

■ 論 文

Emergency Preparedness in Shopping Arcade Areas for Disaster in Ibaraki City

Thanyarat Suvannavong¹, Chaweewan Denpaiboon², Yusuke Toyoda^{3,*}

Abstract: Nowadays disaster preparedness is important in Japan facing with large-scale natural disasters such as Great Hanshin-Awaji Earthquake in 1995. This disaster exerted an enormous damage on community development. This earthquake have people more aware of disasters and cooperating to disaster preparedness in every way, for example, storing supplies, conducting disaster management activities, learning disaster preparedness and conducting evacuation routes in areas.

When disasters occur, a wide area is affected. This study described disaster preparedness in commercial area especially shopping arcade areas in Ibaraki City. This kind of shopping place is also known as *shotengai* in Japanese. We focus on shopping arcades because human, building and especially business is damaged by disasters. *Shotengai* in Ibaraki city was not affected much from Great Hanshin-Awaji Earthquake. Community in this area does not have high awareness of disaster. Thus, it motivated an *shotengai* association will conduct some activities related to disaster prevention for community to prepare themselves for natural disasters. But in working process of *shotengai* association they have problems in less collaboration with other local associations. Thus, this is one of the challenges of processing disaster preparedness in *shotengai*, Ibaraki city.

Therefore, this study aims to describe a present situation of disaster preparedness in *shotengai* in Ibaraki city. Results evaluated its disaster preparedness and the study suggested what *shotengai* needs to do and what is its challenges and strong points. By doing so, this study is expected to enhance its disaster planning and its capacity for disaster information dissemination in *shotengai*.

Keywords: Shopping Arcade, Disaster Preparedness, Ibaraki

I . Introduction

Commercial area is an area that can be one of the indicators of economic development within cities. Commercial area is a place where a group of retail shops, restaurants, and other businesses are connected together on streets. In some areas, private small shops are standing closely along the both side of streets. It is called “Shopping Arcade” or *shotengai* in Japanese.

This research is intended to consider commercial area in Ibaraki City, Osaka in relation to disaster preparedness. As Ibaraki is well supplied with commercial districts, supermarkets and large shopping centers near stations and across the city, the commercial areas act as focal points for the locality and as a hub of connection, interaction, becoming place for spreading disaster message to community.

At the present, shopping arcades in Ibaraki do not have many disaster preparedness events nor promote disaster awareness information in the surrounding areas. Therefore, this is a right place to study on the present situation of disaster preparedness in *shotengai* in Ibaraki City. In the past, Great Hanshin-Awaji Earthquake in 1995 caused a lot of casualties at 6,425 and remained about 25,000 people injured. When disaster occurs, it brings out heavy damage in every type of area. Especially in shopping areas, it is serious because the areas do not have much space and buildings are standing closely.

*1 Assistant researcher, Faculty of Architecture and Planning, Thammasat University, Phatumthani, Thailand and Visiting Researcher, Organization of Open Innovation of Collaboration of Ritsumeikan University, Osaka, Japan

2 Associate Professor, Faculty of Architecture and Planning, Thammasat University, Patumthani, Thailand

3 Associate Professor, College of Policy Science, Ritsumeikan University, Osaka, Japan

In addition, shopping arcade is a collection of retail stores in the area. It also need to drive disaster preparation in community. Playing a significant role in communicating about disaster preparedness, store essential emergency supplies and helping shop associations would lead them to be ready when natural disasters occur.

Main points of this study are divided into 3 factors: to describe the process of disaster preparedness in *shotengai* from the viewpoints of Improving collaboration, Increasing disaster awareness and Disaster preparedness. These three factors can reduce risks of disasters, increasing disaster prevention and providing disaster management for community. Therefore, we adopt five elements (reliability, cognition, relation, communication, motivation) to find ways to solve problems in shopping arcades in Ibaraki.

II. Scope of the Research

The scope of the study is describing the process and activities of disaster preparedness of *shotengai*. The study evaluates disaster preparedness in *shotengai* in Ibaraki City. In Ibaraki City, *shotengais* are located not far from one another and many are located near important places such as Hankyu and JR Train Stations, which are hubs of transportation. In the end, this study show some ideas on disaster plans to improve disaster preparedness.

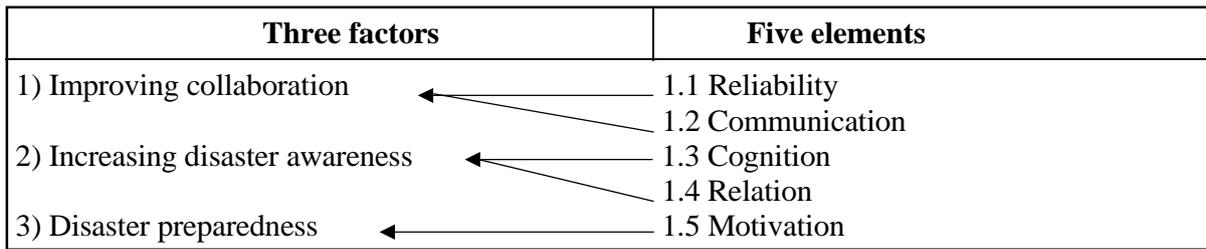


Source: Authors

Figure 1. *Shotengai* in Ibaraki.

III. Instruments Used in the Research

The study uses three factors, that are, Improving Collaboration, Increasing Disaster Awareness and Disaster Preparedness to evaluate present situations of the target area in the target area and these three factors are divided into five elements: Reliability, Communication, Cognition, Relation and Motivation. The source of factors is “The nine disaster preparedness modules” provided by a team of Central Asian disaster management specialists for disaster management (International Federation of Red Cross and Red Crescent Societies, 2000). Based on these three important factors as indicators, we evaluate and suggest for disaster preparedness to *shotengai* association by the interview with the leader of *shotengai* association in Ibaraki (Figure 2).



Source: Authors

Figure 2. Disaster Preparedness Measurement

Figure 1 shows the relation between the factors and elements. Improving Collaboration are related to Reliability and Communication. Reliability is a trust from community to the *shotengai* association: how much reliability they have on their disaster plan and disaster activities. Communication means that how the *shotengai* association disseminates disaster information to community such as poster, brochure, newspaper and radio. This two elements are related to improving collaboration, because if community have reliability and communication channels, people would be willing to join an event that can improve collaboration between association and community.

Increasing disaster awareness are related to Cognition and Relation. Cognition means that how much community knows about disaster information. If people get to know more information, it means cognition increasing in disaster awareness. And also, as to Relation, if they have high relation between the association and community, it means increase in disaster awareness.

Disaster preparedness is related to Motivation. It means how much motivation that the association or shop owners have to plan disaster management. If the *shotengai* association have motivation to do something about disaster such activities or events, it would affect to community to develop plans for disaster preparedness.

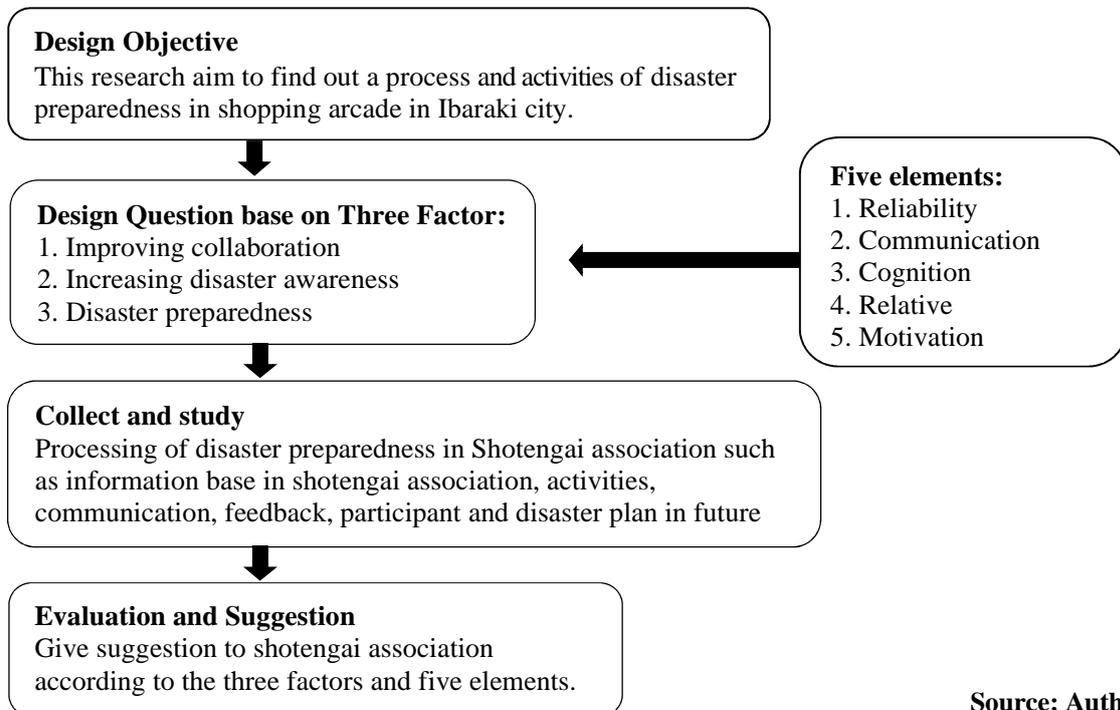
Table 1. Questions on Five Elements

Five Elements	Question
Reliability	1. Have commercial area ever disaster occurred? 2. Does your commercial area have any Emergency Preparedness, Disaster Response or Business Recovery plan in place?
Communication	3. Source of information? 4. Poster information in a variety of places on shop wall, shopping bags, brochure etc.? 5. Who are the most influential voices for community? 6. Are there other people in this community that this group listens to and respects?
Cognition	7. How often of participation activity or event disaster in community? 8. What kind of activity? 9. Community feedback to participate in the activity? 10. In shopping arcade has emergency disaster public warning, evacuation route, temporary?
Relation	11. How much relative between community and shop owner? 12. What do you see as the largest barriers to collaboration in community?
Motivation	14. What is motivate shop owner to collaboration disaster preparedness? 15. Commercial area have plan to storing Disaster Supplies in shop?

Source: Authors

IV. Method and Framework of Research

This study explores the most common methods of data collection used in qualitative research by interviews and observation. The study examines each method in detail, focusing on processing and activities about disaster preparedness, to evaluate and suggest ideas to improve disaster preparedness in shopping arcade at Ibaraki city.



Source: Authors

Figure 3. Step of Study

V. Literature Review

Definition of Shotengai

Spacey (2012) defined *shotengai* is a Japanese term that can be translates in shopping street. It is most often used to described Japanese shopping streets that have a roof. *Shotengai* is sometimes considered private property. They are run by shop owner association. *Shotengai* promotes itself with events.

Mochizuki (2005) defined *shotengai* as the system that was born spontaneously out of those medieval markets. Commercial system of the *shotengai* has come to play many other roles in the community, such as welfare and security.

Kato (2016) defined community and *shotengai* associations are common in Japan. These groups should work together to share information and plan responses to natural disasters.

This study defines *shotengai* as shopping street in Japan. It is an area that have many small shops along streets. *Shotengai* have their own association to work and share information together among members with community. *Shotengai* also work to plan disaster preparedness to reduce natural disasters by conducting welfare and events, not focus only on business.

VI. The Research Interview and Data Collection

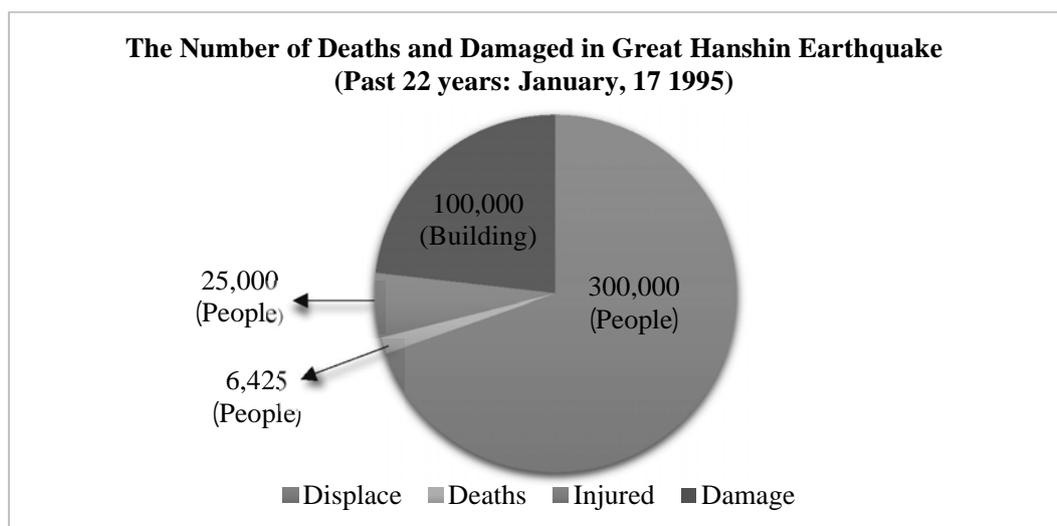
Ibaraki City has *Shotengai* Association. *Shotengai* is a style of Japanese commercial district running along a certain street. *Shotengai* often connect to the nearest train station. Most suburbs and towns of Japan have *shotengai* of varying size, and larger *shotengai* may take the form of covered arcades that are blocked off to traffic. A typical *shotengai* includes most of shop such as supermarkets, clothes shops, convenience store, book shops, cloths shop and etc. (Wikipedia, 2006)

VI.1 Disaster preparedness in *Shotengai* Association in Ibaraki

Awareness of disaster in *Shotengai* is rather high because of Great Hanshin-Awaji Earthquake on January 17 in 1995. The earthquake left 6,425 dead, injured about 25,000, displaced some 300,000 people, damaged or destroyed around 100,000 buildings and caused at least \$132 billion worth of damage, or about 2.5 percent of Japan's national income, making it one of the most expensive natural disasters in history in Kansai region (Figure 4). The Earthquake is a starting point of disaster awareness of community. This big disaster is a cause of people to still fear and get motivated to do some activities for reaction to disaster.

According to interview with the leader, the association has four strong point:

- I.) **Information Dissemination** – *Shotengai* area is easy to disseminate information to community including poster, newspaper and advertise. They have more plan to disseminate information in the future about disaster prevention in area.
- II.) **Budget** – They collect membership fee from shops in *Shotengai* association and they have budget to conduct some events. In case of budget is not challenge for association because every member are plan and help each other among association
- III.) **Network** – *Shotengai* association has close network among members. They are help each other to conduct activity every year. There relation is not close only in a work time but also in daily life they usually go out for dinner and meeting.
- IV.) **Human Resource** – *Shotengai* association has a number of people to provide goods and help each other to conduct disaster prevention activities. Example in the last year *shotengai* conduct the event that collaborate with University. It mean that *shotengai* not only have human resource in *shotengai* member but also have human resource outside the group.



Source: Hays, 2011

Figure 4. The Number of Deaths and Damaged in Great Hanshin Earthquake

VI.2 Disaster Manual and Disaster Plan in Ibaraki

Ibaraki city have mainly four association related to disaster preparedness, consisting of *Shotengai* Association, Neighborhood Association and Community based Disaster Reduction Group and Fire Brigade.

Community Based Disaster Reduction Group (Bosaikai)

Bosaikai is community based disaster reduction groups. They organize this kind of organizations to conduct some disaster trainings in Ibaraki city and each group has a disaster warehouse but this is managed by the central member of community based disaster reduction. So, normal residents usually do not know what they are doing or what the manual describes about.

Activities and events for raising disaster awareness

Ibaraki city have many events and festivals about markets and ceremonies on special days but the *shotengai* association never has an event about disaster preparedness until 2016. However, the *shotengai* association in Ibaraki city conducted events on disaster preparedness for the first time. It was a collaboration between the *Shotengai* Association and Ritsumeikan University Osaka Ibaraki Campus at Iwakura Park for disaster prevention. Thus, this is the starting point the association to conduct an activity ton disaster.

The main point of this event came from lifestyle of resident in Ibaraki. The association considered that when an area is hit by earthquake in day time of weekday, who stay in Ibaraki city. They are the members of *Shotengai* and university students because many office workers go to work to Osaka or Kyoto and they do not stay here daytime. Therefore, the association conducted the disaster preparedness event.

Every year the association conducts one of this kind of events in one time. Last year in 2016 the *Shotengai* association had an disaster event. But before that, they conducted events on ecology with this festival but the festival features mainly appeared and the theme of ecology got behind the festival. In this event, about 2,000 people came to this festival.

Ibaraki City have another festival but this is not a *Shotengai* association's event. As many as 140,000 people join. In case of the *Shotengai* association, it conducts at the smaller scale with specific themes.

Table 2. Detail of *Shotengai* and Ibaraki Activities

	<i>Shotengai</i> Events	Ibaraki Events
Number of people	2,000 people joined	140,000 people joined
Theme	Specific Theme: Ecology, Disaster Prevention	Large Theme: Market Festival
Capacity	Smaller Size	Bigger Size

Source: Authors

The leader of association mentioned that “*Getting more participant is not important, its theme and quality is the most important.*” He thinks accommodating many organizations or many people very hard because he cannot control people. He believes that the small scale and specific themes could promote themes and it is more important than collecting more participant.

Feedback of Activities

About feedback of participant, the association did not get any directly but on an event they had a local broadcasting TV company for taking videos for TV program and some participant in the video showed positive feedback because they could get some knowledge and awareness of disasters.

VI.3 Communication and Announcement Device in *Shotengai*

Another one strong point in *Shotengai* is 253 shops join this association and association can ask them to attach posters and newspaper for disseminating information on events in Ibaraki area.

Among all, three *shotengai* have announcement devices for disseminate information. Three *Shotengai* having this device are located in a shopping mall, behind near a station but not inside the building and inside a train station building. So, they have a kind of disaster emergency manual when they face with earthquake.

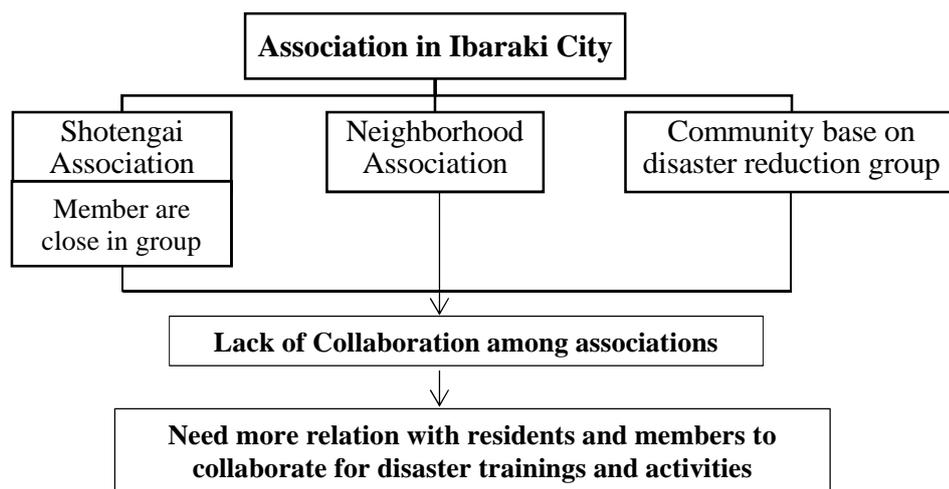
VI.4 Disaster Supplies

The *Shotengai* association has distributed disaster supplies such as garbage bag. It can attractive more people but the association did not think deeply about how to use garbage in a disaster situation. Before they distributed posters and ecology bags because saving energy was the themes of the festivals. And the association also distributed manual fans because people do not have to use air conditioners, saving energy. Thus, based on the themes, they change the media to distribute information.

VI.5 Participation in Disaster Meeting

The association leader said that “Only the representative of the association joined a meeting held once a year. Even though the association have about 5,000 members including members’ family, only the representative joins.” Therefore, the association has less participation and he also pointed out some challenged that city is usually bureaucratic. The section of emergency management of Ibaraki City considered about disaster preparedness for community but it did not have collaboration with other sections in the city government. Therefore, this area has no potential to expand disaster activities.

The *Shotengai* Association does not have collaboration for activities with neighborhood associations and community based disaster reduction groups. Thus, this is a challenge in Ibaraki City to connect among the *Shotengai* Association, Neighborhood Association and Community based disaster reduction group.



Source: Authors

Figure 5 Challenge of Association in Ibaraki City

VI.6 Disaster Preparedness Plan in the Future of *Shotengai*

The *Shotengai* association has a plan of preparedness and prevention for disaster planning. The association focuses on three topics:

Emergency Supplies

The leader of *shotengai* association said that they had a meeting and got some idea in the future, that is, *Shotengai* could have a function to store some emergency supplies when disasters occur.

When Fires Occur in Commercial Area

Shotengais are located along streets. The association leader mentioned that if their shops are fire proof, they can prevent fire expansion to another side of the streets. This kind of idea came up with in the meeting. The association needs to collaborate with the city government but it is not sure how much the city government are willing to do this kind of collaboration with the association.

More Disaster Activity and Collaboration with Local Community

The leader wishes to continue their activities on disaster preparedness because it is not good to change topics every years and importance is continuing. Thus, he believes that they need more relationships with local community.

VII. The Research and Discussion

VII.1 Evaluation of Disaster Preparedness in *Shotengai*

Potentials in *Shotengai*

The pattern of streets in *Shotengai* is a grid pattern. Although the streets in *shotengai* have two side, each side of streets have lanes to connect with other streets. This type of pattern is preferable to disaster response, because residents choose many ways to escape to safety areas. This way of pattern also decreases the response time to evacuate from the area. These routes are utilized to bring emergency personnel, equipment, and supplies to affected areas in order to save lives, protect property and minimize effect on the environment. During a disaster, these routes have priority for clearing, repairing and restoration over all other roads. *Shotengais* have some disaster equipment to prevent a hazard. *Shotengais* in Ibaraki city are not well prepared for disaster. Some are only equipped with announce machine.

Table 3. Disaster Preparedness SWOT Analysis in *Shotengai*

Strengths	Weaknesses
<ul style="list-style-type: none"> Easily disseminating information to community Having budgets to conduct some events Close network among <i>shotengai</i> association members Strong human resources 	<ul style="list-style-type: none"> <i>Shotengai</i> Association with less collaboration with other associations Sections in Ibaraki city working only in their sections Awareness gap among residents Lack of common multi-sectoral vision for disaster management
Opportunities	Threats
<ul style="list-style-type: none"> Attracting people to the area for events conducted every year by the association Relations with local broadcasting TV company Experience of past disasters, and events with benefits to disaster preparedness 	<ul style="list-style-type: none"> Political condition that means the changing every year, making hard to keep old leader vision Less collaboration with other sections in the city government

Source: Authors

VIII. Conclusion

This research evaluated disaster preparedness in commercial area in Ibaraki city. Based on three factors and five elements we evaluated and suggested ideas to improve disaster preparedness in shopping arcade or *shotengai* in Ibaraki.

We concluded that Great Hanshin-Awaji Earthquake was the starting point for disaster awareness in Ibaraki City. Especially, the *Shotengai* association is a group of shopping arcade that have plan to conduct activities and events every year. In the last year, the *Shotengai* association collaborates with Ritsumeikan University in the theme of disaster preparedness. This was the first event about disaster that the *shotengai* association conducted and led resident to recognize the *shotengai* association were one of the key groups for disaster management. Members in the *shotengai* association are close more than other associations, because they often have dinner meetings and go drinking together every month. The *shotengai* association have strong resources for conducting events such as budget, good relation, human resources and information dissemination channels. On the other hand, Ibaraki city is not collaborative to events together and also lack of collaboration among the *Shotengai* association, Neighborhood Associations and Disaster Reduction Groups. Thus, this is one of the challenges. This challenge can be solved by the association to meet each other for exchange information among their groups when they have time or conduct some events. Another challenge displays less communication about disaster. *Shotengai* do not have any poster nor brochure about disaster information. Now, it only has brochures for inviting people to join events and some little article on the events. Therefore, this is a problem for residents who can not join and get disaster information in this event. This is a reason why we suggest the *shotengai* association to disseminate information by poster and post it in wall in front of shops.

Despite *shotengai* area in Ibaraki city just starting to focus on disaster activity preparedness on last year of 2016, it is a good way to start to provide information to resident in community. It does not put importance only on business. This is an advantage for residents in Ibaraki City for disaster preparedness in the future. Not only residents but also associations open their minds to collaborate with each other matters. If the *shotengai association* can Improving collaboration, increasing community disaster awareness and Increasing disaster preparedness, it can relieve damage of disaster that may occur in the future.

VII.2 Evaluation and Suggestion:

Table 4. Evaluating Disaster Preparedness Measurement

Factors	Factors Evaluation	Elements	Elements Evaluation
1. Improving Collaboration	<p><i>Shotengai</i> in Ibaraki City are not directly affected by Great Hanshin-Awaji Earthquake that damaged heavily on people and building. This disaster made people having more awareness and collaborating to disaster events held by the <i>shotengai</i> association. Three <i>shotengais</i> have announcement devices for disseminating information to people especially inside and outside of Hankyu train station and shopping mall.</p>	<p>1) Reliability</p> <p>2) Communication</p>	<p>Reliability in <i>shotengai</i> is faced with the gap of people with high or low awareness of disasters. Some people think this area would not be affected by disasters much.</p> <p>Three <i>shotengais</i> have an announcement devices to promote their disaster event. But others do not have.</p>
2. Increasing Community Disaster Awareness	<p>Disaster Information posters are not attached to <i>shotengais</i> area, such as shop walls and boards. But <i>shotengais</i> only attach posters to invite people to join their events on disaster prevention. Tools to promote the disaster event was brochure and other ways.</p> <p>The <i>Shotengai</i> association members have close relationships and help each other. The leader of association is the most influential voice to communities.</p>	<p>3) Cognition</p> <p>4) Relation</p>	<p>The <i>Shotengai Association</i> just started disaster prevention event last year (2016) under collaboration with Ritsumeikan University. So the <i>shotengai</i> association conducted only one disaster event at the moment. The leader of the association mentioned that he want to continuously conduct this kind of events.</p> <p>The challenge is some residents do not join activities because they think that disaster would not affect to them. This is the gap of people with high and less awareness of disasters.</p> <p>Ibaraki city has three main associations that consist of <i>Shotengai</i> association, Neighborhood Association and Community based on Disaster Reduction Group. They have meetings and dinner many time. Only members in each association work closely together but no collaboration with other associations.</p> <p>This challenge motivated the leaders to have more relations with other associations for conducting some events and activities together.</p>
3. Increasing Disaster Preparedness	<p>Disaster Preparedness in <i>shotengai</i> is not enough because the association focuses on conducting events. Although the <i>shotengai</i> association has meetings to plan disaster preparedness, information of the meetings disseminated is only brief.</p>	<p>5) Motivation</p>	<p>The <i>shotengai</i> association have plan to store some disaster supplies such as garbage bag and water. This idea came from a meeting of the <i>shotengai</i> association.</p>

Source: Authors

Table 5. Suggestion on Disaster Preparedness Measurement

Factors	Suggestion on Factors	Elements	Suggestion on Elements
1. Improving Collaboration	Reliability has the gap in people about disaster awareness and communication to promote disaster preparedness is not prepared. They could post more disaster information in posters in front of public spaces such as inside the Hankyu station or along shopping arcades that many people can notice. This information can make more interested in disaster. Also it is important to introduce announcement devices to every important place.	1) Reliability	The association should know the habits and preferences of community members to design disaster preparedness events. They could introduce more announcement devices in every public place and post the history of disaster in this place. This could motivate people more thinking about disasters.
2. Increasing Community Disaster Awareness	The <i>Shotengai</i> association conducted disaster events in collaboration with University for community. The disaster prevention event was held only one time, in 2016. This activity is a starting point for promoting disaster awareness by <i>shotengai</i> . The <i>Shotengai</i> association has a plan to conduct more disaster events in the future. This is an advantage for increasing disaster awareness and sharing this awareness to their community.	2) Communication 3) Cognition	The association should increase more emergency machines and posters to disseminate information. <i>Shotengai</i> should disseminate disaster information to community with easy and clearly messages. The <i>Shotengai</i> association announcements should let audience understand that they are safe. In addition to being told about the risk, it is very important that they are provided with practical actions that they can take to withstand and reduce the impacts of the disaster. Information should be presented in a simple manner. They should improve disaster preparedness activities, such as increase the frequency of activities. And the <i>shotengai</i> association should conduct meetings or activities with invitation of new members to the associations.
3. Increasing Disaster Preparedness	The <i>shotengai</i> association should have more details about disaster preparedness functions such as: - Making evacuation route - Supply checklist before storing that people need (food, water, medical supplies, flashlight, battery) - Building shelters	4) Relation 5) Motivation	They should collaborate for disaster planning with other associations such as Neighborhood Associations and Community based on Disaster Reduction Groups. Every month they could have committee meetings for disaster planning, and show information on posters in <i>shotengais</i> . They should have discussion among members on what each type of shops could do for emergency supplies, for example, supermarkets could store some foods that can be provided in disasters.

Source: Authors

Acknowledgements

The authors wish to thank to the leader of *Shotengai* Association for kindly cooperating to the interviews and provided a plenty of information. This research was supported by Research and Development Institution of Regional Information, Ritsumeikan University.

[References]

- Disaster Preparedness and Response Training, *Centers for Disease Control and Prevention*, 2014.
- Facts and details*, 2011, [homepage on the Internet], Great Hanshin Earthquake. [Cite 2017 Feb 25] Retrieved from <http://factsanddetails.com/japan/cat26/sub160/item863.html>.
- Increasing Community Disaster Awareness, International Federation of Red Cross and Red Crescent Societies*, 2000.
- John S. Swift, “Reducing disaster risk a challenge for development”, *A Global Report*, 2004.
- White Paper on Disaster Management in Japan, Cabinet Office Japan, 2015.
- Wikipedia, 2006, [homepage on the Internet], *Shotengai*. [Cited 2017 Feb 12] Retrieved from <https://en.wikipedia.org/wiki/Shotengai>.

コア・コンピテンシーによるコミュニティ活動の評価
～バーンチャムルン・コミュニティ組織ネットワークを事例として～

Thanyarat Suvannavong, Chaweewan Denpaiboon, Yusuke Toyoda

【要旨】本研究はコア・コンピテンシーに着目して、タイに位置するバーンチャムルン・コミュニティ組織ネットワークの活動を評価するとともに、コア・コンピテンシーの視点からコミュニティ活動の発展へ向けた提案を行うことを目的としている。バーンチャムルン・コミュニティ組織ネットワークとは、アグロツーリズムで有名な農村コミュニティであり、当該村落の開発活動を通じて発展してきた組織である。本研究では、本村落での主な活動として経済活動、社会・コミュニティ活動、そして環境活動を挙げ、コア・コンピテンシーを高める6つの要因（customer focus on service and relation; adaptation and change management in community activity; continuous learning and continuous improvement in community activities; innovation of community activity; independent working of; team working of activities）について定義し、それぞれの活動について各要因から評価を行った。その結果、バーンチャムルン・コミュニティ組織ネットワークでは全ての活動において improve innovation 要因を改善する必要性が指摘できた。また、環境活動については independent 要因の向上に注意を払うべきであることが明らかになった。さらに、社会・コミュニティ活動と環境活動においては、まだいくつかの活動が実施されていないこともあり、コア・コンピテンシーの全ての要因を向上させる必要性が指摘できた。

キーワード：コア・コンピテンシー，バーンチャムルン・コミュニティ組織ネットワーク，評価