

The Comprehensive Picture of Resource Management Clarified by the Activity of Resource Management Unit in Niigata Chuetsu-oki Earthquake

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1. Introduction

In order to realize high quality disaster management many organizations involved have to cooperate. The Incident Command System (ICS), all-hazard incident management concept in the United States, is the systematic tool for the command, control, and coordination of an emergency response. (Figure 1) ICS allows agencies to work together using common terminology and operating procedures for controlling personnel, facilities, equipment, and communications at an incident scene.

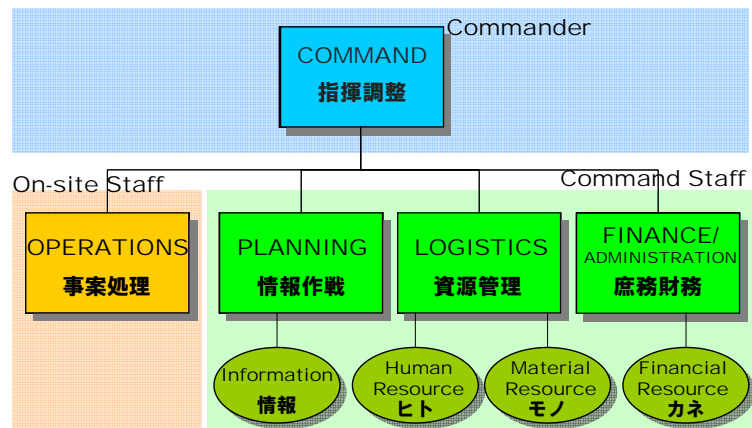


Figure 1 Five capital functions of incident command system

In the ICS concept comprehensive

Resource Management is a key management principle that implies that all assets and personnel during an event need to be tracked and accounted for. It can also include processes for reimbursement for resources, as appropriate; unfortunately in Japan this concept is not understood especially by the local government, who must be the coordinator of resource management in the impacted area.

At 10.13am on July 16 2007 (JST), the Chuetsu-oki Earthquake struck in Niigata Prefecture, registering a magnitude (M) of 6.8. Yamamoto (the officer in Bureau of Disaster Prevention at that time), who recognized the need for having the resource management function in Niigata Prefecture Disaster Management Headquarter, asked the researcher team and the supporter team from other prefectures to come and establish the Resource Management Unit as one function of Niigata Prefecture Disaster Management Headquarter.[1]

2. Activity of Resource Management Unit

The Research & Support Team had operated from July 21st to August 31st. The procedure of the operation is as follows 1) collect information about human and material resources which came from the outside of the organization, 2) organize information based on the necessary items to receive resources from the outside of the organization and send them into the section or organization, 3) design and construct the database of Resource Management Unit and input the real data, 4) respond to the sections' or organizations' requests, which needed to have dispatched personnel. As the result of the activity we collected 39,205 data including 11,444 about human

resources, 26,817 about material resources and 944 about others. (Figure 2)

3. Introduce the Result Clarified by the Activity of Resource Management Unit

The activity of Resource Management Unit clarified how much human and material resources were in the impacted area. It was the first time that those kinds of analysis had been done in the history of disaster management. The figure 3 and 4 showed the result of Pareto analysis on Resource Management Unit, a statistical technique in decision making that is used for selection of a limited number of tasks that produce significant overall effect.

Material Resources: Sanitary Materials accounted for 24.8% (6,650) of all material resources used for the victims' assistance. Ice pillars accounted for 10.2% (2,723), which let victims cool in the shelters. **Human Resources:** Medical staff or welfare participants accounted for 50.0% (5,727) of all human resources supported victims or administrative staff in the impacted area. The personnel for restore the lifeline accounted for 25.2% (2,884). The victims' direct assistance did 12.7% (1,456) and investigators of the damage did 10.1% (1,157).

References

[1] Wang, L., Hayashi, H., Kimura, R. and Tamura, K., "Suggestion of Effective System for Resource Management – Based on Participant Observation of Logistics Operations in Niigata-Prefecture at the 2007 Niigata-ken Chuetsu-Oki Earthquake ", *Journal of Social Safety Science*, No.10, pp.543-552, 2008.

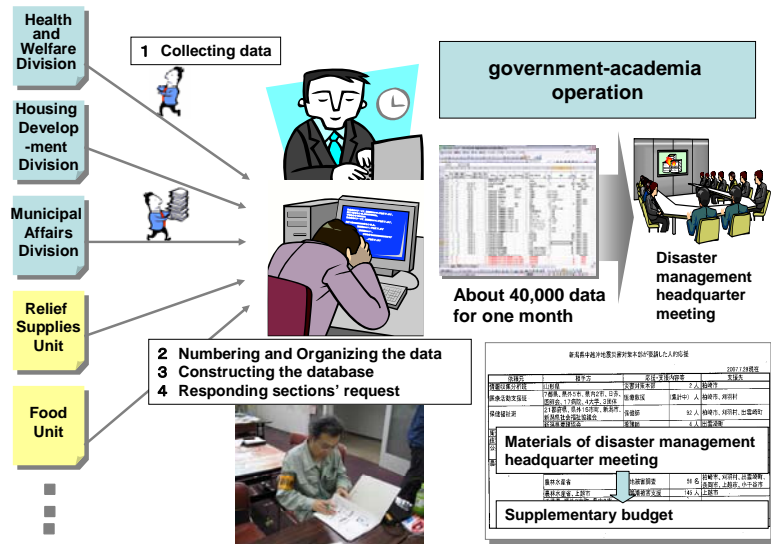


Figure 2 The activity of Resource Management Unit

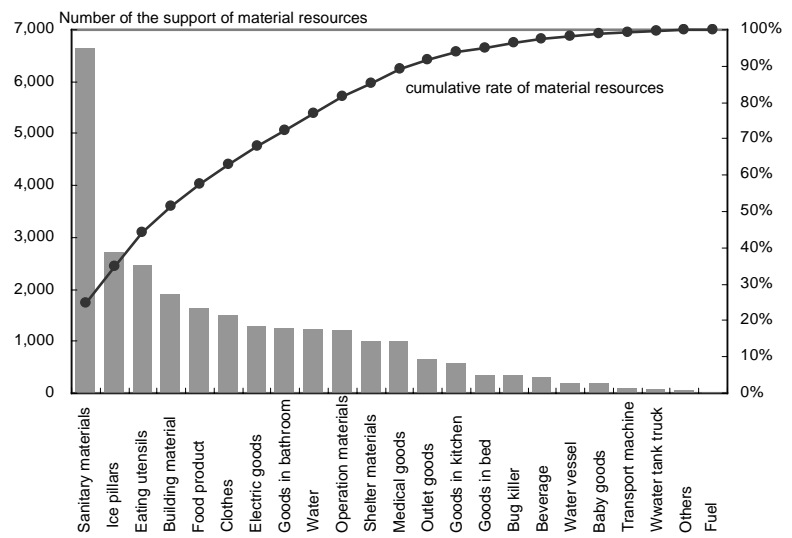


Figure 3 Pareto analysis (Material resources)

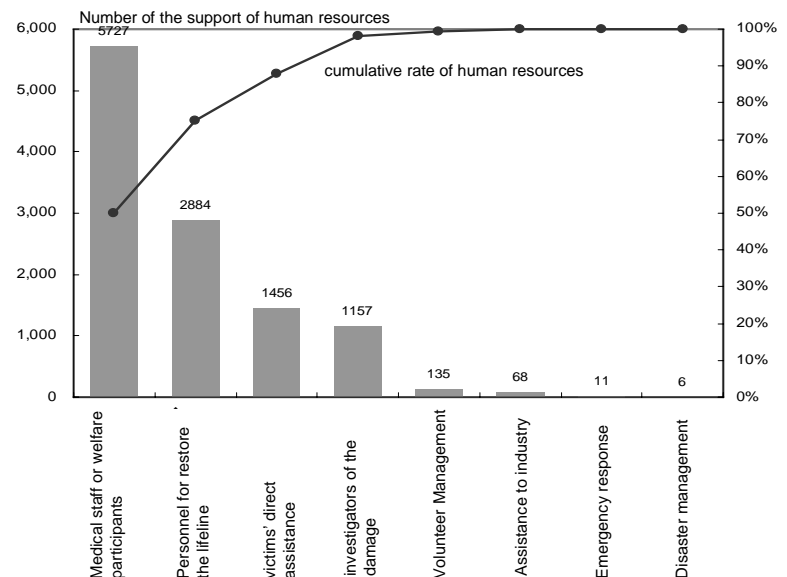


Figure 4 Pareto analysis (Human resources)