

全球重大災害事件簿開發與異常災害特性分析

Development of the Global Disaster Event Notebook and the Analysis of the Characteristic of Abnormal Disaster Events

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摘要

隨著全球災害事件簿網站開發完成，國家災防科技中心針對世界重大災害資料蒐整與評析，持續將過去的歷史災害事件彙整於全球災害事件簿網站，除此之外，本專案隨時專注國際災害事件新聞、掌握災害脈動。而國內災害潛勢地圖網站將持續更新各部會所公開的新版災害潛勢地圖。除了災害事件紀錄外，異常災害特性的分析也是本計畫的研發項目之一，例如以離散元素法為基礎 3DEC (Three-Dimensional Distinct Element Code) 軟體建構三維數值模型，進行三維穩定性分析、邊坡破壞行為分析，並確定邊坡不穩定塊體，進行大規模崩塌地的數值模擬，探討其滑動歷程以及影響範圍。此外，本項計畫運用各項監測資料進行資料解析，探討各項環境監測數據與災害之關聯性。

關鍵詞：全球災害事件簿、三維數值模擬、環境監測

Abstract

With the development of the chronicle of disaster website, the National Science and Technology Center for Disaster Reduction analyze the major disaster in the world, and continue to collect historical disaster events. The disaster potential map website continued to update the new version of the disaster potential data published by various government agencies. Not only the disaster recorded, but also the analysis of the characteristic of abnormal disaster event is also the purpose of this project. The Three-Dimensional Distinct Element Code (3DEC) belonging to the Distinct Element Method was adopted to generate three dimensional model for deep-seated landslide simulation in this project. This study simulates the deep-seated landslide by 3D numerical simulation to explore the sliding process and its impact area. The analyze results determine the unstable block and impact potential area caused by deep-seated landslide. In addition, various monitoring data were used to explore the relationship between various environmental monitoring data and disasters.

Keywords : Global disaster event notebook, 3D numerical simulation, Environmental monitoring