

About "Technical guideline for countermeasures against deep-seated catastrophic (rapid) landslide"

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1. Introduction

Deep-seated landslide occurs less frequently than usual sediment- disasters, but once it occurs, it may have very large magnitude and cause enormous damage (Figure 1). However, conventional measures against sediment-disasters may be insufficient for deep-seated landslide, e.g. it is difficult to say that existing erosion and sediment control facilities may not have sufficient resistance or scale for deep-seated landslide or for natural dams etc. that are caused by deep-seated landslide.



Figure 1. Deep-seated Landslide Generated in Kii Peninsula in 2011

2. Measures against deep-seated landslide

In order to reduce damage from deep-seated landslide, it is necessary to implement not only individual measures but all possible measures including prior structural measures, land use, warning and evacuation, and emergency measures. Of the damage caused by deep-seated landslide, for deep-seated landslide that may cause particularly large damage, it would be difficult to eliminate material damage etc. thoroughly. Therefore, even if complete elimination of damage is difficult, measures to mitigate damage should be considered, such as at least save people's lives. To this end, it is essential to organize the present technologies and research findings systematically. However, no material has ever organized systematically scientific knowledge and countermeasure

technologies for deep-seated landslide. Then, we organized "Basic technical matters for the measures against deep-seated landslide" as Technical Note of the National Institute for Land and Infrastructure Management (NILIM) (Figure 2).

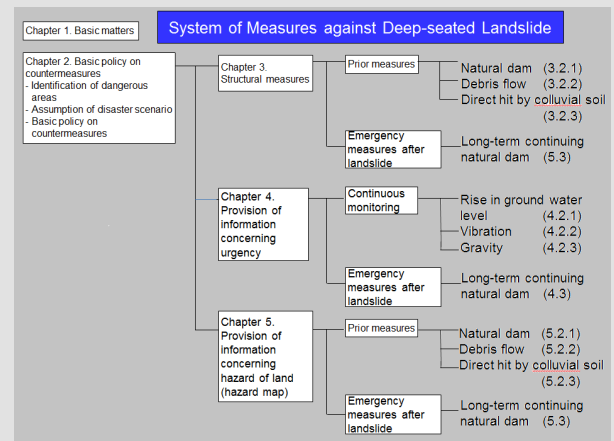


Figure 2. System of Measures against Deep-seated Landslide

3. Conclusion

For deep-seated landslide, examination concerning the risk of occurrence of deep-seated landslide is ongoing, e.g. publication of "Deep-seated Landslide Estimated Frequency Map" in 2009 from the Ministry of Land, Infrastructure and Transport (MLIT) / Public Works Research Institute. We expect this material to be utilized in implementing various measures to mitigate damage from deep-seated landslide as well as conducting hazard assessment.

[Reference]

- 1) Technical Note of NILIM, No. 807 "Technical guideline for countermeasures against deep-seated catastrophic (rapid) landslide" Jun'ichi KAMBARA and Taro UCHIDA
<http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn0807.htm>