

Creation of safe and secure society
Provision of evacuation information and evacuation behavior of residents
— Front line provision of information during disaster —

KATADA Toshitaka

Regular Member

Prof. of Gunma University

Measures for resident evacuation and evacuation behavior realities

The recent spate of torrential rainfall events highlighted a number of problems associated with delays in transmitting evacuation information and with people who have difficulty evacuating. To overcome such problems, the Ministry of Land, Infrastructure and Transport and the Cabinet Office are together studying various measures to assist residents as they evacuate in time of disaster. These include methods of providing information during disasters and measures to deal with senior citizens and others who have difficulty evacuating. However, is it really possible to solve the problems associated with disaster evacuation by promoting measures focused only on the information sender's viewpoint?

The author was involved in some recent surveys of damage caused by torrential rains, including last year's heavy rain damage in Niigata Prefecture. In every survey, the comments space is filled with criticism of the government's bad response. Most respondents attribute economic losses and delayed evacuation to the administrative authorities, complaining that they were unable to evacuate because no evacuation information was available and that economic losses would not have been so great if information had been provided. However, an examination of people's behavior revealed that they often failed to evacuate even after continuous hard rain, when water levels within protected lowlands rose

considerably and rivers flooded. The reason for failing to evacuate was, some said, that no evacuation information was provided. The fact is that every survey showed most residents did not evacuate even when an evacuation order was issued, even though quite a lot of residents said they would have evacuated if information had been provided.



Photo 1 Kariyata River (near where the dyke broke)

Excessive dependence on information and overprotection from disaster

Did residents fail to evacuate because information was not provided? As can be seen from the fact that a lot of residents did not evacuate even when evacuation information was provided, the problem is not so simple. The author would have to say that residents who did not evacuate until an evacuation order was issued, even though water had risen to dangerous levels, were excessively dependent on information and overly protected from taking responsibility for their disaster response; they left

response to the disaster entirely up to the government. In this situation, with many residents dependent on information and waiting for instructions, the author is deeply concerned that providing more detailed information in a more timely fashion will simply make residents more dependent and increase the number who fail to evacuate until an evacuation order is made.



Photo 2 Broken dyke along Igarashi River (source: Sanjo City office)



Photo 3 Flood-damaged Sanjo City

The first priority is the relationship between government and residents during disasters

On reading the comments section of the survey sheets, the author gets the impression that, in essence, the government is expected to cope with disasters and residents are under the government's protection. If it were feasible, technologically and financially, to fully protect residents against disasters, the best approach would be to improve physical measures against disasters and have residents dutifully

follow evacuation orders based on this thinking. However, the reality is that government has no such power to protect residents from disasters and it is impossible to provide perfect information because external natural forces have to be predicted and the predictions have to be within reason. Taking into account this very ordinary reality, it seems necessary to review the relationship between residents, who tend to leave disaster response entirely to government, and the government, which does its best to meet the resident's demands.

What the government should do first is to improve the disaster prevention infrastructure in an efficient and active manner within the range of assumed external forces, take action to enhance crisis management systems in preparation for disasters outside the range of these forces, and frankly inform residents that it is impossible for the government to take responsibility for natural disasters that exceed these forces. It is important to renew residents' awareness of the basic principle that they should make their own efforts to safeguard their lives.

Enhancement of residents' disaster information literacy

The finding that residents fail to evacuate even when evacuation information is provided has serious repercussions for disaster prevention in this country. The presence of so-called "normalcy bias" inhibits evacuation behavior and evacuation action may not be taken at the last moment even when it is known that evacuation is imperative. People try to justify not taking evacuation action by raising concerns about the gap between knowledge and action. They come up with justifications for not evacuating, including the fact that previous evacuations proved unnecessary and neighbors had not evacuated. In the final analysis, they fail to evacuate.

The reality that they do not evacuate is the

result of an inaction. Looking into the resident's minds reveals that they do specifically decide not to evacuate but rather are in a position in which they cannot make the decision to evacuate. For fear that they will have to evacuate, they seek for and wait for information and as a result do not evacuate. When evacuation information is provided, they are controlled by the normalcy bias and ultimately fail to evacuate. Having faced up to this reality a vast number of times, the author even thinks that it is fundamentally impossible to make all residents evacuate.

In addition to improving disaster information policy, there is a need to ensure residents understand the characteristics these people who are unable to evacuate, encourage self-help that rationally leads them to a decision to evacuate, and cultivate disaster information literacy so as to make the most of disaster information in the preservation of lives.