

【世界防災フォーラム PM3
被災地からの経験・教訓の共有と継承－東日本大震災を中心に－】

■Coordinator (Ms. Ito)

Welcome everyone. My name is Akiyo Ito from the Miyagi Prefectural Government Earthquake Disaster Restoration and Policy Planning Department, and I will be the coordinator for this panel. As the title suggests, today's session will focus on how exactly can we successfully pass on both the experiences and lessons from the Great East Japan Earthquake. It has since been six years and eight months. Amidst people's fading memories, I believe many would agree that Miyagi Prefecture, as a region that has suffered greatly, has a duty to pass on the timeless lessons and stories from the disaster to all people across both countries and generations.

However, actually doing so, with hopes of preventing similar disasters and loss, proves to be very difficult; today in Miyagi Prefecture we have all of you experts and government workers of affected areas collaborating together to work out the best approach. This event here today we have gathered all of you researching the preservation and passing of memories, records, and lessons of the disaster-affected regions, as well as all of you already attempting to do so in practice. I would like for all of us to think together about the issues up until now and what needs to be done going forward, as we are introduced to a variety of important opinions and perspectives here today. Without further ado, as part of their self-introductions we would like to hear from our panelists on their perspectives, research, and current efforts regarding today's topic. First, we have Professor Maki from Kyoto University's Disaster Prevention Research Institute.

■Prof. Maki

My name is Maki and I am from Kyoto University and so my self-introduction, what we Passover is mainly the great earthquake kingdom. It has been two years actually the students of the University did not experience firsthand the disaster. My personal experience I was born in 1958. And so the Second World War and 22 years or so I was born and so this kind of work expense I really do not have a first-hand experience. Similarly this is I think the similar situation of the great Hanshin earthquake situation, the people who are in here today who have a first-hand experience of the earthquake but as a child I really did not have a good feel of the war experience and I think that kind of a sense is kind of important. I think on the 22nd and 23rd anniversary for Kobe and based on that I will touch upon more details later. But we do have a disaster Memorial conference. We started from the first year, after the disaster and up until the 10th year. And 20th year. We had a memorial year and on the 30th year, what are we going to do? We would like to continue until the, for three decades to think about how to pass on the experience and that's one of the activity. The other activity is where I work, maybe at some of you have visited this actually, and there is a disaster reduction and human renovation institution in Kobe. And I am the data recently. I have a hard copy of paper materials as well as goods, how do we preserve, utilize? Because this story told by the things and objects and artifacts are very strong. So we are working on that. And the other viewpoint is that West Japan, I think we have the mega thrust earthquake. So from total hoax perspective or how do we use this Tohoku devastating experience. We really have to utilize the expense otherwise we will regard ourselves.

■Coordinator (Ms. Ito)

Thank you very much. Next, we have Professor Shigekawa, from Tokoha University Graduate School.

■Prof. Shigekawa

I am from the research center of Tokoha University. I myself have experienced and trying to pass on the disasters personally. It is a little bit audacious of me to say, I would like to keep that memory fresh. 22 years ago, 1985 especially that I came to the determination at the Hanshin earthquake. There was the 1959, the East Way, and for the first time in 36 years, more than 1000 people died. Nearly 40 years that we are not very knowledgeable of the, we are too competence over the natural disaster. And in the 1995, the earthquake hit. Not only that the local government and, volunteer companies, we never knew that we could not predict what to come next. Consequently enough we are obliged to think that what comes next, what is the next step. And we face many challenges for the first time, shelters. The shelter means that, avoiding the disasters, however unfortunately 500 people died in the shelters. Or that many people died alone, even after that they are admitted to the provisional houses. Temporary houses, and so we tried to learn from the past for example, the great earthquake and there is a lot of documentation of this earthquake in 1908. But looking at it, in index, plan and organization and construction, that the civil are working and that parks and also zoning. All of these are related with the hardware. But in the case of Hanshin Awaji great earthquake there is a report on the hard and find that the culture, urban planning, infrastructure of what comes to the bottom of the list of must to do list, priority list, thus the Hanshin Awaji earthquake what we started was a ethnographic research. The disaster was not perfected on the official research. Gather the information directly, those people who are in the front line witnesses, or the first responders. We consider that this is a very important source of the report of the Hanshin Awaji earthquake. All of them suffered a lot but we started taking the report from them from one era to eras after. What I wanted to do is a dispersed, this personally a cumulative information. But it should be that the diversified and distributed experience accumulated in the human beings should be converged and collected and organized. Because if that experience stays with individuals, if the individual pass away nobody knows that experience. We want to gather and organize them and stock them in an organized manner. This is what I have been trying to do.

■Coordinator (Ms. Ito)

Thank you very much. Next I would like to welcome Associate Professor Sato, from the Tohoku University International Research Institute of Disaster Science.

■associate Prof. Sato

Thank you very much for the introduction. It shows that the addition of the disaster science, I am usually wearing two hats. One is the researcher. The other is the implementer of policy. I as a researcher, before that the earthquake place, and after, before and after. What are the impact of that great East Japan earthquake and the quantitative way? I swear the practitioner, the Ishinomaki I am the supporter of the, as a volunteer I would like to have that centered off and as a storyteller. These are the mediums of passing on the information. One is a sinotov traditional

one. What kind of the sinotov are known to the local people, all of the stone tablets. In the earthquake, that great eats Japan earthquake, there are several that suffered no death. And we went into this and found out that there are secrets because there are 20,000 died. And these are the two villages, otsunami and yagi, they have been constructed at the sinotov. The background of this is that this is the research that the early evacuate have the features. One is that they previously talked about what to do with the, when the tsunami comes and they also wanted information on how the tsunami, those people who evacuated first. That is what we found out. And the map here is, people mentioned about the museums are the storytellers, archives, are the salty tears exist. Because at the end tangible stories are told in Tohoku. Also the exhibits, these are all available. Also Nishi Ojima, I plotted how many people use the peak is 2013 and the number is coming down. Why? That is the declining of the users and the visitors. In order to maintain and possibly revitalize the visitors that we try to prepare for the administration and citizens. Now the members of the government and public sectors are gathered together who will be discussing the future Messrs. and IT specialists. You can see the video during the disaster. I am running and thinking at the same time. But I think this is good enough as a self-introduction.

■coordinator(Ms. Ito)

Thank you very much Mr. Sato. Now I would like to welcome Professor Tricia Wachtendorf from Delaware University. Professor Wachtendorf comes from the State of Delaware, U.S.A., Miyagi's sister state, and we are glad to have her here today.

■Prof. Tricia

Thank you very much. And I want to thank Miyagi Prefecture, in particular, for inviting me to participate in this very important forum held here in Sendai. My name is Tricia Wachtendorf, I am a faculty member in sociology and one of the directors of the Disaster Research Center at the University of Delaware. The Disaster Research Center is the oldest center in the world focused on social science and management aspects of disaster. It was started by the pioneers of disaster sociology and disaster science, Professors Enrico Quarantelli and Russell Dynes. And we currently have nine core faculty representing such disciplines as sociology and public policy, civil engineering and geography and many more affiliate faculties and graduate students working on our research projects. In addition to our research that focuses, that sees the disasters at their core as social problems, working in an interdisciplinary way, we have several different graduate programs in four disciplines, and a relatively new interdisciplinary disaster science and management program at the PhD and Masters level. We have the largest collection in the world focused on social science and management aspects of disasters. And we're known for pioneering the quick response, field research method, in doing observation in the immediate aftermath of disaster. Much of my research focuses on such topics as humanitarian logistics, on organizational coordination, on evacuation decision-making, on social vulnerability to disasters and emergency, improvisation and creativity as we look after the 911 attacks in New York City and the waterborne evacuation of over a half million people by boat in an unplanned way. Along with that my research involves working in an interdisciplinary way, with my colleagues in atmospheric science, in engineering, in computer science and other social science disciplines. After the 2011 disaster here in Japan, we joined our colleagues, including those on the panel here, to see what was going on, to see how Japan was responding and experiencing this event. And I continue to

do research with colleagues at a number of different universities. The project I want to highlight today doesn't focus on interdisciplinarity with engineers or atmospheric scientists. But as you'll see, it's going to focus on integrating social science scholarship with art, with humanities, with photography, in order to understand some of these complex issues and to learn from disasters in different ways. Thank you.

■Coordinator (Ms. Ito)

Thank you very much. Lastly, we have Ms. Fujima who comes from Ishinomaki, one of the hardest hit areas by the disaster. Ms. Fujima is currently working towards passing down stories and lessons gained from the disaster as part of the Ishinomaki Future Support Association.

■Ms. Fujima

I am the storytellers, I stayed several days as a volunteer, I moved to this and this is my 6 year of the Ishinomaki just before the disaster they started, right after the disaster, for communicating but rather after the disaster NGOs concentrated on the Ishinomaki, we started as a Secretariat of the coordinators. The first meeting was 20th of March. Just nine days. We award Ishinomaki support Association is the one that we covered the public person, NPO, NGO and the volunteer, special skills like the nurses, hairdressers and the masseuse, while the volunteers with the skills in order to be engaged in activities that we coordinated and also that improve the health conditions of the shelters have to be a part of our undertaking. Later on from that rescue to the help and since, to the recovery that the fence to obsolete later on. And in November of the following year, we changed it to the Mirai support, future support. Bringing good futures together with the leaders of the community, we have been trying to support for the Ishinomaki. We acquired that the public benefit organization, right now from the alliance of the disaster, we are shifting to the alliance of the storytellers. Who are passing on the disaster. I myself have been started as a volunteer, started with Hanshin Awaji earthquake. Major to the TV, the great fire occurring on the city was a shocking experience, I was desperate because I cannot do anything at that time. I recall this memory and during that the East Japan earthquake, that was the point of the volunteer activities.

■Coordinator (Ms. Ito)

Thank you very much for your self-introductions. I am sure now that everyone has realized that our panelists today are researchers and practitioners standing at the frontier of this field. Now I would like to ask our panelists several questions. Japan as a country has experienced both earthquake and storm-related disasters ever since long ago, but although we have collected lessons and experiences from each disaster, as mentioned earlier, we continue to witness scenes of confusion and suffer losses. I would like to ask, to what extent did Japan make use of the lessons and experiences gained from previous disasters, and which points did we neglect when the Great East Japan Earthquake struck? What were the reasons for the retelling of past experiences working or not working? First Professor Maki please.

■Prof. Maki

It is really difficult question for me to answer. But of course we need to save lives. First and foremost and also we need to support the lives of the affected people in that temporary shelters

and the evacuation and how to help people restore ordinary lives. As people already discussed, to some degree, the past lessons have been helpful for us. But for helping, but unfortunately in some other areas, as past lessons have not been expensive at all, I think the volunteer coordination that other people experiences in Kobe were important lessons and informed people here in Tohoku. Sometimes takes 10 years for recovery. This is one example that we experienced difficulty. It is again, this is again a very difficult, of course it is easy for us to tell people to evacuate immediately. When the tsunami is coming. But it is not easy to tell these lessons so that people can translate this lesson into action immediately. I don't like the word victim. Because it is rather, it gives the people, with these words, people might think that the victims, affected people rather remorse the people in need and difficulty beyond the TV screen. But we have to take lessons and the stories not for others. But for us. For each of us. The disaster Memorial programs are so important. In Kobe there are still many people experience the major earthquake in person. So they are the witness to that story and they can tell stories to people directly. But if their stories and the lessons taught indirectly for example, in the classroom or in the school, that is rather difficult for students to take for themselves. I think that the past experiences have been, of course communicated to people in Kumamoto. It is rather difficult to understand the other people's experience. I think the, I should use the word relearn, we need to repeatedly learn the past lessons or we should try to learn lessons immediately. Not after it the disaster. So the past memories would not fade away.

■Coordinator (Ms. Ito)

Thank you very much. Hearing directly from affected people, being conscious on the matter, and brushing up on knowledge are all very important. Next, Professor Shigekawa.

■Prof. Shigekawa

6 1/2 years ago the great East Japan earthquake hit us and more than 18,000 people were killed mostly by the tsunami. As Prof. Maki mentioned of course saving lives is the prime importance. Unfortunately so many people have died. So the most important, there are many important lessons for us to, what matters most is the lessons or the wisdom to save lives. There were 600,000 people living in the disaster affected areas. 3% of them died. 97% of the affected areas were saved. By evacuation, through evacuation or through other actions. I wonder whether such a percentage would have been realized in Shizuoka where I teach. If it does unexpectedly. If totally unprepared, for example people in Shizuoka, I don't think that the people in Shizuoka would have been effectively evacuated. So I think the people in Shizuoka would behave like people in Tohoku area. Even if 18,000 people were killed, much more people were evacuated successfully. We should ask why 3% of the population were lost and why the remainder, 97% of the people survive. We need to analyze deeply into the course and that should be collected stories of the individuals and documented. For example, we had the research in the Taro district in Miyako city Iwate, as you can see here this area, this district with so many earthquakes and tsunamis in 1906 and 1933, 1958, 1960, 1968, and 1979, and in 2011. 6 1/2 years ago. So the people living in these districts that have memories of so many earthquakes and tsunamis. In 1933, the isendeku earthquake and salami which had been killed so many people. Even if the tsunami hit this area, after 1933 did not have any casualties. At least in Taro district. As you can see here, the seawall is built after the synonymy of 1958. This is 10 m high and doing a half

kilometers long. This is called the Great Wall. In 1979 the second seawall was built. It was in the land side of this particular seawall. So these are the building of the walls, it started eight years ago. We cannot talk with the people that passed away, but we collected information from people through, we interviewed the people of who were with their families and their friends who died in this earthquake and tsunami. Lights of the circles shows the location of the houses where people who died. And the yellow circles show the location of those people who died. So 4-5 means that they were and fire brigade volunteers. Guided the local people to the evacuation and went down to the coastal area. None of these people died on their evacuation areas. Some of these people were born and raised in Taro areas. None of the victims were, the people who do not have any knowledge about the earthquake, so these people should have been well informed of the past earthquakes. But five of the seven deaths were spouses and each of them was mothers. We tried to know why these people died and why some other people survived and as you can see at the bottom, in 1933 many people experience the major earthquake and the tsunami and the people who survive 6 1/2 years ago, they were the people of who listen directly to their families and relatives who experience the earthquake and tsunami in 1933. As I said, since after the earthquake in 1933, the major railroad and the huge seawall were built. And the administrators, the local people told that this area became safe. The tsunami first, the warning, informed the people that the incoming tsunami would be only 3-4 m high. And they would remain home because they thought that they would be safe from the seawall. But others evacuated to higher ground. So these people were the people who saved themselves. So the question was how to make the path lessons useful? Well I think in order to save lives, the answer is simple. The family, the people who experienced the natural disaster should tell their families directly what they witnessed, what they experienced. That is a major motivation for people to take action and to take refuge to higher ground.

■Coordinator (Ms. Ito)

Thank you very much Professor Maki and Professor Shigekawa. Listening to the voices of those affected, those genuinely trying to pass down lessons, is certainly connected to protecting lives going forward. Professor Sato, could you please tell explain the reasons behind the effectiveness, or ineffectiveness of story retellings, and whether these narratives are properly being passed down or not?

■associate Prof. Sato

So please have the slides up. Yes for this subject with the community, how do we pass on the information. Also on the municipal level, or within the I would like to separate the two and first, how to evacuate within the community. We have two answers for that. Do they have a custom to look back and revisit the past disaster. It makes a big difference. So one, use the, introducing even such a major tsunami hit, there are major areas that do not have any actual death tolls. So those areas tended to have the kind of a repose ceremony. Another one is that in Nagasaki, there was a massive of flood. So there were many people that would become victims. So every month they have a festival of just distributing the memory of what happened. The other one was 1982, there was this massive flood in Nagasaki. There was heavy rain but there was no one that died. And so these kind of rituals, or events, this functions to reduce the victims. The other one is the repetitive what Ms. Shigekawa management. Our grandfathers, parents, we did a survey

within the relatives. What is sort of the borderline of hearing these kind of stories and then it is limited up to grandparents and then it goes to grandchildren. Passing on this information within the three generations, it is removed to how to pass on such information within that limited circle would be the key. This is actually something that we worked with the disaster and policy planning department. So that we had actually did an interview of the aluminized of the government of how it was back then in Miyagi. They had a major experience from the 1978 and we had a major water damage in 8.5, 9.22, and then there was a continuous earthquake. Just before the great East Japan earthquake. I asked them, with the past experience, were able to capitalize on that? Many of them said no. I thought it was actively used but the answer was no. And so that is the reason. They said that because their position at that time was different because they can promote it, from just a low level to management level, what they have to do is making authority is so different. So when they were young, their experience was not really useful. There are certain departments that functions that is civil engineering. Because this is a professional division that, what you do is does not really change over the years. Also the finance department, why is that is because we actually do have a model of calculating the damage estimate and to request for the budget to the central government. That has not changed over the years. That workload and the contents of the work, if it does not change over the years, it does function. So this concludes from my perspective.

■ Coordinator (Ms. Ito)

Thank you very much. We were able to learn more about what worked and what didn't work in retelling narratives, and come to understand the difficulties in doing so properly. Thank you for also touching on retellings within different settings, from local communities, families, as well as organizations. Based on what we just heard, how exactly can we preserve and utilize the lessons and experiences from the Great Japan Earthquake? Now I would like to invite Ms. Fujima, a current practitioner of retellings in Ishinomaki, to speak more on the key points and methods of a practical approach in doing so.

■ Ms. Fujima

We have been conducting the program, we have six programs and to that exhibit our manage by us. But for ourselves and the programs and the institutions, in order to function whether it is fully functioning or not, sometimes this very difficult to make any judgment on them. And also that the other presenters, that your parents and children and grandchildren, these are the most effective. However the storytellers are not the representative, the relatives and also that the staff members are not the family members. Our programs and exhibits, this is how much it impacts on the visitors. Whether that we are successfully communicated or not, we have heard the data. We have heard the methodology fortifying our effect. Now I would like to get into the programs that we offer. As you can there are two programs, we conduct that is the storytelling program and also using the buses and the other vehicles and visiting around the bases and these are the two programs. One more. We have going around Ishinomaki, there are many clients and volunteers to serving storytellers. At the beginning, at the very bottom you can see that the peak of the visitors is since 2013 is coming down. As our program to address that the storytelling and the learning also the exhibits, learning experience with exhibits, we are seeing that the visitors are still coming down. Somehow we are managing to sustain the activities of the programs. This

year's is a little difficult to maintain and there might be a little decline of the visitor but still we are maintaining more or less. And out of the programs that we offered to the visitors include, for one as I have mentioned, the storytellings, the storytellers and the bus trip. Storytellers of the disasters in the rooms they tell the private experience. Especially lessons learned from the 1960s and the grandma experience that the disasters and the grandma told this young lady at the bottom number of the time over and over and over, she realized this and memorizes and evacuated right away at the great East Japan earthquake. Also some of the storytellers are very dangerous because that was almost a failure that they evacuated. When the tsunami came that it would be the end of the story. He thought that it was the end of the story. That care for the family members. These are the agenda items of the story tellers. You can apply for both or one of the two. This is going around the town before the disaster prevention. Many people appreciate this and are very popular. Using of the application. This is a first of this kind, offered in Tohoku the tsunami application can be downloaded free of charge and your smart phones. So please download right away. And for the past and present. You can see how high this tsunami came. As a pass information that we can accompany, that you can do it alone or that the volunteers can accompany you to walk around. And this is an impression and opinions of the visitors. And I say it is unbelievable that the water came this high. Using the application to follow the experience of the earthquake and the tsunami, they said was the first, it came to their mind that it was so hard the experience was. And this is, some people say that it can be like how hard the experience was. Some people said that they were moved, that people were trying to recover. The kindergarten kids come, one of the children said that I clicking the water death and the kindergarten kids had this are a danger. The tsunami is higher than my daddy. I think this kind of sensitivity it's very important. This is making something of the history visible. To impress this much of an impact on the preschoolers. This is a questionnaire of the participants and application was usable. Also they said that the explanation of the guides is very good. Not only the contents however the service. So the men and human being really counts to put a good experience for the visitors. And one more, is another program, the walking around on the events with the march. With the storytellers. We can accommodate one time 200 people at a time. One volunteer for 20 of the students and at the time of that area, so they evacuated, they stopped by. Mostly the school has joined these program. And then they become the repeaters. Most of them, I think that this is a value given to the visitors or participants of that. So this is the storyteller, going to your place, not going to you. But a part of that disaster program. Or as the pre-studies of the disaster training that they sometimes, that they invite. Our storytellers participate in their program and the next day they will request the students to write the report while the memory is for. And I mentioned that we have the exhibits. Or the museums. In Minamihama museum, about 4000 more people used to live. 1800 households were washed away. By 2020 with the help of the national and government and the local government is going to give a subsidy. There is already bad for the activities that we are managing already to exhibit. We added the theater room and also that we prepared the meeting place with the local people. About 20,000 people visit and use this exhibit or the museum together. The big screen can be displayed now. What we prepared to show the visitors. We are virtual that the reality that the glasses are distributed to really feel that the disaster, elementary school right after the earthquake and tsunami, inside of the school rooms as you can see. 360°. Using the drawings Kadonowaki elementary schools would be maintained not as this is. Part of the elementary school would be de molished. So that

we are making the 3-D model using the drones. We would like to preserve that the building of this elementary school, a part of this will be preserved. As I have mentioned earlier passing on the information there are things at the left top, you can see the study collaboration system, the construction conference is the title. Prof. Shosuke Sato is very supportive of grading the system. Also Ishinomaki, Local townships, get together with the collaboration with the preserving and passing down the information of the earthquake. And tsunami, the December 2015 when we started with a conference, it was convened just recently. That the administrator and the private-sector can participate. Also that together with the help of the academe, we are making and manuals with where to start. This is sideways of the map of the Miyagi. And these are the places on the south. Yamamoto, for each district has that remainder of the buildings, or the parks, Memorial Parks. Is going to be contrasted. Ishinomaki city alone cannot attract the customers because the visitors would like to visit many places of the mayor memorial Parks industry. In order to create a good program to entertain them, that the talents we have to consider the future generation into the future. We are going to decide that the leadership of the Memorial network just started. That everyone wore in this hall, if you are interested in being a part of the community that we are going to be the Secretariat of the network. Through the Internet you can pick up that window of information. With this much of the content, I would like to conclude that the deciding factors for human beings, that potential members contact us with emails and phone numbers. However they cannot come to listen to the storytelling. That is something of course what we do not want. In order to pick up the phone, the inquiry of the phone, that is writing with the storytellers and also that I would like to include, concentrate that the pictures on the museums not only the storytellers alone, supporters and also that we are the MC, that the human being house. So that the storytellers would be pure. If we study each and every story, the failures, each and every piece of the information, 7.2 m at the breakwater that is heavy constructed. However the schedule changed that the program changed. The structure change. All of these details, we can take care of that details and information so that the storyteller can concentrate on their personal experience. So if the customer come in a drunk state, they cannot accept that the message. So we would like to ask that, we have to prepare the environment, prepared experience of entertainment three pillars.

■Coordinator (Ms. Ito)

Thank you very much. We have learned quite a bit on the current activities of the Ishinomaki Future Support Association and using ICT in story retellings. People and networks are certainly important, and we touched upon their continuing relevance. Now, I would like to hear from Professor Tricia.

■Prof. Tricia

Thank you very much. And thank you to the panelists for a very insightful and heartwarming, thoughtful remarks. I'm going to continue to speak a little bit slower so it's easier for the translators to transcribe. And I really want to take a moment to tell you a little bit more about our work in Japan, especially in Fukushima Prefecture. We were very interested in this idea of how disaster survivors make sense of the recovery process. Next. And I do want to mention that

this work was conducted with Yuki Namiki, with Tokyo Kasei University, as well as Collette Fu, helping me with the work as well, from Philadelphia. We've done a lot of work both qualitative and quantitative research, looking at recovery, looking at how the literature defines recovery over the years and how that has changed, looking at how governments and policymakers in the private sector define recovery, and how we've set benchmarks for the recovery process after a disaster event. Most of those recovery benchmarks have to do with physical aspects of recovery and economic aspects of recovery. So perhaps we might look at how housing stock is eventually rebuilt, and how quickly that takes. We might also look at household income, returning to pre-disaster levels, employment rates returning to pre-disaster levels. These are common themes both for government as well as for disaster researchers. In the past few years we've seen more research looking at two other aspects of recovery. Environmental recovery, so in this case we might look at the impact of soil and air quality and the extent to which it has returned to pre-disaster levels or, when those weren't that great to begin with, to safer levels. We might also look at life, well-being and social recovery. So to what extent, we might ask ourselves, is there chronic trauma remaining in a community. We might look at community functioning, returning to pre-disaster levels. Are schools reopened? Are children attending those schools? Are hospitals reopened? These are many ways that we can look at the strategies communities are taking and to see how they're doing in achieving those goals. Much of the research has also recently suggested that communities might define recovery in different ways. But that they share common characteristics of returning to what was there before and sometimes reaching for a goal of a better way for that community to move forward. Our research was somewhat different. We wanted to understand how people made sense of that recovery concept. How disaster survivors defined those benchmarks for themselves. We weren't interested if they were right or wrong, but we want to understand how they thought about recovery while they were going through it. I'd like to present two cases to you that illustrate how we approached this, and I am going to go through them very quickly. But the first case from Fukushima Prefecture is Mrs. Abe. Abe san is a pear farmer. She is energetic in the field, in her orchard. Her orchard is in Fukushima City, and though they experienced damage to their property, their fence, their house as a result of the earthquake in 2011, they did not have, much of that was repaired quite quickly. They were, however, because of their agricultural livelihood, very concerned about the radiation release. As I met with Mrs. Abe in 2013 and 2014, I asked her to talk about what recovery would mean to her. She spoke of many things. She talked about the soil levels returning to safe levels. In fact they have. She talked about her produce and that her pears being safe for her consumers, for her customers to have. Indeed those were also at safe levels when I met with her, yet she didn't seem recovered. She talked about the decommissioning of the nuclear power plant but even that wouldn't have been enough. As she walked through all the soil, everything she looked at, every crack, every different shade in the soil, she looked at with concern. The soil that had been stripped off of her property is buried, actually, in a spot in the middle of the orchard. It still is today; of course you can't plant on that spot. And after talking with her, reflecting on the commitment she had to the land that was in her husband's family for generations, after talking about the concern for her children and for her grandchildren. It became very clear that recovering was something that was very difficult for her to explain. Although she didn't use these words, the difference between "anzen" and "anshin" became quite clear. In many ways Abe san had achieved "anzen." The radiation levels were safe where she was. Her food she could sell to

her to her customers. But there was still a sense that she hadn't regained "anshin." There was always the sense that something could go wrong. Every cough, every nosebleed, every poor health condition, every poor soil condition could have been a result of the power plant release. And the fact that she couldn't quite get this out of her thoughts. And so what we were able to produce article rather than a journal article or a report was to create a work of art to demonstrate for her, her happiness when she's in the orchard, her concern when she was walking around the soil, how even in the orchard in the back of her mind, was a view, a thought of the radiation, of the power plant, of her customers, of her children and grandchildren, of the ancestors. How the Geiger counters were everywhere, checking, making sure things were safe. And underneath the soil were still those bags of radiation always on her mind. So this is a way to really illustrate that for one person, one single person, there were many different layers of what recovery meant for her. The second case I want to share with you is Mr. and Mrs. Ichizawa from Iitate Village. They evacuated with a very long story, eventually when their village was overcome with radiation. They had a very successful coffee shop, Agri Coffee in Iitate Village. It took them some time to want to leave. Eventually, they resettled in Fukushima City, and leased a place for their coffee shop. And you see here, the coffee shop that still remains, the building, the structure in Iitate Village, and there is the coffee shop that they had leased in Fukushima in 2013 and 14. They since rebuilt and purchased some land and rebuilt a new coffee shop. For him, he was very much looking towards returning. When the discussion happened for that village about whether or not the community should strip the soil to decontaminate and return or whether or not people should instead move on and relocate. He very much wanted to go back. The land had been in his family for generations, they were buried, the family cemetery was on that land. He talked about the land being in his DNA. He talked about wanting to revive not only the land and the house, but also his community. He spent many times there during the week going and checking on the property. For Mrs. Ichizawa, it was a very different story. She talked about how this was her husband's family, the land, she had moved there. And she didn't feel the same attachment. To her, home was wherever they were. She was a very successful business operator. She took pride in her pastry and her coffee. She was concerned about what it would mean for her son to inherit that land. That her grandchildren would not come visit it. And for her, she was looking forward, to moving, to staying somewhere else. So between the two of them, in the same household, this was a conversation they openly had, how to negotiate. They described surveys that were conducted in the community after the disaster, and only one person in the household would fill out that survey. You can imagine most of the time it would be the man in the household. But here, we have two people who care about each other, who had a strong connection but had a very different sense of the path forward and what recovery meant to them. So as we reflected on this, he was very much looking back towards his ancestors, towards the house, towards the property and for her she was very much focused, while he was there, on her business, on the pastry, on looking forward and thinking about where they were then. Two people, same household, different perspectives. And so the lessons here that I'd like to offer are that the lessons learned are not always objective. Certainly as a social scientist, that is something that I value, those objective benchmarks and understanding. But we also have to remember that the lessons learned reflect different interests, different perspectives and different experiences. And that the benchmark for disaster recovery is conflicting or difficult to define for a single

individual like Mrs. Abe, or within a household like the Ichizawas. We should be careful when considering official benchmarks as well. Thank you.

■Coordinator (Ms. Ito)

Thank you. We tend to go on thinking that our experiences and lessons are the same for everyone else, but everyone really has their own individual feelings and emotions. From your explanation, we felt how difficult it must be to share and pass down narratives when everyone's stories have their different nuances. Next, we have Associate Professor Sato.

■associate Prof. Sato

Would you put up the slide please. Next please. For me to talk about here is the including of the disasters, how we sustainably pass it on, what is the elements need. And so we talked about the evacuation from the disaster and within the public sector, what is the expertise? So we know that we are at a face that we kind of know what is good. Or what is necessary. However this team, I have no answers because we kind of had vague idea of what we have to do. But how do we set it up? How do we start? How do we sustain? These kind of things we have no answers yet. In terms of the evacuation from the disaster, you have homes and communities, they do not forget the past disasters. They sort of have like a custom and if you have sort of a leadership amongst the community or it is kind of affluent and you have much of budget, then it can lead to a commemorative festival every year pin but how do we set it up and how do we launch and how can we have it that the university done throughout the country, we don't know the elements. And on the public side, the government side, if you visit the areas, at the early stage official government staffs came for help. So it is not necessarily those people that had the direct experience 20 years ago of the great Hanshin Awaji earthquake. But they had the expertise and the came over to the disaster areas in Tohoku. Maybe have nice transfers and but being having a sense that there is something they can get to share. So that was what was felt during the past. So the passion, motivation, how Miyagi prefecture would carry it on similar kind of passion going forward.

■coordinator(Ms. Ito)

Thank you very much. Now Professor Shigekawa, please.

■Prof. Shigekawa

associate professor Sato says I agree with you. The maintenance is more continuation. But I am going to explain to you is that we are flexibly sometimes, for the past 10 years, some of the organizations is continuing more than a decade. I would like to share with you some examples that the passing on, considering passing on tangible things, sometimes you can pass down the tangible. Also intangible. Especially with the intangible thing to share and pass on, this is something that we have to consider. But it is necessary for doing so. The team Sendai is challenging. Just before the March 11 took place, the volunteers of Sendai city government started this team and I that the volunteers Citigroup proposal for the policymaking that the young City Hall members, the team Sendai. shortly after the March 11 break East Japan earthquake, they start considering that they have to leave these activities for taking that record. Taking down the record and preserving and it should be a very minute and meticulous report. so

that started with and ethnographic, that the research which is very close to my specialty. And so that Sendai report by all means should be reported. So we can support however we should not take the initiative as an outsider we have to create this system of the citizens community members, take the minute notes and preserve with past bond air in this line. That we join hands and collaboratively taking action. Taking documents. There are many city officials of the city and many people are sharing many types of neighbors. Past, the Kobe earthquake has a very high priority that disasters mediation that many of the city members are selected to be part. We conducted the interview and we wrote this up. The record over the interview all is translated in textbook form. As you can see the textbook. No changes. Sometimes the shorter and charter can be, compressed to the 10 pages are 20 pages of the document. By reading this we try to share this from record taking. Taking in the record is easier said than done. Digital data is sometimes dangerous, this is the voice recorder, DVD, the past archive quite often if a Japanese paper are blocking is used. this is very sure, secure way. The USB and DVD are very vulnerable. Staff members of the office, they are going to, they will take the initiative of gathering information and organizing this as their own treasury. And one more network. Keeping the record is this is the 13th year of these activities. In 2004, there was earthquake, big earthquake that Nigata Chuetsu earthquake took place. Is the city of his members and her volunteers. They started out the network, Ojiya is the name of the organization, to share the experience of the great earthquake. What they're doing is, their people who are experienced with a similar disaster, went to the volunteer. To assist had semi-experience of the disaster, go to the disaster hit area and support. And several times a year, the member gets together. about 80 public organizations, with a membership of 10,000yen per year that they pay the budget of the administration. They also went to the assistance of the Kumamoto. and those members may not know that the Hanshin earthquake, however in Kumamoto that they had on-the-job experience. After deepening that express they would deepen the sites and they would have in-depth assistance. If the member is afflicted and without any conditions, there is a rule that they can get one month of assistance without any conditions, without free of charge. What we are doing is not maintaining the tangible products, this is experiencing memories handing down from person-to-person. even though that the memory is handed over, the documents are handed over, the passion still there. Also the change of the offices, the change of the location, changes the houses, are that we have to fill out the gap of the generation changes. For the past 13 years, Ojiya has been continuing and the team Sendai has been continuing and this is the first year although that we are just about to end the first year of the team Sendai tangible and intangible. This is what we are experiencing every day.

■coordinator(Ms. Ito)

Thank you. And now, Professor Maki.

■Prof. Maki

Now professor Sato, talked about the strong passion. Perhaps the people in the area, are passionate. But every time it makes me a very tearful when people say that they have not reciprocated enough. So, that perhaps makes people to go other places to provide support and help. because I think if you were helped by others and then that makes you more passion Nate to help others, how to pass our experience to the next generation. Of course we need to

document or take records. three stories of lives lost after major earthquake. There are so many stories of these but there are not many stories in the records of the affected people. Restoring, and the reconstruction of their life. It can take 10 years, it has been only six years. So this process in Tohoku still continues. Next his preservation. Or starting the records. This is very important but it is not easy. Disaster reduction and human renovation institutions have restored the 190,000 primary material and 40,000 secondary materials including books. And we have the archivists, three archivists who work part-time and have been 22 years since the Kobe earthquake. But the free archivist still continues organizing the materials from the recording experience in Kobe. it has been 22 years and it's really become difficult increasingly to come to contact with the people who gave some records and materials. we need to work with a sense of urgency because if we cannot, if we simply leave the materials in our storage, then it would be worthless. It would become worthless. And then thirdly we would need to consider how to use the information and the material effectively. As I said at the beginning, disaster Memorial activity as well, over the last 22 years Kobe has organized the various instructions. In the first 10 years, we had the memorial conference in Kobe. in January every year. The citizens and NPO's and the local governments and the research government get together. To share their expertise amongst them. The memories can fade away essay said. So the primary, the priority was to pass the experience on to future generations. The people who talk about their experience mostly elderly people, people in the audience mostly young people. We need to foot that generation gap. The storyteller have to be careful so that this stories can be easily understood by young people in high school, children. We also, the young people themselves have to become storytellers. Because sometimes the young people, children, cannot fully understand the stories told by the Tohoku administrators, we use Kobe's word, people stories can be shared if the local language is used effectively. It has been more than two decades. We need to utilize material effectively. So we have the archives and that should be used better to be passed on to next generations. The archive that we have, you can access this on the Internet and the physical materials can be very powerful. I don't remember correctly but one person comedy used a very old word processor, all the word processor was very important to the user. So this is one example but we can utilize the physical, the position and things in order to pass stories to the next generations.

■Coordinator (Ms. Ito)

Thank you so much. While we would love to have everyone speak for one to two hours, we unfortunately passed out time limit. To quickly close could we please have a few last quick remarks from our panelists. Starting from Professor Maki please.

■Prof. Maki

In a disaster area people, those people they first 10 were most effective. So I want them to try to pass them on with their own words. When week about them passing it down, their people that cannot express out loudly in their words. It has been one or two decades for Kobe. Once they start talking, they cannot stop. So there are still those people, even in Kobe, we would have to wait for their timing. When they can talk, let them talk.

■Coordinator (Ms. Ito)

Thank you very much.

■Prof. Shigekawa

I talked about the closest, maybe the first or 2nd°. Or Otherwise they won't evacuate. My parents did not have a direct spirits being hit by a disaster. What I want to say is that what you are currently working on, to pass on the information of disaster, there is no one complete decisive solution, is a combination of various things and collaborations and corporations will enable that many information can be available to one person. Anything that kind of network and accurate information is important. Over time, going forward, even if you don't have a direct percent experience, visually or verbally, you will know how to protect yourself and you would know how to prepare for disaster, what you have to do, you have to be, and you have to have an educated and clever information to make that decision.

■Coordinator (Ms. Ito)

Now Professor Sato, if you would please.

■associate Prof. Sato

And that is what I would like to share with you. On the last, Mr. Sato, because we are running out of time, just one point. One of the person said that the let us try to be the Miyagi of the East. when we are talking about reconstruction and disaster prevention, we want to become a representative in the east of Japan. So that Tohoku of East Japan can take pride of be our representative of disaster prevention. I would like to go forward with you, become, and be able to realize such a position.

■Coordinator (Ms. Ito)

Thank you very much. Now Professor Tricia, please.

■Prof. Tricia

Thank you. And I just wanted to say, my one point, to say that there are a lot of opportunities as we think about lessons learned and how to really move forward in new way thinking about what we experienced in a disaster. To involve interdisciplinary research between engineering, social and policy sciences, but also arts and humanities and to bring the community in together in new ways to really make a shift. I am very excited and encouraged by some of the examples that the panelists shared going on right here in Miyagi Prefecture as well as the other impacted areas.

■Coordinator (Ms. Ito)

Thank you. And now Ms. Fujima.

■Ms. Fujima

So we actually create programs, we are the contents creators. So as Prof. Maki said, we have to be prepared when they are ready to speak. As well as repeatedly emphasizing that the continuation is important. So how can we continue and sustain our activity, we have to always think about it. And always review that weather our content so that we are generating and providing is the most optimal that we should have the most flexible to always change our

program for the better. And we have to accommodate and not use the committee to accommodate to the changing needs.

■Coordinator (Ms. Ito)

Thank you very much for all of your thoughts and examples. In summary, while we once again realize today just how difficult it is to retell narratives properly, it is nevertheless something the people of Miyagi must do. Today, we listened to stories of commitment and passion. Not just Miyagi, but Tohoku itself struggles with displaying passion to its onlookers. However, I believe there are many voices out there in hiding, and we must strive to make those voices heard. People to people, structure, as well as the networks are some of the keywords brought up today. I believe our commitment will be tested going forward; there are many organizations working on such activities and are keeping the narratives alive. There are remains from the tsunami that hold personal episodes of the disaster. There are storytellers and many others working towards this cause, and I would like to see all these efforts meet and align as we continue to progress. I apologize for running a bit behind schedule, and I will now like to conclude this session. Thank you all very much for of your participation.