The Experimental Development of a Management Tool for Promoting the Activities of a Local Community about Disaster Mitigation

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Abstract

The improvement of earthquake safety is a crucial problem in Japan. Therefore, various measures aiming to mitigate earthquake damages have been performed in collaboration with neighborhood associations, local governments and experts throughout Japan. These activities are aimed to raise awareness of disaster mitigation and safety of built-up areas. The most critical points of activity by the associations must be self-sustaining, but there are few examples of those activities. Therefore, it was believed to be necessary to support community-based sustainable activities in local communities.

Some informational tools (Kato 2002, Gohnai 2008) that are intended to support these activities have been developed. These informational tools have shown their usefulness either in raising awareness of disaster mitigation or in the understanding of an area's vulnerability to disaster. However, the informational tool for community-based sustainable activities has not been developed yet. This study aims to examine the function and role of "A management tool for promoting the activities of a local community about disaster mitigation" for supporting community-based sustainable activities in local communities.

First, the authors examined the factors that hindered the activities, focusing on the three aspects of community, awareness and organization, based on a survey of the citizens' collaboration awareness that the local governments implemented. As a result, it was thought that the following are factors that hindered the self-sustaining activities for disaster mitigation. The existing local community declined as a result

of a population outflow and an aging society with a declining birthrate. The awareness of disaster mitigation temporarily rises just after a large-scale disaster. However, the awareness of disaster mitigation decreases as time passes. Therefore, the activity of the local community was held by only a few inhabitants. Also, it was thought that "the lowering participation rate of the neighborhood association" and "the shortness of the term of office of a chairperson" influenced the lack of communication.

Second, the functions and directionality of the tool development were examined based on a hearing survey and arranging the minutes of the neighborhood association meeting. The hearing survey reached for local government officials because they are concerned with the community-based sustainable activities in local communities. On the hearing survey, it was understood that there were many inquiries such as "What kind of activity should we perform?" by local inhabitants. Therefore, local government officials thought that local inhabitants had a poor grasp of regional problems. Also, there were opinions that "The provision of information about community-based activities in local communities based on the hazard assessments about disaster was necessary" by local inhabitants (Yamamoto 2013). Accordingly, it was believed that the provision of information which connected evaluation results such as the risk of disaster and capacity to deal with disaster, with information about community-based activities was important.

For the problem of lack of communication, the information thought to be needed for continued implementation of the activities was examined. This examination was based on documents such as the minutes of the neighborhood association which are active continuously. The considered contents were action aim, action contents, a schedule, preparation and site layout. Particularly, the action method improved concretely over the next year when the neighborhood association set the concrete action aim of including the participation number of people. For these reasons, it is believed that the concrete action aim is important for the continued implementation of the activities.

From the above, the following four functions in the tool were incorporated.

Table 1: Function of the tool

Functions	Contents
Browsing feature of information on the local community	The function that provides the information for the purpose of support present grasp at various scenes, such as raising awareness of disaster mitigation, creating a plan of the activity and inspection of results and problems. The contents are drawn showing the arrangement of items such as the evacuation center and water supply, the hazard map of a tsunami or basic information of the region, such as the rate of aging.
Support function for examination of the activity	The function is to exemplify an activity having a high enforcement need based on evaluation results such as the risk of disaster and capacity to deal.
Browsing feature of	The function is to provide information for support examination of the

information of the activity	activity. The contents are summary of the activity, a schedule, the general item which need examination or items to be prepared.
Function of information storage of the activity	The function is to store information for the support to transmit information about the activity and also for the evaluation and improvement of the activity. The contents are summary of activity, a schedule, site layout or items to be prepared.

Figure 1: Image of the tool

References

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