

Research Trends and Results

Development of a Method of Building Disaster Occurrence Scenarios Considering Excess External Force

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1. Introduction

Since the Great East Japan Earthquake, it has become necessary to make flexible strong responses to even severe low frequency disasters. So the NILIM is conducting research and development to provide extremely tough core disaster prevention facilities that will not fail to function when a severe disaster strikes, and a method of contributing to crisis management that minimizes the impact of damage. This report introduces the results of this research and development organized as a disaster occurrence scenario building method.

2. Method of building disaster occurrence scenarios

A disaster occurrence scenario is built by first concretely setting external force, followed by participants divided into groups to deal with roads, rivers, etc. as appropriate conducting brainstorming while examining maps, to consider facility damage, obstacles to facility functioning, and obstacles to daily life and the economy and entering the results in obstacle conception sheets. Next, they organize the results into disaster occurrence scenarios. Then, they use excess external force focus cards to study phenomena that could be caused by unanticipated external force that was not initially set, and add these to the scenarios, so that they can portray disaster occurrence scenarios that consider large-scale disasters.

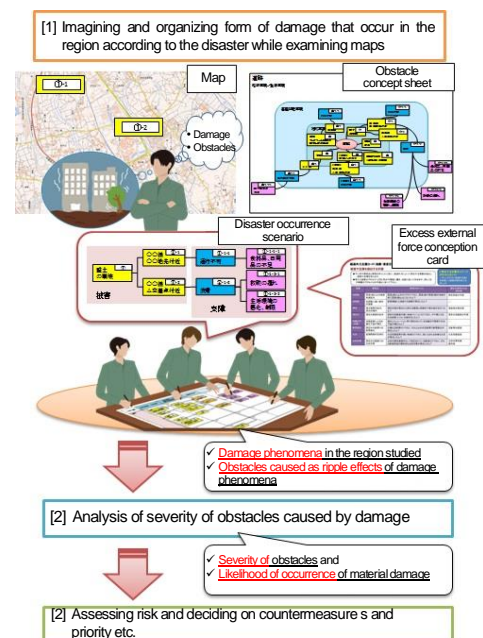
3. Characteristics of the method

This method permits efficient high quality study using study support tools that have also been developed.

The group of tools has been prepared based on past disasters and the results of case studies, and includes written procedures and entry formats to support the work during a study done in conformity with the procedure, a collection of printed phenomena labels to improve the quality of the study contents, collected cases and a checklist, etc.

And in addition to their use a method of building full-scale crisis management methods to study disaster countermeasures, these tools are also considered to be useful as training tools to teach or to remind disaster prevention officials and young staff of the forms of disaster.

Figure Image of Performance of a Disaster Risk Assessment



4. Future Development

Trial use at regional development bureaus that have cooperated with this initiative has yielded positive opinions concerning its usefulness. We plan to improve the completeness of the developed tools so that they will be of use in studying disaster countermeasures in the field.