



Considerations on Human Resource Cooperation among Local Governments after Disasters

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Abstract

In Japan, it is a local government that takes the initiative to respond to natural disasters. Although the national government immediately starts support activities, a local government plays the main role, because it is nearer affected victims and it implements activities based on its local needs.

However, the capacity of a single local government to cope with a huge disaster is limited. When a disaster occurs, unaffected local governments give support to affected ones. It is helpful to complement lack of staff. In addition, support from experienced local governments in disasters is advisable for an unexperienced affected government. Collaboration among local governments or cooperation with NPOs/NGOs has become popular. This study considers overall support system initiated by local governments to respond to disasters.

There are various types of collaboration systems. For example, there are seven regional blocks by prefectures. There is also support agreement among 20 big designated cities, agreement among sister municipalities and others. In addition, the national government has created a new system to coordinate a matching system among local governments. The problem is each collaboration does not always link with each other. Such situation causes confusion when an affected government receives support. To maximize various support, a coordination system is necessary.

Furthermore, we should develop the capacity for receiving support before a disaster occurs. For example, if it has been decided how long, how many staff and what kind of support would be needed, support could be more effectively. Thus, some local governments have already launched such a plan. In addition, the local governments should also prepare a BCP, Business Continuity Plan. They should decide which business they prioritize and who are in charge of that business during emergencies. It is found that a good cooperation system requires strategies for both governments that send and receive support.

We should also consider using of self-help, mutual support and public support. Presently, volunteer or NPO/NGO activities are popular in Japan. Their activities range from shelter operation in the short term to community development in the long term. Some of them have created their own support network, and they play an intermediate role between local governments and communities. Since they are experienced and they have accumulated expertise, instead of unexperienced local governments, they can implement care activities for victims. However, the resources of NPOs/NGOs are too limited to continue their activities. A local government can provide subsidies or office spaces. A local government and an NPO/NGO can complement each other's activities.

Japan has decentralized. Regarding the support system, I make a detailed analysis of the above points to consider the good practices of the support system and challenges.

Keywords: disaster response, local government, NPO/NGO, capacity of receiving support, support system



1. Introduction

When a huge disaster occurs in Japan, unaffected local governments (prefectures and municipalities) dispatch their staff to support affected local governments. Such cooperation has become popular since the Great East Japan Earthquake in 2011. This trend has been along the line of decentralization. Several staff were dispatched to affected prefectures like Iwate, Miyagi and Fukushima. Such support, which almost covers all fields that local governments are in charge of, including housing, civil engineering, urban planning, industry, health, medical, welfare, environment and education, has continued. In addition, special jobs have been created to cope with disasters at emergency times.

However, many types of support systems on the following fell into confusion due to lack of proper coordination.

- 1) Cooperation initiated by the national government
- 2) Cooperation initiated by prefectures' associations, wider local governments
- 3) Cooperation initiated by municipalities' associations, basic local governments
- 4) Cooperation initiated by other types of relationship

I consider what an effective coordination system is. This paper consists of the following elements. (1) I summarize the role of both national and local governments in Japan, according to the Disaster Management Act. (2) I analyze the framework of human resource support, where I investigated challenges of the implementation of coordination. (3) I consider a case study of the coordination by the Kyushu Regional Block after the Kumamoto Earthquake Disaster in 2016. (4) And I propose an effective coordination system for human resource cooperation. (5) I also consider the role of the private sector.

Therefore, I analyzed some relevant materials and interviewed staff of the departments in charge (disaster management, personnel management and municipality management) of the local governments as shown in Table 1. Some have experienced disasters (Great East Japan Earthquake Disaster in 2011, Kumamoto Earthquake Disaster in 2016, and the Rainfall Disaster in 2019). Others are preparing for the future Nankai Trough Earthquake Disaster. And I had studied future prospects for human resource support among local government after disasters [1] and effective human resource support by prefectures' associations using the lessons of Kumamoto Earthquake in 2016 [2]. This study further investigated human resource support framework, where I focus on coordination, including the one with a private sector.

Table 1 :Interview of local government

Disaster	Local Government	Department in charge
Great East Japan Earthquake Disaster (2011)	Miyagi Prefecture	<ul style="list-style-type: none"> •Crisis management •Personnel management •Municipality management
	Tagajyo City in Miyagi Prefecture	
	Kesennuma City in Miyagi Prefecture	
Kumamoto Earthquake Disaster (2016)	Kumamoto Prefecture	
	Oita Prefecture	
	Hyogo prefecture	
Rainfall Disaster (2019)	Hiroshima Prefecture	
	Sojya City in Okayama Prefecture	
	Saka Town in Hiroshima Prefecture	
	Uwajima City in Ehime Prefecture	
(Future) Nankai Trough Earthquake Disaster	Tokushima Prefecture	
	Tottori Prefecture	
	Minami Town in Tokushima Prefecture	

2. Role of national and local governments, according to the Disaster Management Act in Japan.

Japan's Disaster Management Act regulates the role of the municipality, prefecture and national government. A Municipality is called a basic local government, which should mainly respond to disasters to save the lives and properties of citizens. There are three types of municipalities: city, town and village, in principle, according to the size of population. Currently, there are 790 cities (in which 20 cities are



designated ones with a population of over 700,000), 745 towns and 183 villages. There were 1,718 municipalities as of April 2015. They take care of neighborhood associations (communities) and they have semi-public entities, including industry, social, women, aged, youth, and sports associations. They have their own disaster management plans.

A Prefecture, as a regional local government, is in charge of the coordination of affairs among municipalities. When the scale of disasters is beyond the capacity of a single municipality, a prefecture should mainly cope with disasters and implement complementary affairs. There are 47 prefectures. They also play an intermediary role between national and municipality governments. They have their disaster management plans.

The national government implements total coordination with local governments and designated public organizations. It gives instructions and advice to local governments. It has its disaster management plan.

3. Framework of human resource support, its challenges and coordination

3.1 Framework by local governments

3.1.1 Regional block by prefecture

A total of 47 prefectures can be divided into 7 regional blocks: “Hokkai-do/Tohoku”, “Kanto”, “Chubu”, “Kinki”, “Chugoku”, “Shikoku” and “Kyushu” blocks. Many of them employ a counterpart system within their block where supporting and receiving prefectures are specified in the event of a disaster. Some blocks adopt similar counterpart systems when they support other prefectures outside the block. The Unions of Kansai Governments (UKG) first developed such a system in the Great East Japan Earthquake in 2011.

3.1.2 Cooperation system by 20 designated cities

When a huge disaster occurs in some designated cities, others support the affected member city. These cities have accumulated their lessons through various supporting activities among the same members.

3.1.3 System based on municipalities

Municipalities in the same prefecture have cooperation agreements, where a prefecture takes the initiative in the event of a disaster. Some of them have similar agreements outside their prefecture for themselves. The second type, the agreements outside their prefectures, is based on the relationship in normal times, including the one by sister cities. On the other hand, there is a different type of cooperation without any relationship before the disaster.

3.1.4 New counterpart system initiated by the Ministry of Internal Affairs and Communications, National Government

The ministry created the new counterpart system. Any affected municipality can get support from other prefectures and designated cities, in cooperation with the ministry, National Governors Union (NGU) and designated cities. The municipalities also receive advice from an appointed prefecture or designated city.

3.1.5 Support of technical staff coordinated by other ministries

For example, the Ministry of Health, Labor and Welfare Medical coordinates to ensure the availability of welfare staff from local governments, while the Ministry of Land, Infrastructure, Transport and Tourism is in charge of civil engineering, architecture and urban planning staff. Both of the ministries have a strong relationship with local governments on technical matters in normal times.

3.2 Occupation

Occupation is mainly divided into administrative and technical staff. Administrative staff ranges from general, personnel, accounting and planning to project affairs in every field that local governments cover. In addition, in emergency times, their duties include management of disaster operation center, management of



evacuation shelter, damaged house inspection and issuance of disaster victim certificates. Technical staff includes civil engineering, architecture, electricity, agriculture, health and cultural property.

3.3 Term of dispatchment

Term of dispatchment is divided into short term, ranging from one to several weeks, and medium-long term, ranging from several months to a few years. Several occupations are started soon after a disaster, including “operation of evacuation shelters”, “psychological care”, “damaged house assessment”, “building demolition at public expense” and “preliminary survey for temporary housing”. It is beyond the capacity of a single affected local government and it needs much support from other local governments. In the recovery and reconstruction stage, staff for hard infrastructure is required in several fields, including civil engineering and architecture.

3.4 Challenges in the coordination of human resource

3.4.1. Lack of dispatched staff

No local government has an adequate number of staff, because of municipal mergers, administrative reforms or financial reforms. The number of municipalities decreased from 3,232 in 1999 to 1,730 in 2010. In addition, the number of staff in all local governments decreased from 3,282 thousand in 2004 to 2,737 thousand in 2018. Especially, the number of technical staff (e.g., civil engineering and architecture) has been insufficient. Instead, affected and some supporting local governments have had to hire temporary staff, many of whom are retired.

3.4.2 Mismatch between needs and seeds for giving support

Some supporting governments would like their staff to gain experience in order to prepare for a future disaster. In addition, they sometimes designate a certain occupation for their staff to cooperate with. Furthermore, some staff are young and have less practical experience. It is not easy for an affected government to decline such an offer of support.

3.4.3 Capacity for receiving support by affected governments

If affected governments are less experienced in the management of disasters, they do not know what to do after a disaster occurs. They cannot estimate the necessary number of staff when they get support. They lack coordinating staff to receive it. The national government has encouraged local governments to prepare plans to get such support.

3.5 Temporary conclusions

Based on the interview of affected or supporting prefectures or municipalities, the following are the temporary conclusions.

3.5.1 Close relationship during pre-disaster times

Many affected governments tend to hesitate to give further requests to supporting governments. However, if they have already had some relationship before disasters, they find it easier to make such requests. Such relationships are mainly by mutual support agreement or by sister city relationship. They accumulated face-to-face relationships through meetings, events or personnel exchanges.

3.5.2 Support based on experience in past disasters

Supporting local governments that have experienced disasters can explain what is expected in the aftermath of a disaster. Since affected ones are in a state of confusion, it is quite helpful for the supporting local governments to show the way ahead to the affected local governments.



4. Case study of the coordination by the Kyushu Regional Block after the Kumamoto Earthquake Disaster in 2016.

The Kumamoto earthquake occurred on 14 April 2016, which was a foreshock, and on 16 April 2016 (a main shock). The death toll from the earthquake was 154 and the number of heavily injured was 1,033. In addition, 8,532 houses had collapsed totally, while the number of half or partially collapsed was 169,254. A total of 12 municipalities were affected.

In this earthquake, Kumamoto prefecture, an affected prefecture government could not afford to link supporting governments with affected municipalities. Instead, Oita prefecture government, which borders Kumamoto and a managing prefecture in the Kyushu block governors' association, played the role of coordinator of various supporting governments. Oita negotiated with prefectures inside and outside Kyushu, other governments and the central government. This study considered coordination within the association on the following.

4.1 Counterpart by the Kyushu Governors' Block Association

The association comprises 9 prefectures (Fukuoka, Kagoshima, Kumamoto, Miyazaki, Nagasaki, Oita, Okinawa, Saga and Yamaguchi) mainly in the Kyushu region (Yamaguchi borders Kyushu). The Support Agreement regulates the association at the time of disaster among Kyushu prefectures and Yamaguchi. Oita, as a managing director under the agreement, has a headquarters for support activities of the association. It had regular meetings, implemented trainings and drills, and cooperative support activities in the rainfall disasters in the northern part of Kyushu in 2017. They have already established a close relationship among member prefectures.

In the Kumamoto Earthquake, those 8 prefectures other than Kumamoto gave support by the counterpart system, through which affected municipalities were specified. The association also coordinated other counterpart systems by the UGK, NGU and so forth.

Chart 1 shows the timetable of decision making for matching after the foreshock on 14 April 2016. Although there was no contact by the Kumamoto prefecture during the foreshock, Oita prefecture immediately dispatched their liaison to Kumamoto. They arrived at Kumamoto 3 hours later. On the 15 April, they discussed with staff at Kumamoto and other liaisons from the UKG, NGU and Shizuoka prefecture (which has an agreement with Kumamoto). After the main shock on 16 April, Kumamoto prefecture made a request for dispatching support staff for Kumamoto. Oita completed a counterpart, including coordination with the UKG and the NGA on 17 April at the first stage and on 19 April at the additional stage. It considered the distance from the supporting prefecture to the affected municipality and the feasible number of staff for each dispatchment. The rest of the staff was mainly covered through the UKG and the NGU. Table 1 shows the matching of affected municipalities and supporting prefectures. Due to the close relationship at pre-disaster, the arrangement by the association was relatively smoothly and flexible.

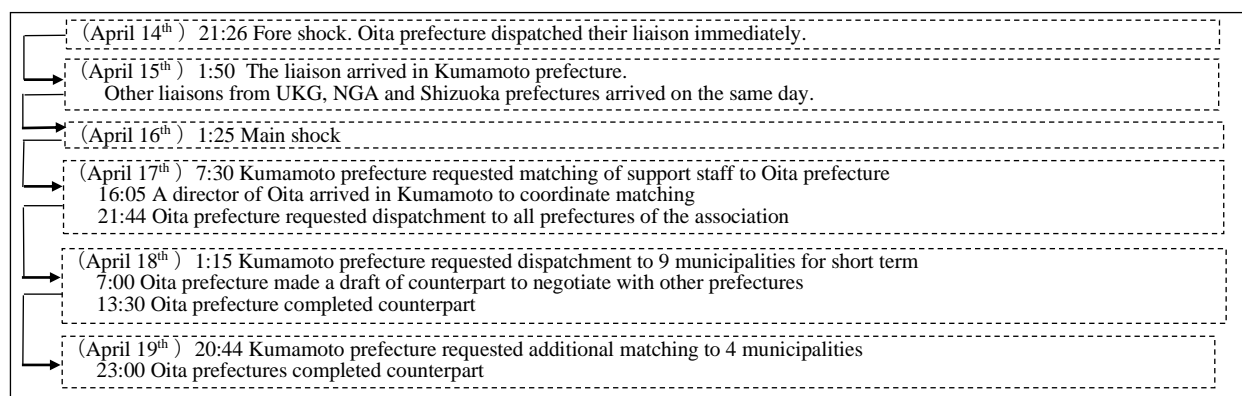


Chart 1: Timetable of process for making counterpart [3]



Table 1 : Matching of affected municipalities and supporting prefectures [4]

Affected municipalities	Supporting prefectures	Affected municipalities	Supporting prefectures
Uto City	Nagasaki and Okinawa	Kashima Town	National Governors' Association
Minami Aso Village	Oita and National Governors' Association	Mashiki Town	Fukuoka and Union of Kansai Governments
Aso City	Nagasaki and Miyazaki	Kikuchi City	Nagasaki
Otsu Town	Union of Kansai Governments	Kikuyo Town	Fukuoka and Union of Kan-sai Governments
Nishihara Village	Saga	Kousa Town	Kagoshima
Uki City	Kagoshima	Santo Town	Miyazaki
Mifube Town	Yamaguchi		

4.2 Support from Union of Kansai Governments (UKG)

The UKG is a coalition of prefectures mainly in Kinki region. Currently, the members comprise 8 prefectures (Hyogo, Kyoto, Nara, Osaka, Shiga, Tottori, Tokushima and Wakayama) and 4 designated cities (Kobe, Kyoto, Osaka and Sakai). The UKG covers 11 areas as their joint programs, including disaster management, for which Hyogo prefecture is a representative.

It has launched support activities by counterpart to 3 severely affected prefectures (Iwate, Miyagi and Fukushima) in the Great East Japan Earthquake from 2011. Support to Kumamoto has become the second case, where it mainly supported Mashiki, Otsu and Kikuyo municipalities through the negotiations with the Kyushu association. Especially, Mashiki was the municipality most severely devastated in this earthquake.

The UKG established the support system in chart 2. The following are its characteristics. Its support was organizational, instructive and wide based on the experience from past disasters.

- 1) It set up an on-site headquarters in the affected site. Staff, deputy director-general, was dispatched as a representative. It was possible to make decisions in Kumamoto without waiting for instructions in Hyogo.
- 2) The UKG was the advisor of the affected municipalities at the post disaster stage. Especially, Mashiki town lost their local government building, because it collapsed, and its mayor had no idea of what to do. The UKG suggested that the directors of Mashiki should return to office from the evacuation shelters to open a disaster countermeasure headquarters and that the staff of UKG stay at the shelters instead.
- 3) Support by the UKG broadly covered shelter operation, volunteer coordination, health, medical and welfare support, debris disposal and building temporary houses. Particularly, it created a special team for evacuation shelter, housing damage support and inquiry counter, which jobs were busy in a certain time.
- 4) In addition, the UKG also set up a logistic support team. The team covered contacting the headquarters at the UKG, writing daily reports and attending meetings. It also coped with some negotiations or arrangements between the supporting and recipient staff. Due to this team, other teams were relieved

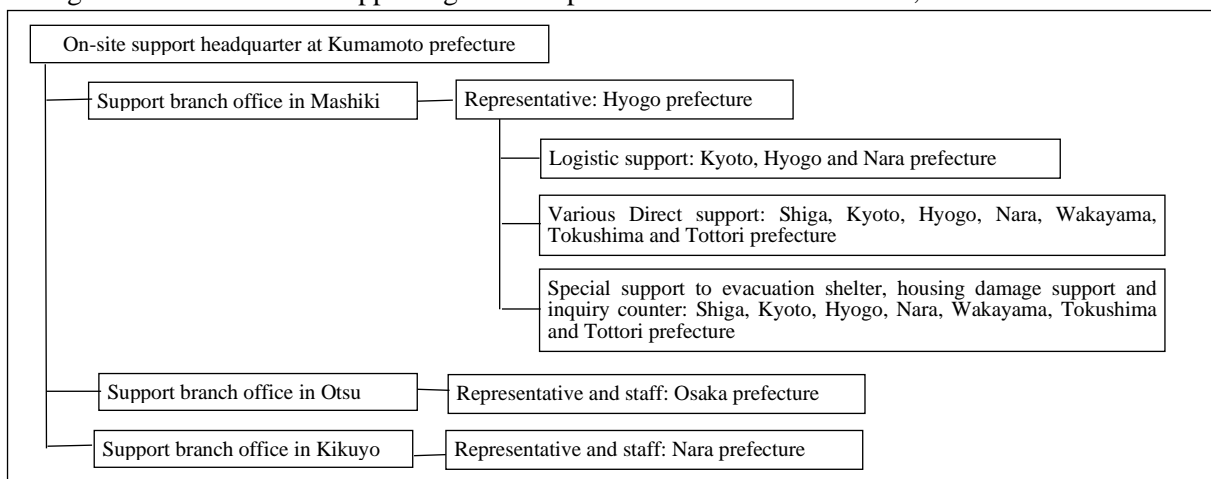


Chart2: Organization of on-site support headquarters by the UKG [5]



from such miscellaneous jobs to focus on their own support.

4.3 Role of Kumamoto prefecture

While it was helpful for Oita prefecture to make arrangements for counterpart, the arrangements did not always function smoothly. It was difficult for the affected municipalities to estimate the necessary number of staff, occupation, duration and other conditions. Supporting prefectures discussed with those municipalities about detailed matters directly. However, it was the first time that supporting prefectures and affected municipalities had to link. Supporting prefectures were not familiar with partner municipalities in Kumamoto. Such a situation extended mutual hesitation.

Thus, Kumamoto prefecture mobilized staff at the municipality division to facilitate the relationship above on 25 April 2016, 10 days after the foreshock. The mission of the division is to give technical and financial advice to municipalities and its staff has kept a close relationship in normal times. It started the following 2 jobs. Due to such arrangements, the counterpart was able to get on the right track.

- 1) The division created the support teams to ensure the function of affected municipalities for receiving support. Its staff were divided into teams to enable every affected municipality to understand the real situation and to give the respective support.
- 2) The prefecture dispatched their executive staff to the 3 heavily affected municipalities (Mashiki town, Nishihara and Minamiaso villages) for a certain period. They assisted those mayors to make proper decisions.

4.4 The verification and proposal by the association

The association verified to their activities in the aftermath of the Kumamoto earthquake, and proposed the following for further cooperation during future disasters.

1) Liaison

- The liaison should be dispatched from the closest prefecture to an affected prefecture.
- The liaison should consist of a director, who can decide for himself and its staff who is a subordinate under the director.
- An on-site office, which is under the direction of the association headquarters in Oita, should be established.

2) Counterpart

- The association should do matching, depending on “damage situation, manpower and needs at affected municipalities” and “geographical location and access route from a supporting prefecture to an affected municipality”.
- Counterpart should be established within 13 hours after the disaster.
- The association should also use cooperation other than the association to ensure availability of the necessary number of staff, especially technical staff.

3) Cooperation with supporting municipalities

- The association should strengthen the relationship with the mayors’ association in Kyushu and designated cities’ association for smooth arrangements.

4) Arrangement for staff dispatchment

- In principle, an affected prefecture, an affected municipality and a supporting prefecture should decide it.



- In case an affected prefecture has difficulty in emergency, a supporting prefecture should take the initiative.

5. Lessons from the Kumamoto Earthquake

5.1 Close relationship at pre-disaster times

Members of the Kyushu Association have developed close relationships with each other. When the foreshock occurred, Kumamoto did not contact to Oita. Oita realized that it was impossible for Kumamoto to make requests, not that it was not in need of help. That was why Oita dispatched its liaison immediately, and the counterpart was able to complete in a short period.

On the contrary, it was not easy to create cooperation between a supporting prefecture and an affected municipality, based on the new counterpart without relationship before disasters. Finally, Kumamoto prefecture played an intermediary role to connect both sides.

5.2 Support based on experience in past disasters

The UKG was mainly in charge of the heaviest damaged municipalities. Since it has expertise through support activities in the East Japan Earthquake, its support was on-site based and extended to various kinds of fields. It also anticipated affected municipalities could fall into confusion. The advice was also effective for municipal mayors.

5.3 Support from outside the prefecture block

While support within the association was useful, it had limited capacity to cover the necessary number of staff in affected municipalities. Therefore, the support from the UKG and NGU was indispensable.

Based on this lesson, the Ministry of Internal Affairs and Communications developed a nation-wide support system, in cooperation with the NGU in 2018. This system has two functions: one is a counterpart system between “a supporting prefecture or designated city” and “an affected municipality”. Another function is that it is an advisable system to an affected mayor by a supporting government. It is supposed that a prefecture or designated city outside the block could be a supporting partner for an affected municipality. The system was adopted in the Rainfall disasters in 2019 and the Typhoon disasters in 2020.

5.4 Developing the capacity to receive support for municipalities and supplementing lack of the capacity by prefecture

Particularly, small and unexperienced municipalities lack the necessary expertise and the resource to get support. Such situation caused less communication with a supporting prefecture, which was supplemented by the intermediary role of Kumamoto prefecture. The advisable system stated in “5.3” was also developed based on the reflection of such confusion.

6. Cooperation with Volunteer and NPO/NGO

We should also consider using self-help and mutual support as well as public support. Currently, volunteer or NPO/NGO activities are popular in Japan. Their activities range from shelter operation in the short term to community development in the long term. Some of them have created their own support network and played an intermediate role with local governments and communities. Since they are experienced and they have accumulated expertise, instead of unexperienced local governments, they can implement care activities for victims.

Particularly, there was cooperation between local governments and volunteer groups, when the volunteer groups received evacuees in the Great East Japan Earthquake. An advanced example is in Aichi prefecture. The prefecture established the Aichi Support Center for Earthquake Victims 3 months after that disaster in 2011. The prefecture entrusted support activities to 4 NPOs, in cooperation with Aichi Social



Welfare Association and Coop Aichi. The center also hired paid staff from the evacuees. The activities continue.

The center has solved problems through outreach activities. Its staff watched over evacuees with evacuee's volunteer, which relaxed evacuees and enabled them to confess their real situation. The center created opportunities for evacuees to meet with each other through exchange events, which prevented isolation in their residences far from their hometown. Some professional groups held consultations for evacuees in various fields, including medical care, legal issues, housing and livelihood. It also supported evacuees to establish self-support groups.

The prefecture provided the center space in the prefecture office building. In addition, it ensured budget for both administration and activity expense. While the local government gave logistic support, NPOs, which are familiar with disaster support and civic activities, offered a helping hand to evacuees. It is said to be a public-private partnership.

On the other hand, there is little case for personnel dispatchment to be implemented through the cooperation by the both sectors. Although NPO/NGOs sent their staff to affected sites, they mainly developed their activities, separate from the local government staff.

7. Consideration

This study considered the effective human resource cooperation among local governments after disasters. It is found out that a counterpart system is effective to link supporting prefectures with affecting municipalities. And we should emphasize on both "providing support" and "receiving support" to facilitate the counterpart system (Chart 3).

The "providing support" mainly consists of "(a) close relationship at pre-disaster stage", "(b) support based on experience and lesson from past disasters" and "(c) cooperation at the national level". In the case of (a), both supporting and receiving governments have known with each other through disaster trainings, regular meetings or exchanging events at pre-stage. While the latter one is easier to make requests to get support in emergency times, the former can immediately respond to it without detailed information. In (b), although they have not always known with each other, its experience and lesson by the supporting governments are useful for receiving governments to estimate their future process. In addition, experienced local governments are eager to disseminate their lessons to repay for kindness. On the other hand, it is not enough to cover the support by only (a) and (b) at the event of huge disasters. In such case, (C) is indispensable to supplement the lack of staff and other resources. I would like to conduct further research on the outcome and challenges of the newly established counterpart system initiated by the Ministry of Internal Affairs and Telecommunications.

The capacity of "receiving support (d)" is also important. While there are various support systems by municipalities, prefectures and the national governments, receiving governments are in confusion without proper coordination. Accordingly, receiving local governments should develop the capacity to get support. On the other hand, we found that the affected local governments could not afford to make coordination to get support, from the lesson of the Kumamoto earthquake. In this regard, a neighboring prefecture can play the alternative roll, instead of an affected prefecture (e). Since both prefectures keep close relationships in normal times, such system will be a good reference to cope with future disasters.

The private sector plays an important role in supporting affected victims. However, personnel dispatchment is done separately between public and private sectors (f). I would also like to further research on how the both sectors can cooperate with each other to enhance coordination of human resource.

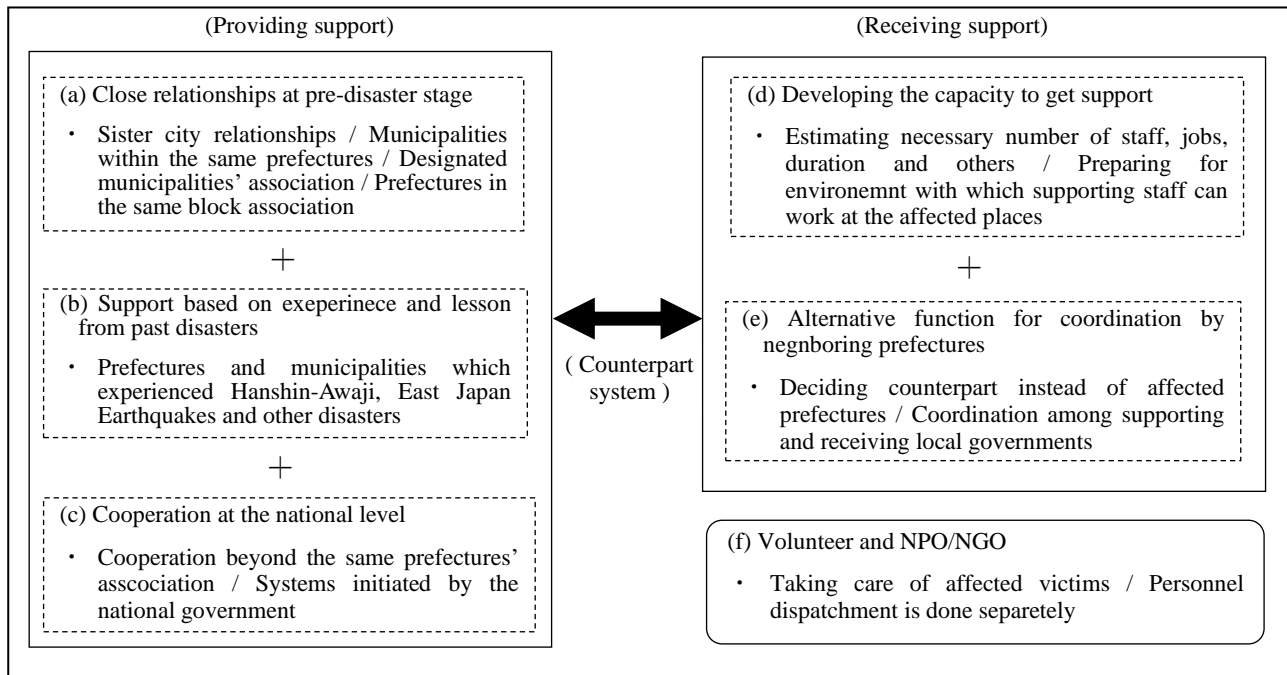


Chart 3: Human resource cooperation among local governments after disasters

8. Acknowledgements

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