氣候變遷下農村再生社區風險指認-以嘉義縣為例
Climate Risk Exposure to Rural Regeneration Communities: Identifications of Chiayi County

國家災害防救科技中心

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摘　要

氣候變遷衝擊農村許多面向，加上農村社區面對氣候變遷脆弱度相對其他類型社區較高，例如農村社區在地理位置上，經常處於極端高低溫、颱風、易淹水、乾旱、坡地崩塌等災害潛勢空間，特別是生計上又相當高度依賴農地及自然資源，對農村的產業發展、居住安全及整體空間環境均造成顯著挑戰。為提升農村再生社區(簡稱農村社區)因應氣候變遷風險的應付與調適能力，農業部農村發展及水土保持署自113年起與國家災害防救科技中心(簡稱災防中心)合作，優先推動農村社區氣候變遷風險評估之能力建構。

計畫發展初期，主要運用災防中心產製之淹水、坡地危害-脆弱度圖及國科會「臺灣氣候變遷推估資訊與調適知識平台」計畫(TCCIP)所推估的高溫危害度圖，以嘉義縣農村社區空間區位為基礎進行套疊分析，藉此方式初步辨識出暴露於潛在高風險的農村社區，後再與嘉義縣政府農業處請益各農村社區社會情形、產業特色及發展願景等，共同選定民雄鄉福興社區、東石鄉塭仔社區、義竹鄉埤前社區、竹崎鄉金獅社區及番路鄉大湖社區等五處較具代表性的農村社區。這五處農村社區地理區位又分別涵蓋平原、海區與山區等三大地貌類型，初步圖資套疊結果顯示出各農村因地理區位差異，而於現況及未來可能需優先進行細部分析的災害風險區位及類型。

農村社區在「生活環境」、「農業生產」及「生態保育」等三生功能及資源上各具發展特色，展現農村再生政策指引在地轉型的潛力，後續工作將藉由農村背景資料蒐集與分析、實地勘察、深度訪談等方式，投入於各農村社區自然資源、物理資源、人力資源、社會資源及經濟資源等五種資源類型的調查，並評估未來可能受氣候變遷影響的資源分布空間，進一步解析出各資源重要性及社會-生態系統關鍵脆弱度，用以作為進行風險評估及調適操作示範社區的篩選基礎。

關鍵詞：氣候變遷、農村再生社區、應付與調適能力、危害-脆弱度、高風險

Abstract

Climate change impacts multiple aspects of rural areas. Compared to other categories of communities, rural communities are generally more vulnerable to climate-related hazards. Specifically, rural communities are often located in areas where prone to extreme temperatures, typhoons, flooding, droughts, and slope failures. Moreover, their livelihoods are highly dependent on farmland and natural resources, posing significant challenges to rural industrial development, residential safety, and the overall physical environment.

To enhance the capacity of rural regeneration communities (hereafter referred to as rural communities) to cope with and adapt to climate risks, the Agency of Rural Development and Soil and Water Conservation has collaborated with the National Science and Technology Center for Disaster Reduction (NCDR) to promote capacity building for climate change risk assessments in rural communities since 2024.

In the early stages of the collaboration, mainly applied flood and slope vulnerability maps (developed by NCDR), as well as heat hazard maps (estimated by the "Taiwan Climate Change Projection and Information Platform Project" (TCCIP) under the National Science and Technology Council) to overlaid with the spatial locations of rural communities in Chiayi County. Consequently, the project initial identifies rural communities those exposed to potential high risks. Subsequently, five representative communities were selected and in consultation with the Agriculture Department of Chiayi County Government based on the conditions among social characteristics, industrial features, and development visions. Those communities including Fuxing Community, Wenzai Community, Piqian Community, Jinshi Community, and Dahu Community.

These five rural communities are distributed across three major terrain features—plains, coastal areas, and hillside fields. The preliminary analysis reveals the hot spots of disaster risks due to geographical differences and requiring further analysis vary for each community in following social-ecological vulnerabilities exploration.

Each rural community has its own development characteristics in terms of "Life-surrounding," "Agri-production," and "Eco-conservation," which are reflecting the potential of transition for localized development under rural regeneration policies. Future efforts are including rural background data collection and analysis, fields investigations, and stakeholders' in-depth interviews, which surveys will focus on the relevant issues of five resource types: natural, physical, human, social, and economic. The purpose is to assess the spatial distribution of resources where potentially affected by climate change, and furthermore further analyze the importance of resources and identify key socio-ecological vulnerabilities. By means of comprehensive data collections and analysis in rural communities will serve as the basis for selecting communities for demonstration of climate risk assessment and adaptation practices.

Keywords: Climate Change, Rural Regeneration Communities, Coping and Adaptive capacity, Hazard-vulnerability, High Risk