

Establishment of Use Patterns of Toolkit for Supporting Study on Disaster Control Measures

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1. Introduction

Japan is hit by various disasters, including earthquakes and storm / flood damages. It is therefore very important to prepare for them by conducting pre-training assuming their occurrence, etc. NILIM has developed a toolkit for supporting study on disaster control measures (the "Toolkit"), which puts together various tools for examining disaster damage estimation, risk assessment, and countermeasures as a flow of serial operations, and has been studying on its improvement and utilization method from time to time based on results of use in training, drills, etc. by individual organizations. This paper reports results of study on utilization in FY2018.

2. Outline of Toolkit

The Toolkit is a disaster exercise to be conducted in the following procedures (i) - (iv).

- (i) In "Infrastructure damage data organization," assume disasters from an earthquake, storm / flood damage, etc. and plot damages to infrastructure on jurisdiction and other maps for organization.
- (ii) In "Disaster scenario establishment," organize the effect of infrastructure damage on society and economic activities.
- (iii) In "Risk assessment," assess the risk of infrastructure damage from "possibility of occurrence" and "seriousness of effect on human life and economy" and organize seriousness.
- (iv) In "Countermeasure examination," study the content of countermeasures for individual damages and organize the degrees of difficulty and priority.

3. Utilization of Toolkit

About one day is required to implement all the contents described in the outline of Toolkit. Using various tools, use patterns are being established according to the time and purpose of training. For this fiscal year, training time was set to 2 hours and use patterns were established for the following purposes (i) to (iii) with the structure shown in Table.

Table: Structure of use pattern

時間	項目	概要
約20分	【事務局】訓練概要の説明	・状況設定および訓練手順を説明
約60分	【各班】ツールキット概要①、②の内容演習 災害時の被害状況のイメージ 社会、経済活動への影響をイメージ	・個別班に分かれ、地震発生時に管内でどのような被害が発生するのか、また、発生した被害はどのような支障をもたらすのか、地図を見ながら発想し、整理
約10分	【全体】発表(1班あたり5分程度) ※班数により代表班を選出	・班毎に、以下の点について発表 >発想した被害の様相 >他分野に波及が懸念される被害のうち、特に懸念する被害
約30分	【事務局】講評、ツールキットの説明 ツールキット概要③、④の説明	・各班の成果に対して講評。 ・体系化されたリスクマネジメントの考え方について概説。 ・ツールキットを活用した検討可能事項を説明

- (i) Build the concept in addressing disasters.
- (ii) Make participants understand that infrastructure they manage may be damaged and society, economy, etc. may be greatly affected.
- (iii) Make participants understand that damages to multiple units and various fields of infrastructure mutually affect each other in the event of a disaster and that it is necessary in responding to disaster to take actions by making overall decision considering it. The use patterns were demonstrated in the technical training conducted to subsection manager or equivalent personnel with experience of 5 or 6 years at the position in Kanto Regional Development Bureau. Photo shows the training.



Photo: Disaster exercise technical training

Since the presentation material of the Toolkit, training introduction material, damaged area information, etc. were distributed before the training, the participants deepened their understanding in advance and discussed the topics actively even in a limited time and confirmed the practical applicability of the use patterns.

4. Conclusion

NILIM is going to promote the use and dissemination of the Toolkit in various organizations and further develop another toolkit that is easier to use by conducting necessary improvement and study of use patterns based on results of actual use.