
Death toll (as of 9 December 2011): 310
Missing: 38



Brief chronology of the response and reconstruction by the Government of Japan

11 March 2011	Establishment of the Emergency Response Countermeasure HQs
14 April 2011	Establishment of the Reconstruction Design Council
24 June 2011	Enforcement of the Basic Act on Reconstruction ⇒ Establishment of the Reconstruction HQs
28 June 2011	First Meeting of the Reconstruction HQs: Basic Guidelines to be decided by July
29 July 2011	Fourth Meeting of the Reconstruction HQs ⇒ decision made regarding the Basic Guidelines in response to the Great East Japan Earthquake
21 November 2011	Adoption of the Third Supplementary Budget (FY 2011)
7 December 2011	Passage of the Law for Special Zone for Reconstruction
9 December 2011	Passage of the Law on Establishment of the Reconstruction Agency
26 December 2011	Enforcement of the Law for Special Zone for Reconstruction
6 January 2012	Cabinet decision on Basic Guidelines on Special Zone for Reconstruction
10 February 2012	Reconstruction Agency begins operations. The agency is staffed with 250 personnel. Its headquarters is situated in Tokyo, three bureaus are located in Iwate, Miyagi, and Fukushima, and there are branches in Miyako, Kamaishi, Kesenuma, Ishinomaki, Minamisoma, and Iwaki.

Emergency shelter management

Immediately following the disaster, those affected sought shelter at places such as gymnasiums, schools, and community centres that had limited resources. Some communities like the one shown in the case study below could manage by utilizing their own resources, but most of the shelters were confronted with a very severe situation. A couple of days after the disaster, emergency relief items started to reach some of the shelters. There were 2,182 recognized evacuation shelters a week after the disaster, compared to 1,138 shelters at the same time of the Hanshin-Awaji Earthquake in 1995. In addition to this number, there were many people who evacuated to their partially collapsed houses and neighbouring houses. Among the evacuees, the particularly vulnerable included the elderly, infants, children, women, and foreigners. For example, women's needs were overlooked and, for example, there was a lack of privacy at the evacuation shelters and it was difficult to meet their gender-specific needs. Although the Cabinet Office sent a letter to the relevant agencies requesting that the shelters respond to the needs of women and children on 16 March 2011, it is not certain as to whether that letter actually reached them. The elderly also faced many problems at the shelters. People were not able to wash their hands despite the unhygienic conditions, and they had to sleep on the floor of the shelters in cold weather, thus increasing the risk of infection.

It is important to assess the lessons learned from shelter management and make improvements in order to be prepared in the event of future disasters.

Case study: Community emergency response in Nagahora district

The Nagahora district of Rikuzentakata, one of the cities in Iwate Prefecture hit hardest by the 11 March Earthquake and Tsunami, is a small fishing village where aquaculture was the main source of income among the residents. Twenty-eight of the approximately 60 houses in the village were swept away by the tsunami, but there were no casualties.

Immediately after the disaster, Nagahora's community network started working at full tilt for such tasks as securing rice and drugs and dividing necessary work among the residents. A leader of the community checked how many rice each of the houses had, and calculated how they could survive for a month if they shared it equally. In order for such things to be smoothly distributed by rescue staff, they listed up what kind of medicine the elderly people took. It proved that their mutual support systems for organizing festivals and ceremonial functions in normal times helped to work effectively in times of emergency. They set up a temporary elementary school for their children by utilizing one of residents' houses in the community for securing learning opportunities. Three days after the disaster, roads were opened to other areas. They have also been undertaking their unique rehabilitation activities by themselves.

Case study: Community response and rehabilitation in Babanakayama area of Minamisanriku town, Miyagi Prefecture

Around 400 people of the Babanakayama area of Minamisanriku town in Miyagi Prefecture were totally isolated for 10 days after the disaster. Eight people died and 100 houses were washed away. Approximately 200 people took shelter at their community centre that had limited resources. After the matter was discussed by the mayor of Minamisanriku-town and the people of the community, the residents decided to make their own plan for rehabilitation. They first planned to build temporary shelters in the community, but the city's regulations did not permit this due to the lack of water service. After moving to government-built temporary shelters, they maintained contact with one another to discuss their rehabilitation plan. At the moment, they have two main projects: (1) rehabilitation plan of the fishery industry; and (2) "Road to the future" project.

- (1) Under the rehabilitation plan of the fishery industry, they started to clean up debris in the sea. They have advertised using a web site asking for assistance, and received a medium-sized ship. They also got support from an NGO to buy a second-hand ship. In October, they started planting seaweed seeds.
- (2) The "Road to the future" project aims to build a road to higher land where their community could be transplanted en masse. First, they looked for a suitable place, requested volunteers and other support to build the road, and it was completed in October.

Recovery policies and measures of the Government of Japan

The Government of Japan established a new governmental agency, named "Reconstruction Agency," that is being administered by the Cabinet in February 2012, with a view to promoting and coordinating all the policies and measures for reconstruction in an integrated manner.

Mandate of the Reconstruction Agency:

- Planning and coordination of national policies and measures for reconstruction;

- Supporting the efforts of afflicted local governments towards reconstruction and serving as a “one-stop” agency for local authorities that comprehensively manages the policies and guidelines for reconstruction of the respective agencies.

Structure of the Agency:

- Head: Prime Minister
- Three bureaus to be established in the three most affected prefectures: Iwate, Miyagi, and Fukushima.

Duration of operation: Ten years (FY2011-FY 2020)

Recovery support provided by prefectures and municipalities

Most of the prefectures in Japan have sent their staff and relief items in response to the disaster, from the emergency to rehabilitation phases. To support the six affected prefectures (Aomori, Iwate, Miyagi, Fukushima, Ibaraki, and Chiba), municipalities in Japan have sent 73,802 general staff as of 1 October 2011. They assisted in the operation of shelters during the emergency phase, and increased staff with construction and engineering skills for the longer term. According to the Ministry of Internal Affairs and Communications, the affected municipalities in Miyagi, Iwate, and Fukushima Prefectures accepted 40,757 staff, 18,136 staff, and 13,059 staff, respectively, from outside their prefectures. The highest number of 3,835 staff was sent by Tokyo, 1,783 staff by Saitama Pref., and 1,216 staff by Hokkaido.

As of 8 February, *The Daily Yomiuri* reported:

“Tatsuo Hirano, state minister for disaster reconstruction, said Tuesday (7 February) that districts in Miyagi and Iwate Prefectures will be approved Thursday as the first special disaster reconstruction zones where exceptional measures can be applied. The districts in Miyagi Prefecture will be designated for the promotion of private investment while those in Iwate Prefecture will be approved as special zones for health, medical and welfare projects.

These will be the first designated special zones to be created in response to the March 11 disaster, where exceptional treatment is to be given in terms of regulations and taxation. These measures can be applied in areas damaged by the Great East Japan Earthquake and tsunami. The special zones for the promotion of private investment were applied for by the Miyagi prefectural government jointly with 34 municipalities in the prefecture. Corporations setting up in the zones will be exempt from corporate tax for five years.

The special zones for the promotion of health, medical and welfare projects were applied for by the Iwate prefectural government and all 33 prefectural municipalities. The measures in the zones include the easing of restrictions on allocating doctors and nurses.

The government is also studying whether to approve an application filed by Aomori Prefecture for an exceptional corporate tax district and one by Iwate Prefecture for an industrial revival special district, where preferential tax treatment will be given.”

The Kansai Federation consisting of Hyogo, Osaka, Kyoto, Wakayama, Shiga, Tottori, and Tokushima Prefectures, arranged their support in the form of a counterpart system. The counterpart system involves two to three prefectures within the Federation supporting the affected prefectures, as stated below.

Iwate Pref.: Osaka Pref. and Wakayama Pref.

Miyagi Pref.: Hyogo Pref., Tottori Pref., and Tokushima Pref.
Fukushima Pref.: Kyoto Pref. and Shiga Pref.

Case study: Total support from Nagoya City to Rikuzentakata

Rikuzentakata, which lost one-fourth of its local government staff, has been supported by several departments of Nagoya City.

At eight o'clock in the morning, 23 staff from Nagoya City who are stationed in nearby Ichinoseki, go to Rikuzentakata by bus to support municipality-related work such as various administrative matters, including formulating a rehabilitation plan, processing documents from the residents, managing health care service, among others. Nagoya City has so far sent 127 staff to Rikuzentakata.

When the staff of Nagoya City visited Rikuzentakata to conduct an assessment, they learned that 68 out of 295 staff died from the disaster. Although the remaining staff members were managing the situation as best as they could, conditions were obviously very severe. Nagoya City decided to give its total support to Rikuzentakata, by sending staff equipped with various skills for the long term. Twenty staff from Nagoya stay at a Japanese inn in a neighbouring city. The longest a staff member has stayed so far is one year. A staff member named Mr. Banno was sent to the city last May from Nagoya. He is an urban planner, who was involved in development projects in Nagoya. Now, he is a core member of for formulating a rehabilitation plan.

One advantage in providing total support is that it allows flexibility when responding to Rikuzentakata's needs. Following the disaster, staff members knowledgeable in health and social welfare matters were sent, while engineering staff, who were specialists in restoring water pipelines and formulating a rehabilitation plan, were added in May when temporary shelters were constructed. In July, work related to taxes increased, so a person in charge of residential taxes was sent to the city. It was easy to identify where staff is needed because various staffs have already been sent the various city departments.

Ten months after the disaster, Rikuzentakata requested to send more staff with special skills, but Nagoya does not have many special-skilled staff. However, Nagoya City has decided to give emphasis to sending more special-skilled staff from April 2012. They also aim to educate the young staff members of Rikuzentakata. It will be a valuable experience for them in undertaking future work.

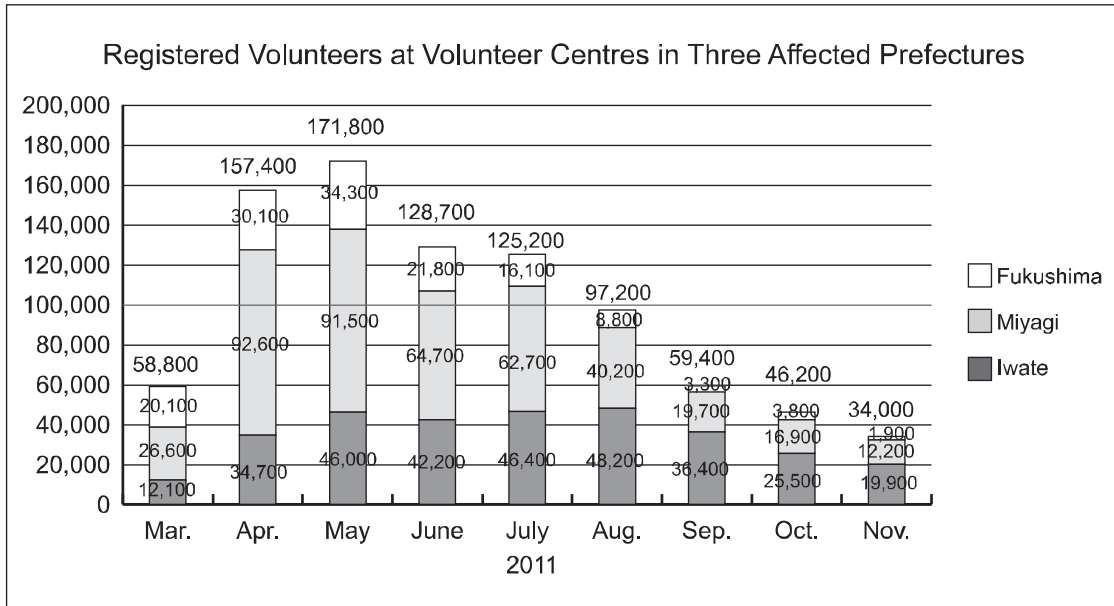
NGO/NPO and Volunteer Support

The Government of Japan supported the setting up of a coordination room within the cabinet secretary's office for disaster relief volunteers to offer information on disaster relief activities. They also promoted effective information sharing through a private web site.

Three years ago, the Hatoyama Government set up the New Public Commons Roundtable to promote volunteer work. The concept of the "New Public Commons" has been revived and adapted to accommodate the present circumstances in order to rebuild the bonds among the people and communities. NPOs in Japan play important roles in providing various types of services in normal times such as medical care, childcare, and education to local communities, and they offer advice and resources in fields such as the environment, agriculture, forestry, culture, and art. In some instances they adopted novel business models, such as offering micro-financing to small business owners. Following the Great East Japan Earthquake, the roles of NPOs/NGOs has increased drastically.

The Japan Civil Network (JCN) for Disaster Relief in East Japan, which is a coalition of Japanese NGOs, was established on 24 March. The network comprises 721 volunteer organizations that share information and cooperate with one another in undertaking activities.

According to the Japan National Social Welfare Council, there were 920,000 registered volunteers in the three affected prefectures, compared to 1.38 million volunteers at the time of the Great Hanshin-Awaji Earthquake. However, this number does not include volunteers who joined NPO/NGO activities. The number of volunteers is getting less and less, but there is an increasing need for volunteers in the affected areas.



There are various kinds of work that were initiated by NGOs in the affected areas in response to needs of the people. In one case in Kesennuma, Miyagi Pref., the people affected by the disaster created an NGO. They started a food van business for the elderly who have difficulty going shopping. The person-in-charge lost his seafood processing job, and now earns 750 yen an hour as a sales staff. The wages are paid from donations received by the NGO from all over the world, and they employ jobless people for the food van business or debris cleaning through coordination with the national government. A person-in-charge of an NGO Centre for the Tohoku disaster said that the Centre supports this kind of activities with the hope that it will enable the affected people to carry them out independently in future.

Case Study: Handicraft-making and job creation using common space

An NGO called the NGO Collaboration Centre for Hanshin Quake Rehabilitation, which was established after the Hanshin-Awaji Earthquake in 1995, started their relief activities right after the Great East Japan Earthquake. One of their main activities is to encourage handicraft-making using the common space in temporary shelters. Handicraft items called *Makenai-zou* (means never give-up, and also *zou* itself means elephant) was born in the aftermath of the Great Hanshin-Awaji Earthquake. When the affected people made such crafts, many people said they could forget what had happened and could focus on what they were doing. This helped them in alleviating their stress. In addition, craft-making can support them financially. They are sold for 400 yen, and 100 out of the 400 yen is paid to the person who makes it, 50 yen goes to the project fund of the Great East Japan Earthquake and Tsunami, and the rest is used for buying materials and transportation costs. This project has been introduced to affected areas, starting in Otuchi-cho, Iwate Pref., Kanuma City of Tochigi Pref., and Yonezawa City of Yamagata Pref., and has given them the power to live.

Below are comments from those who joined in the handicraft-making activity.

“Although we have been suffering from the bad memory of the Tsunami since 11 March, we’re able to forget about it when we make *Makenai-zou* together.” (27 March at Ohtsuchi-cho, Iwate Prefecture)

“We have nothing to do but sleep after dinner here at the evacuation centre. But making *Makenai-zou* has given us so much fun in our boring daily life!” “This is the first time for me to feel nicely tired since the earthquake happened, because we have had no work to do after having evacuated.” (29 April 2011, Yonezawa City, Yamagata Pref.)



Temporary shelters

More than 50,000 temporary fabricated shelters were needed in the affected areas. (13,800 for Iwate Pref., 23,000 for Miyagi Pref., and 14,000 for Fukushima Pref.).

Construction of the temporary shelters was completed at the end of August 2011. The temporary shelters were built quickly and sometimes do not fulfill basic needs. The residents are facing many problems due to the lack of countermeasures against cold weather in the Tohoku region, and many municipalities are now working to improve the shelter situation. Among the residents are those who have expressed their concern about living in such a place for two years, which is the directive of the government. Some temporary shelters still do not provide a community common space, so some residents feel isolated if they are housed with residents from different communities. In the case of the Great Hanshin-Awaji Earthquake, 233 people, most of them elderly, died alone in temporary shelters. Therefore, it was an important lesson from the Great Hanshin-Awaji Earthquake to have a common space, where people can get together, chat with others while having tea, and make friends.

Some of the locations are not convenient in terms of commute to work and schools; therefore, some people preferred to stay at public apartments. As of December 2011, 66,000 rooms in locations all over Japan are used as temporary shelters. While the rental public apartment system is advantageous in terms of cost performance and making a smooth transition from life at emergency shelters, it would be difficult to pass on necessary information to the affected people.

Case Study: Temporary shelters in Kamaishi City

The temporary housing area in Heita district was constructed by Kamaishi City, with the involvement of the University of Tokyo and Iwate Prefectural University from the planning phase. It aims to provide comprehensive care to the residents, with an adjoining support centre and facilities. Of the 240 temporary housing units: constructed, 239 are occupied by 516 residents (as of 1 December 2011). They were designed as community conscious temporary housing for promoting communication opportunities in order to prevent isolation of elderly residents and to encourage local networks through such consideration.: House entrances face each other, and a barrier-free wooden deck that has tables and chairs has been built along the houses (providing communication space). They provide primary and convenient functions for residents' livelihood such as support centre, temporary shops (to open at the end of December 2011), bus services (to start on 16 December 2011), and a space for nursing and child-raising. The support centre aims at creating an easily accessible and comfortable place for the elderly in order to prevent their isolation and worsening of their required care level. The comprehensive service centre provides functional spaces for comprehensive counseling, day service, medical office, and local networking; 24-hour support care is provided, utilizing the care-call system. Comprehensive counseling offers various consultation services such as helping with the application process for nursing care insurance, or providing consultations on issues such as health, supporting elderly people, and the living environment of their temporary houses.

Case Study: Building temporary shelters by themselves in Nagahora District

Twenty-seven out of 58 houses were destroyed by the Tsunami in Nagahora district of Rikuzentakata City; not only residential houses, but also seafood cultivation facilities and ports were also damaged. Since the area is located close to the sea and no flat public land was available for temporary shelters, the municipality did not plan to build temporary shelters within the community. However, the people in Nagahora district requested permission from the municipality to build temporary shelters by themselves after finding an appropriate parcel of land and renting the private land for several years for free. The municipality accepted their plan. The residents wanted to live together in their community because: (a) it is important for community rehabilitation; and (b) as most of them are fishermen, they do not want to live elsewhere. Some professors from Tokyo advised them to build a community centre, and made a plan to build a gathering hall called "rehabilitation dome". According to the regulations, however, there should be more than 50 temporary shelters when building a community centre. There are only 25 shelters in the community, so this is still under discussion. This is a rare case of the people of the community taking the initiative to build temporary shelters in the community.

Temporary markets

Many temporary markets in the affected municipalities have been opened recently. According to the *Yomiuri Shimbun*, there are 14 temporary markets, which consist of more than 20 shops and restaurants, in Iwate and Miyagi Prefs. In order to build temporary markets, municipalities submit the request to the Organization for Small & Medium Enterprises and Regional Innovation, JAPAN (SME Support, JAPAN), which is an independent administrative agency under the Ministry of Economy, Trade and Industry, comprising owners of markets. There have been 583 applications to the SME, including small-scale markets, and 256 from the affected areas have been approved. The SME supported the construction of temporary prefabricated shops. These shops will be rented to shopowners free-of-charge, but arrangements and costs for utilities should be covered by the owners. The cost of setting up one facility runs from 5 million to 30 million yen, which will be covered by the organization's budget. Residents of temporary housing built away from the city area are pleased to be able to benefit from the convenience of the shopping centre and find it comforting to see familiar stores there. However, because such markets are "temporary," municipalities place a two-year time limit on their use.

Case study: Temporary market in Kesennuma City

A temporary market "Kesennuma rehabilitation market: Minamimachi Murasaki" in Kesennuma City was opened on 24 December 2011. Before the disaster, the market was the biggest market in the city, but the disaster washed away about 160 shops and restaurants. Many owners had almost given up on their rehabilitation. But some owners, who were less affected, started their business on the street. When one of the leaders saw this, he felt that their market would vanish if they did not do anything right now. He then started selling foods and clothes with other owners on the street, but they could not do so on rainy days. At that time, he joined an SME seminar and decided to apply for their support. It was a long way to opening since there was no land available, except for private land, so they needed to persuade the landowners to rent their land for the market. The land also needed to be cleaned up of debris before construction. Meanwhile, the leader and members visited Kobe to learn lessons from the Great Hanshin-Awaji Earthquake. They were shocked to see many shuttered shops and a sprinkling of the people in the market there. They realized the difficulties of restoring their market. They discussed how they could keep their customers in the future. After returning from Kobe, the members renovated one of their shelters for the children's drama group. They believed that if there are secure places for children to practice, parents who pick-up their children would come to the market. Though the temporary market is "temporary," owners dream of their real rehabilitation.

The above case studies, which are related to small-scale employment creation, are cited in the ILO draft preliminary research background paper on Employment Creation in Response to the Post-Great East Japan Earthquake (October 2011).

Cash-for-Work

Onagawa Curry Project:

A spicy curry made of special ingredients, which was offered by volunteers at the evacuation shelters in Onagawa Town, Miyagi Prefecture, have been made into commercial products and sold nationwide. Currently, the curry is sold online, at events, and in various stores in the Kanto and Kansai areas.

The ultimate goal of the project is to build a factory in Onagawa Town, Miyagi Prefecture and generate local employment, by becoming a new tourist resource, and thereby boosting the economic development of the local area.

Sanriku *shigoto* (work) project

Local companies in the disaster-stricken cities of Ofunato and Kamaishi in Iwate Prefecture launched a project for women in the fishery industry who used to peel the shells of scallops and oysters as part of their work. The project has now spread to Miyagi Prefecture.

Bracelets made of fishing nets are sold for 1,100 yen apiece over the Internet and nationwide in stores. The number of people involved in the project is 163 in Iwate Prefecture and 90 in Miyagi Prefecture. Between May and July, 5,600 pieces were created, making 3,250,000 yen in revenue. Fifty per cent of the sales price becomes the income of the producers.



Social (Community) businesses based on the Job Creation Fund

Project to support the operation of temporary housing in the affected coastal areas (Ofunato City, Iwate Prefecture)

- Implementation period: From 10 August 2011 to 31 March 2012
- Description of the project: To provide livelihood support at 37 temporary housing constructed in Ofunato City, Iwate Prefecture (about 4,000 residents live there as of October 2011)
- Implementation procedures: Kitakami City, Iwate Prefecture implements the project using the Emergency Job Creation Fund (about 160 million yen). The city commissions a staffing company, the Japan Create, Ltd., to operate temporary housing in Ofunato City using locally hired residents. Moreover, the Iwate NPO-NET Support, Iwate *Fukko* (recovery) Center (IFC), and the city of Kitakami form a collaborative team and support the implementation of the project.
- No. of jobs generated: About 70 support staff, 6 area managers, and 5 managers at call centres are employed on a full-time basis. For the 81 job openings advertised, 150 people applied. Local affected people, ranging in age from their 20s to 60s, including women and the elderly (30% of them are temporary housing residents), have been recruited.
- Description of work: The support staff engage in tasks, such as improving the environment of the temporary housing, caring for residents, assisting with community activities, including support for community associations, improvement of the living environment, communicating and liaising with relevant organizations, making the rounds of the temporary housings, and distributing handouts.

- Characteristics of the project: This project presents an innovative approach to carrying out recovery and reconstruction activities in the disaster-stricken areas. Immediately after the earthquake, NPOs in Kitakami City established IFC to support the recovery of the prefecture's severely affected coastal areas. IFC acts as an intermediary organization to help local residents gain opportunities and start businesses, give advice to government institutions when drafting recovery plans, and so forth. In June, IFC approached responsible persons in the Iwate Prefectural Government and Kitakami City, urging them to launch a recovery project. As a result, Kitakami City, located in an inland area and therefore was able to escape serious damage by the disaster, decided to support Ofunato City, one of the worst-hit cities near the coast, for the operation of temporary housing. Mr. Kikuchi, secretariat of IFC, emphasized during the aforementioned meeting in Tokyo that "what made it possible to start the project so smoothly and quickly was the fact that his NPO had the experience and know-how and had already formed the basis for cooperation with Kitakami City, prior to the earthquake and tsunami." Iwate NPO-NET Support and Kitakami City have been working together on the development of a sustainable community, in order to tackle pressing problems such as the declining birthrate and aging population, population decline, and financial difficulties. Every two weeks, key stakeholders such as the Japan Create, Ltd., Iwate NPO-NET Support, Kitakami City Government, Social Welfare Council, and police, hold an internal meeting to share information and discuss issues to be resolved. Mr. Kikuchi said that because the staff engaged in this project worked in close contact with the temporary housing residents, they are able to promptly and efficiently confirm their safety. Starting from next year, he will begin evaluating the project. Based on his experience, Mr. Kikuchi gives importance to residents acting on their own initiative and setting goals by themselves. He thus aims to realize the economic independence of the local residents. He mentioned that providing support for other coastal areas based on this project model was being considered.

About UNCRD

The United Nations Centre for Regional Development (UNCRD) was founded in 1971 in Nagoya, Japan to promote sustainable regional development in developing countries. Disaster Management Planning is one of the core issues for sustainable regional development and UNCRD has been working on this programme since 1985. With the experience of the Great Hanshin-Awaji Earthquake in Kobe in 1995, the UNCRD Disaster Management Planning Hyogo Office, established in Kobe in 1999, developed and launched the Community-Based Disaster Management, School Earthquake Safety Initiative, and Anti-seismic Building Code Dissemination projects. The office promoted effective disaster mitigation, focusing on the key elements of self-help, cooperation, and education through various activities such as training and international/national/local workshops for capacity building in disaster-prone countries. The UNCRD Disaster Management Planning Hyogo Office was integrated into the Nagoya Office as the Disaster Management Planning Unit in April 2011.

In order to deal with rapidly increasing urban population and associated enormous economic, social, and environmental pressures, UNCRD is refocusing its work towards sustainable urban development. Another key focus of the work of UNCRD is environment, with environmentally sustainable transport (EST) and 3R being part of key elements.



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