

Mutual Aid between Cities during Disaster Reconstruction

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(Characteristics of Major Earthquakes and Problems for Support)

How should we think about mutual aid between cities during disaster reconstruction—or put another way—about coordination between cities? I would like to start by discussing what questions were raised concerning coordination and wide-area assistance between cities during this recent earthquake.

The first characteristic of major earthquakes and problem for support is the fact that they deal catastrophic damage to basic municipalities. Of the 20 or so basic municipalities along the coast, the government buildings in 15 or 16 of these municipalities suffered catastrophic damage. Not only were documents like certificates of residence and ledgers of fixed assets lost as a result of this, but so too were a considerable number of personnel, including management-level personnel. One-fourth of the personnel in places like Otsuchi, Rikuzentakata, and Minamisanriku passed away. Such an occurrence is unprecedented in Japanese history, and I believe that the fact that the municipalities that are inherently the most closely connected to the residents and which should have responded to the disaster were no longer functional is an exceedingly serious matter.

Second is the fact that the area afflicted by the disaster extended over a wide area. The number of municipalities to which the Disaster Relief Act was applied during this recent disaster came to a little less than 200 in total, excluding the Tokyo. This was applied to 25 municipalities after the Great Hanshin-Awaji Earthquake, meaning that close to ten times the number of municipalities were damaged this time around. Moreover, the damage straddled several prefectures. With the Great Hanshin-Awaji Earthquake the stricken areas were mainly restricted to within Hyogo Prefecture, especially the city of Kobe and its surrounding areas.

However, this time around the afflicted regions were considerably widely spread out, and so as a result there were shortages of support in an absolute sense, and gaps also appeared in a relative sense in those areas where support was needed but could not be delivered.

Characteristics of Major Earthquakes and Problems for Support

Characteristics of the Great East Japan Earthquake – Massive, extensive, complex

- ▶ **Massive destructive power – the stricken municipalities were dealt catastrophic damage**
Unable to seek aid or even accept assistance
 - ▶ **Extensive damage – the range of the damage was incredibly extensive and abundant**
Absolute shortages with support and relative gaps in support
 - ▶ **Complex concatenation of events – multiple impediments to assistance across both psychological and material dimensions**
Temporal delays arose with the assistance, such as problems with radiation and gasoline
- **Wide-area assistance and cooperation between municipalities were confronted with new challenges**

Third is the fact that there is a complex concatenation of events, which namely refers to the various problems that occurred centered around the accident at the Fukushima nuclear power plant. In such circumstances, especially when basic municipalities are in a state of collapse, then the question of just what sort of support structure they should go about forming becomes a significant challenge.

Before proceeding to the next topic, one thing that I would like you to keep in mind throughout the duration of my talk is that of thinking about problems related to disaster support on an X, a Y, and a Z axis. First off is the Z axis, which is a vertically oriented axis running from the national government to the prefectural and then basic municipal governments. I think that the question of how the prefectural and national governments should act when the basic municipalities have been destroyed by a disaster is one that pertains to the principle of self government. I feel that in cases where the basic municipalities are no longer able to carry out the responsibilities they should be carrying out, then the prefecture above them should step in to fulfill these responsibilities for them. For example, if they are unable to distribute donations then the prefecture should step in and deliver these for them. Simply put, this means that responsibility should be transferred upwards. Conversely, the authority for promoting reconstruction projects and the like should instead be decentralized, which is to say that such authority should be transferred downwards.

The Y axis refers to horizontal relationships—namely the relationships between local municipalities—which I will discuss shortly. In other words, this is the question of through what sort of relationship should the municipalities provide support to one another.

Then the X axis refers to the relationship between government administrations such as the municipalities with local communities, NPOs and NGOs, companies and business establishments, and other entities.

If coordination between the diverse and varied organizations in local communities—which is to say, the three axes of the X, Y, and Z axes—are not functioning properly, then it will be difficult to sustain these when the basic municipalities are in disarray.

(Status of and Challenges for Wide-Area Disaster Assistance)

Historically unprecedented assistance was deployed following this recent earthquake, with the total number of active Self-Defense Force personnel dispatched reaching 10 million people. In addition, as of this point in time well over a hundred thousand of general administrative personnel have been dispatched over and above the specialized personnel for fire fighting and water supply. Seeing as how approximately 10,000 people were dispatched during the Great Hanshin-Awaji Earthquake, this time some ten times that number of personnel have joined the response in the stricken regions from all around the country. With respect to fire fighting, 4,000 people from Emergency Fire Response Teams entered the stricken regions the day after the disaster. In addition to these, all manner of supporters, including police, Disaster Medical Assistance Teams (DMAT), and professional volunteers came to the stricken region quickly and in large numbers to carry out support activities.

Yet even despite the fact that such unprecedented assistance was provided, disarray with and gaps in this assistance still arose in different places. Because the need for assistance was so enormous and diverse, it created a situation in which no matter how much assistance flowed in it was still not enough. Moreover, the lack of coordination stemming from inexperience manifested itself in the form of hesitation at the rear and disarray on the front lines. Simply put, the rear and front lines were not communicating all that well. As an example, even though vast quantities of supplies were collected, logistics and distribution were not functioning up to par. Likewise, even though firefighters and others had come to the stricken regions there was confusion over where they should be dispatched to and to what extent. Since there was not a good understanding of what sorts of needs there were and where they were the assistance was delayed due to poor communication, despite the fact that supplies and people had flowed into the stricken regions.

On the other hand, those at the rear must also be quick to realize that, if for example roughly 200 municipalities are faced with difficult circumstances, then about 10 administrative personnel are needed for each one for a total of about 2,000 people. By rights it is the national government, the Ministry of Internal Affairs and Communications, that must reach out to municipalities all over the country and create a structure for dispatching personnel. Yet they were not able to handle this all that well, and so initially only assistance of somewhere on the order of 100 to 200 people could be provided. Neither the operations at the rear nor the communication at the front lines functioned up to par. This is something that we must reconsider in a level-headed manner.

Underlying the fact that operations at the rear did not function that well are the existing customary practices for assistance, such as the “principle of appeal.” This is largely concerned with the problem of who bears the cost burden. In other words, there is a general principle that the side making the appeal basically bears the burden for the costs. Because of this it appears that there is a sort of hesitation in the sense that if an appeal is made then assistance will be provided, but if no appeal is made then it is difficult to take action.

As I will discuss later, those municipalities that had sister city or friendly city relationships with the afflicted municipalities provided assistance in line with any agreements they may have had, irrespective of whether or not an appeal was made. Yet full-scale assistance efforts from other municipalities did not get under way until after April 5, after a considerable

amount of time had elapsed. This was because no structure for disaster assistance between the municipalities had been set up.

Status of and Challenges for Wide-Area Disaster Assistance

Historically unprecedented assistance was deployed

- ▶ Firefighters, police, Self-Defense Forces, DMAT, expert volunteers, and others provided support quickly and in large numbers
- ▶ The dispatch of general administrative personnel was ten times that from the Great Hanshin-Awaji Earthquake

Disarray with and gaps in the assistance arose in different places

- ▶ Because the need for assistance was so enormous and diverse, no matter how much assistance flowed in it was still not enough
- ▶ Lack of coordination stemming from inexperience manifested itself in the form of hesitation at the rear and disarray on the front lines
- ▶ Aid practices biased towards past experiences such as the “principle of appeal” produced a “wait and see approach”

(Outcomes and Lessons from Wide-Area Disaster Assistance)

Yet even though such challenges exist, this recent earthquake has given rise to new frameworks for wide-area assistance. One example of this is assistance through the counterpart method. Moves to provide assistance came incredibly quickly, especially from friendly cities and sister cities. For example, Tokai sent out an advance party to its sister city of Kamaishi on the evening of the day the earthquake struck. Since the municipalities that had sister city relationships with the stricken municipalities had a target in that they knew where to go, they could get started with assistance quickly. But even though municipalities that did not have friendly city or sister city relationships with the stricken municipalities prepared supplies and vehicles on their own, since no appeals came they did not know where to go, which resulted in them waiting on stand-by for multiple days at a time. Finally, this was apportioned out by the Japan Association of City Mayors and the assistance got underway, but in many cases it had taken an incredibly long period of time before this happened. Therefore, this has taught us that assistance through friendly city and sister city relationships is extremely effective.

What is more, the “paired assistance” carried out by the Union of Kansai Governments, wherein prefectures and cities were each allotted an afflicted prefecture or municipality to provide assistance to, was also effective. This is an assistance technique via the counterpart method that was used by the Chinese government for the major earthquake in Sichuan. Hyogo Prefecture dispatched study teams to Sichuan on numerous occasions, and the effectiveness of the paired assistance to Sichuan was brought up for discussion. As a result, the governor of Hyogo Prefecture offered a proposal which led to the six prefectures in the Kansai Region implementing paired assistance. With this method sustainable assistance can be provided, and in addition the sharing of roles will be clearly laid out in order to impose responsibility regarding their respective assistance.

The effectiveness of frontline bases and information bases was also affirmed. For example, the Tohoku Expressway Volunteer Information Center was established by Hyogo Prefecture, the Hyogo Council of Social Welfare, and the Hyogo Volunteer Center (with which I am affiliated) as an information base to supply people with the latest information on things like local needs. It was set up in a structure on a strip of land adjoining the Izumi PA on the Tohoku Expressway (the former Izumi main road toll booth maintenance facility). Staff and volunteers from Hyogo Prefecture and volunteers from Miyagi Prefecture provided guidance regarding lodging facilities and the state of the roads, as well as information on things like the need for volunteer activities at this information center, which was extremely effective. What is more, the Tono Magokoro Network is a massive volunteer and relief center that was created in Tono by Tono City, the Tono Social Welfare Council, and volunteers. In other words, in cases where the stricken region is in a state of collapse it is not possible to establish these sorts of information centers, support centers, volunteer centers, and so on within said region. In these cases it is much more effective to establish frontline and information bases outside of the afflicted region. This is being commended as a new initiative.

From there, the width and breadth of the assistance for this earthquake extended out enormously. It is believed that specialized volunteer organizations with corporate status, such as NPOs and NGOs, are still currently active in nearly 2,000 afflicted areas, which represents a magnitude of assistance unlike any seen before. What is more, organizations like Peace Winds Japan that primarily operate outside of Japan have begun operating within the country. A diverse array of volunteer groups have also been providing support activities across sectors such as education, culture, the arts, medical care, and welfare, which has given rise to partnerships between these organizations as well.

Outcomes and Lessons from Wide-Area Disaster Assistance

New frameworks for wide-area assistance were created

- ▶ **Effectiveness of the counterpart method**
 “Paired assistance” by the Union of Kansai Governments
 Assistance through friendly city and sister city relationships
- ▶ **Effectiveness of frontline bases and information bases**
 Tono Magokoro Network and the Tohoku Expressway Volunteer
 Information Center

The width and breadth of the assistance extended out enormously

- ▶ **Extensive assistance through the participation of large numbers of supporters**
 Active engagement by expert volunteer organizations and private companies

▶

On top of this, assistance by private companies was also carried out with considerable vigor this time around. The university with which I am affiliated is active in Oshima, Kesunnuma, where Fuji Xerox Co., Ltd. is also actively working on tasks such as clearing out mud. Up until now companies had never made efforts at quite such a scale. This comes against the backdrop of an era in which there are demands that companies contribute to society, and I find it commendable that this new world is unfolding in which companies and NPOs, and government administrations and communities are joining together.

(Future Challenges for Wide-Area Assistance)

Hereafter, overhauling plans for giving and receiving support when disasters strike ultra wide areas will pose a challenge for government administrations. First among these is to set in place frontline bases and frontline headquarters to coordinate the assistance. I believe that the national government's frontline headquarters should not have been in Sendai City, but should have been established in a central part of the afflicted regions, such as Ishinomaki City. Simply put, when it comes to this current support structure there is far too much distance between the rearward support hubs and the front lines. This was a problem pertaining to the cooperation between the national government and the afflicted regions, and as such the question of just where to establish the national government's headquarters when disaster strikes an ultra wide area is an issue that deserves consideration.

Second is the challenge of setting up a system to allocate and coordinate assistance between municipalities. With regards to paired assistance, I'm inclined towards thinking that new relationships that are as finely detailed as possible should be set up everywhere from the prefecture level, to between cities, and even down at the community level between elementary schools. There may be a sense of unease with strangers, but with people you can trust, such as your friends and family, it becomes easier for the side offering support to provide assistance, and also makes it easier for the receiving side to accept it. It is important that friendly relationships, like sister city relationships, be built up in advance on a day-to-day basis.

At the same time, sector-specific experts must also be dispatched. What I mean when I say sector-specific is that, for example if a house has been damaged, then a disaster victim's certificate must be issued by appraising the extent of the damage—like whether it is completely destroyed or partially destroyed—and so experts are needed to perform this appraisal work. A great many emergency safety appraisers for damaged structures who carry out such work are trained in Hyogo Prefecture, and so Hyogo Prefecture is able to dispatch such appraisers or give instructions for the appraisal work, by way of example. That is to say that matters requiring high level of specialization have already been apportioned out among the regions in advance. A system for apportioning and coordinating assistance like this will be needed.

Third is the establishment of emergency relief units and long-term dispatch units comprised of general personnel. Assistance by firefighting and police emergency relief units was provided smoothly during the recent earthquake. But in addition to such aid during disasters, there are also important roles for general personnel with respect to things like the aforementioned disaster victim's certificates, public welfare, running the evacuation shelters, and searching for sites for temporary dwellings, for example. Therefore, thorough instruction should conceivably be given to employees who are skilled at such work in advance, and they should be dispatched as relief units. Perhaps the Japan Association of City Mayors already has such an initiative for these dispatches.

What is more, plans for receiving assistance must also be set in place. In recent years the support structures for when disasters strike cities have been enhanced, although there may be some uneasiness over matters like where the financial burden for this falls. But these are still not adequate when it comes to receiving assistance. Taking Kobe City as an example, while it has disaster control plans for going to lend support, there is nothing in its plans about receiving assistance. But it is also necessary to give forethought to matters like parking for support troops and ensuring lodging quarters through the use of passenger boats, for example, when receiving support after being struck by an actual disaster.

Furthermore, assistance tends to concentrate around those municipalities that are adept at sending out an “SOS” signal saying that they are somehow in trouble, and so how municipalities go about sending out this SOS signal is important for when receiving assistance as well. Perhaps it was because of the excessive modesty of the people of the Tohoku Region, but we did not hear anything from them about what specific sorts of assistance they needed, and so we had no idea what we should bring. Since the municipalities have not given that much consideration to plans for receiving assistance thus far, including sending out SOS's, these will have to be rethought.

Future Challenges for Wide-Area Assistance

Overhauling plans for giving and receiving support when disasters strike ultra wide areas

- ▶ **Setting in place frontline bases and frontline headquarters for assistance and cooperation**
 - Cooperation between the national government and the afflicted municipalities
 - Cooperation between the administration, central agencies, and private agencies
- ▶ **Setting up a system to allocate and coordinate assistance between municipalities**
 - Regional apportionment (paired assistance) and sector-specific assistance (dispatching experts)
 - Implementing paired assistance in cities and towns, and even down to the community level
- ▶ **Establishing emergency relief units and long-term dispatch units comprised of general personnel**
 - Erect rapid and sustainable systems
 - Standardize administrative systems for disasters

(Characteristics of Earthquakes and Problems for Reconstruction)

As was seen with the recent disaster response, when people are faced with such unprecedented circumstances it generates disarray and paralysis because institutions, financial resources, and structures cannot be maintained. In terms of specific problems, the first is that the application of institutions was rigid and inflexible. For example, the Pharmaceutical Affairs Act prohibits pharmaceuticals from being passed around from hospital to hospital. The purpose of this was to ensure that the system for distributing medications did not come crashing down, or in other words to ensure that inappropriate medicines were not provided to patients. But during the recent earthquake the standby medicines for patients with intractable illnesses did not arrive in time after having been ordered from pharmaceutical wholesalers. As such, it would have been ideal if hospitals could have received spare medication from neighboring hospitals, but since this would have run afoul of the Pharmaceutical Affairs Act it could not be done. In addition to this, dropping supplies from helicopters is also banned by law, and disposing of accumulated human waste by digging holes for it on places like sports fields is also prohibited by health laws. When it comes to reconstruction as well, this is also bound to the existing institutions, making free ideas and free responses impossible.

During emergencies responses that are in line with such institutions are needed, but there are also situations in which extralegal measures are necessary. For example, when donations cannot make it through to reach the disaster victims, then it would be ideal if checks for one million yen could be sent to residents in the afflicted regions through the Post Office. The Post Office could deliver them to people even when they change residences, and so that way

the administration would only have to deal with the portion of these that get returned because they could not reach the residents. Likewise, in cases where donations are handed out, if it comes down to a situation where this has to be done based upon an appraisal by the administration of whether someone's home was completely destroyed or partially destroyed, then the disaster victims will have to wait forever before the donations reach them. Special responses must be made in such times of crisis, but in reality these are almost impossible to do by applying such institutions. I feel that the fact that the authority for this has not been granted to the municipalities is also a problem.

Furthermore, there is the problem of reconstruction costs. Simply put, I believe that the speed of the reconstruction is determined by the speed with which public spending is dispatched, and so money must be doled out thick and fast.

In regards to this point, Japan has traditionally adopted a principle of restoration to the original state which is called for by law, under which disaster reconstruction means returning things to the way they were before. So in order to do this, financial support is provided by the national government. If there has been 5 trillion yen worth of damage then 5 trillion yen worth of support will come from the national government. Since the amount of damage from the Great Hanshin-Awaji Earthquake was 10 trillion yen, 10 trillion yen came from the national government. At the time of the Chuetsu Earthquake in Niigata, the prefecture claimed that there was 4 trillion yen worth of damage, and so as a result the national government sent 4 trillion yen worth of support. For the Great East Japan Earthquake, the Cabinet Office had been claiming from early on that the damage was between 15 and 25 trillion yen, and so at this point in time there are no expectations that support exceeding 25 trillion yen will be forthcoming.

Since the national government has been calling for "creative reconstruction" for the Great East Japan Earthquake, a variety of different expenses will have to be amassed on top of the amount of damage, which follows naturally from the fact that this is based on this principle of restoration to the original state. The national government does not have the money, and so I believe that this custom of saying that if the amount of the damages is 10 trillion yen then that will be spent must be altered in accordance with these circumstances. But at present they are bound to the total amount of the damages, and so no forward progress is being made. Moreover, I am of the thinking that more money needs to be devoted to industrial reconstruction more so than rebuilding homes; which is to say improving harbors and the reconstruction of the fisheries industry and agriculture. But there is no money to devote to industrial reconstruction in this 25 trillion yen framework. This means that true reconstruction cannot be achieved within this arrangement in which most of the costs will be used to rebuild roads and houses. The national government's financial situation is incredibly tight, and so I think that we need to give more thought to this arrangement of deploying public spending during disasters whereby the government just takes the plunge and doles out money during crises.

Characteristics of Earthquakes and Problems for Reconstruction

Disarray and paralysis are generated because institutions, financial resources, and structures circumstances cannot be maintained in response to such unprecedented circumstances – Delays in and vagueness with the reconstruction plans of the stricken municipalities

- ▶ **Rigid and inflexible application of institutions – flexible responses suited to emergency conditions**
Unprecedented systems and extralegal measures are needed
- ▶ **Financial constraints beneath shortages – deploying finances to unleash reconstruction capacity**
Boosting the speed of the reconstruction is the key to economic independence
Ensure financial resource commensurate with the appeals for “creative reconstruction”
- ▶ **Old structure of following precedent – reconstruction structure suited to ultra wide area damage**
Shift accountability upwards and transfer authority downwards
Create structures for vertical cooperation and horizontal cooperation

(Wide-Area Cooperation for Reconstruction)

With respect to the Y axis of the three axes previously mentioned on cooperation between municipalities, thought must be given to support arrangements for when wide-area disasters like this recent one occur. For this I believe that there are two problems when it comes to wide-area cooperation, one dealing with mutual cooperation with far away municipalities, and the other dealing with how neighboring municipalities should help one another. Though these are conceptual in nature, I would like to mention three important points here regarding this first problem: continuous support, wide-area support, and collaborative support.

Continuous support is particularly important. Currently, personnel from all over the country are engaged in support for the afflicted region, but these personnel are switched out after a short period of time. For example, in cases where personnel from a certain city who came to provide assistance return home, as long as replacement personnel to take over for their work are dispatched from the same city then there can be some measure of continuity. But in reality there are various different people coming from all over Japan, and so all the personnel in the afflicted regions do is explain the work to these personnel members who come to offer assistance. Since they are replaced after a short period of time then what actually ends up happening is that a substantial amount of time is devoted solely to explaining the work that they want them to help with. So in this sense what would be most preferable would be more long-term dispatches. Moreover, with respect to the cost of long-term dispatches, the most desirable thing would be for the national government to bear the costs of long-term dispatches. But as things currently stand there is a bad practice whereby the afflicted municipalities must pay for the cost of dispatching personnel, and so they are hesitant when it comes to long-term dispatches. Moving forward we will have to consider questions like how to carry out continuous and lasting personnel dispatches, and what should be done about systems for handing over the work.

What is more, consideration must be given to “standardization” on a number of fronts when it comes to dispatching personnel. For example, while this problem has currently already been solved, at the time of the Great Hanshin-Awaji Earthquake the dimensions of the firehouses and the connectors for connecting the hoses differed from municipality to municipality, and so

a problem arose in which the firefighters who came to help could not connect their hoses. At the same time, as another example with GIS the systems differ in each municipality, and so when people come from other municipalities to help they may not know how to use the system. Speaking of issues that currently pose problems, there are the attempts made to create ledgers of disaster victims. Yet while Nishinomiya City created a system at the time of the Great Hanshin-Awaji Earthquake, this has not been adequately disseminated nationwide, and so ledger systems for disaster victims were created that differed in each of the municipalities and thus these cannot be integrated. Advance arrangements must be made so that a bare minimum degree of work, such as that for the structure for emergency safety appraisals and disaster victim's certificates, can be carried out through uniform nationwide systems. If this can be done through the same software then the personnel who come to help can get started on the work right away, but there is a problem in the sense that such arrangements have not been set up.

Next comes wide-area support. It is important that the counterpart method be adopted even at the reconstruction stage, and that support be provided not only in times of emergency, but that it continue on until the reconstruction of the afflicted region has been accomplished. Sichuan, China has adopted this method. In Sichuan those on the side lending assistance are all working together to reconstruct the city, including everyone from the carpenters up through the experts crafting the reconstruction plans. So for example if Nishinomiya City were to lend assistance to Kesennuma City, then this could be done in a manner whereby Kwansei Gakuin University helps Kesennuma City with its reconstruction plans, or when it comes to clearing rubble personnel from Nishinomiya could be dispatched in a team to do this. It may also be necessary to provide continuous assistance depending on the situation.

But in Sichuan's case there were also adverse affects. After the massive earthquake in Sichuan the city of Shanghai assisted Dujiangyan. So as a result Tongji University in Shanghai drew up the reconstruction plans for Dujiangyan, and construction firms from Shanghai performed the work in line with these plans. This also had the dimension of being an employment measure from Shanghai's perspective. Unemployed workers from Shanghai were brought along to perform the reconstruction of Dujiangyan, and so as a result of this there was a drop off in the work in Dujiangyan. Because this sort of arrangement leads to people being deprived of work, it is not enough to merely provide relief, but this must also leave jobs in the afflicted regions. Of course if paired assistance is taken too far then this will not truly lead to strengthening the afflicted region. For this reason what is needed is a perspective of assistance that unleashes the strengths of the afflicted municipalities, rather than just assistance that merely provides supplies. As this indicates, we cannot necessarily say that China's counterpart method is without its faults. But I believe that it is a fact that it helps to expedite reconstruction in the sense that relationships in which outsiders take responsibility for supporting the afflicted municipalities promote continuous support from a variety of different angles, which also produces responsibility.

Next up is collaborative support, which refers to a perspective of having the afflicted municipalities and the supporting municipalities work together to create a safe society. At present, personnel from municipalities all over the country are heading to the Tohoku Region to provide assistance, because making the afflicted regions in Tohoku safe would also lead to ensuring the safety of the various municipalities. Stated in terms of tsunami countermeasures, this refers to how consideration was given to tsunami countermeasures and what sort of urban development was performed for the reconstruction of the Tohoku Region. Therefore, with what the personnel who went to lend assistance learn there they can harness their know-how for the tsunami prevention plans in their own municipalities after having returned to their cities.

I mentioned a little while ago how 10,000 personnel members went to provide assistance during the Great Hanshin-Awaji Earthquake, with the majority of this assistance coming from Shizuoka Prefecture. The reason behind this was because there was a strong possibility that an earthquake would occur in Shizuoka in the Tokai Region in the near future. So therefore personnel that went to provide assistance to Kobe would also be of assistance with disaster countermeasures in Kobe due to their various experiences, which would be a huge help to Shizuoka for when damage from this earthquake occurred. In other words, going to assist in the afflicted regions does not only help said regions, but is also an enormous help to the municipality that goes to assist as well. As this indicates, the perspective of how to go about creating relationships in which people go to provide assistance and learn from this is an extremely important one.

Wide-Area Cooperation for Reconstruction

Create reconstruction assistance structures suited to the characteristics of the enormous wide-area damage

- ▶ **Sustainable support – Sustainable, long-term support suited to protracted reconstruction**
 - Sustainable & lasting deployment of personnel, etc.
 - Support during emergencies leads to cooperation when things are normal
- ▶ **Wide-area support – Wide-area paired support at the reconstruction stage as well**
 - Intellectual support for formulating plans
 - Resource support for implementing projects
- ▶ **Collaborative support – Mutual aid support for win-win relationships**
 - Creating a safe society together
 - Creating a future society together

(Cooperation with Neighboring Regions for Reconstruction)

Finally, I would like to discuss the latter problem, which is to say the issue of cooperation with neighboring regions. With massive wide-area disasters like the Great East Japan Earthquake, agreements on mutual disaster relief during disasters concluded with one's neighbors are of little use. Since neighboring municipalities suffer the same damage, assistance never shows up because they are relying upon one another for this. Yet when you factor in reconstruction then these result in relationships where neighbors can help one another enormously. For example, the Futaba-gun in Fukushima is the closest region to the nuclear power plant, and so it is in close cooperation. At present the towns and villages within Futaba-gun are aiming to return home from their evacuation shelters, but those towns that are close to the nuclear power plant cannot go home for the time being. On the other hand, places like Kawauchi-mura have currently been delisted as emergency evacuation preparation zones, so the people there can return home promptly. Therefore, a debate has been moving progressing over building a large town in Kawauchi for the residents of Tomioka and other towns that are close to the nuclear power plant. Even if they cannot return to their own towns, they will still be provided with land to build new residences throughout all of Futaba District. Or in order to rebuild agriculture it will first be necessary to mutually supply land on which agriculture can be carried out, as well as to find a good way for mutually sharing employment.

Cooperation with Neighboring Regions for Reconstruction

- ▶ **Even if municipalities that were mutually damaged cannot help one another during emergencies, they can still help each other during reconstruction**

Wide-area cooperative structures for reconstruction

Mutually complementary relationships – mutually complementing what is lacking

- **Employment, land and other resources**

Mutually collaborative relationships – moving forward on shared challenges in solidarity

- **Acquire financial resources, cooperate on projects**

For example,

Reconstruction exhibitions

Sanriku Iwaki Railway

What is more, the Futaba District has been able to erect cooperative relationships for when it makes various appeals to the national government as well. Moreover, I would like to see them hold reconstruction exhibitions. They could hold a world exhibition on March 11 two years later and, even though there are roughly 500 villages from north to south in the afflicted region, pavilions could be made for each village. When doing this, they could turn village facilities for the new towns into pavilions, thereby constructing 500 pavilions with which to attract people from around the world. This is all hypothetical of course, but I do think that it is extremely important for all of the municipalities in the afflicted region to form relationships of mutual cooperation. It is important that regional revitalization and reconstruction continue to be carried out through cooperation with neighboring regions, such as by having the Sanriku Railway run from Hachinohe to Iwaki along the coastline so that people can sample the local fish when they arrive at each station, as an example. As things now stand, from time to time you catch glimpses of neighboring municipalities acting as rivals and vying with one another over fishing boats and freighters. But rather than doing this they instead need a structure for mutual cooperation across the entire neighboring region. In that sense, I feel that the wide-area mutual relief agreements should not only cover mutual aid immediately after a disaster, but should be made to include cooperation over reconstruction as well.