

災害風險圖應用探討-以農業用地淹水風險為例

Application of Disaster Risk Maps: Farmland Flooding Risks as a Case

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摘要

近年國家災害防救科技中心研發之「氣候變遷災害風險調適平臺 (Disaster Risk Adaptation, Dr.A)」, 已陸續受到許多公私部門應用於評估自身業務的氣候變遷風險。Dr.A 除依循聯合國政府間氣候變遷專門委員會(Intergovernmental Panel on Climate Change, IPCC)提出之危害度、脆弱度及暴露度等風險組成因子, 持續導入「臺灣氣候變遷推估資訊與調適知識平台」計畫 (Taiwan Climate Change Projection Information and Adaptation Knowledge Platform, TCCIP)產製之最新 CMIP6 統計降尺度資料, 予以精進淹水及坡地之風險圖外, 另也持續更新及製作鄉鎮市區、最小人口統計區、網格 5 公里及網格 40 公尺等四種不同空間尺度的有關圖資。Dr.A 為使各界於後續「氣候變遷風險評估作業準則」發布實施後, 得以接軌及回應各界應用於氣候變遷風險評估之需求, 近期更著重於推動整合平臺功能及擴大圖層評估應用方式與評估資訊詮釋。本研究主要著重說明 Dr.A 平臺中不同尺度圖資應用之時機與限制, 並採用淹水危害-脆弱度圖評估農業用地風險, 除進行空間範疇界定及現況與未來氣候變遷情境下高風險區位之辨識外, 另也將探討農地分布空間調適差距評估方式, 以期作為後續農業部門調適參考。希冀在本研究發展的圖臺應用架構下, 可逐步使外界了解及提升災害風險圖應用於風險評估之彈性與能力。

關鍵詞：災害風險圖、農業用地、氣候變遷災害風險調適平臺、調適差距

Abstract

In recent years, the Dr.A Platform developed by NCDR, which has been widely used by both public and private sectors to assess their climate change risks. Dr.A follows the risk framework proposed by IPCC and incorporating risk components such as hazard, vulnerability, and exposure. Otherwise, Dr.A continuously integrated the latest CMIP6 statistical downscaled data from the TCCIP to improve flood and slope risk maps. Additionally, Dr. A regularly updates and produces related maps at four spatial scales: township/city, Smallest Population Statistical Area, and 5 km grid and 40 m grid resolutions. To align with and respond to the needs for climate change risk assessment following the release of the 'Regulations for Climate Change Risk Assessment', Dr. A has recently focused on enhancing the integration platform functions and expanding the use and interpretation of layer assessments. This study aims to clarify the timing and limitations of utilizing Dr.A's multi-scale spatial data. It specifically applies the flood hazard-vulnerability maps to assess the exposure risk of farmland land. In addition to defining spatial boundaries and identifying high-risk areas under current and future climate change scenarios, this study also explores methods to assess spatial adaptation gaps in the spatial distribution of farmland. The goal is to provide insights for future adaptation planning in the agricultural sector. Ultimately, this research seeks to gradually enhance users' understanding and improve the flexibility and capability of disaster risk maps in risk assessment.

Keywords : Disaster Risk Map, Farmland, Disaster Risk Adaptation Platform for Climate Change, Adaptation Gaps