民國110年
災害防救白皮書

Disaster Management White Paper

行政院 編印

109年災害防救關鍵數字

0.9 ℃
▶ 年均溫高出氣候平均值 歷史紀錄上最暖年

119.0 mm
▶ 最大時降雨量 109年5月16日(高雄市馬頭山)

668.5 mm
▶ 最大日降雨量 109年5月22日(屏東縣大漢山)

5.5 公分/年
▶ 地層下陷最大速率 雲林縣元長鄉

161 人
▶ 火災死亡人數

1,851 人
▶ 交通事故死亡人數

58 場次/63萬2,539隻數
▶ 高病原性禽流感確診案例禽場

168 小時 未包含非洲豬瘟及嚴重特殊傳染性肺炎
▶ 中央災害應變中心開設時數

134/422 條次
▶ 發布土石流紅色/黃色警戒

1447.92 萬立方公尺
▶ 河川水庫疏濬 近5年來最大清淤量

1,726 條
▶ 完成並公告土石流潛勢溪流(影響範圍)位置

5.7 萬 件
▶ 農業保險累計總投保件數

10 萬9,827 人次
▶ 災防教育訓練參與人次

393萬1,070 人次
▶ 災防演習(演練)參與人次

687.49 億元
▶ 中央部會災防預算投入

126.24 億元(預算數)
64.27 億元(決算審定數)
▶ 地方政府災害準備金

30.48%
▶ 水旱災預算占全部災防預算

21.09 億元(旱災15.29億元)
▶ 重大災害總損失金額 表(1-3)

編輯說明

「災害防救白皮書」之編定，依據災害防救法第 17 條第 3 項規定：「行政院每年應將災害防救白皮書送交立法院」，用以說明災害防救體系平時減災整備與臨災應變、政府災害防救預算、未來推動具體策略與措施及政府災害防救施政成果等。

本白皮書撰擬過程歷經跨部會研商，於 110 年 2 月 8 日邀集內政部、外交部、國防部、教育部、經濟部、交通部、行政院農業委員會、衛生福利部、行政院環境保護署、科技部、金融監督管理委員會、海洋委員會、原住民族委員會、行政院主計總處、行政院原子能委員會、國家通訊傳播委員會及國家災害防救科技中心，擬定本白皮書架構及提供相關編輯建議，與會部會於 1 至 6 月陸續提供資料，內容經行政院災害防救辦公室編撰完成初稿。於 8 月 9 日函請各部會就本白皮書草案加以檢視。審議過程，於 9 月 13 日函請林美聆、馬國鳳、陳亮全、陳宏宇等專家學者審查，提供本白皮書編撰諸多寶貴修正建議及未來編輯參考，11 月 2 日函請各部會就專家學者審查建議提供修正內容或回應說明，並再次檢視確認本白皮書內容，編審過程審慎嚴謹。

「民國 110 年災害防救白皮書」付梓之際，由衷感謝各相關部會機關之協助，以及各界專家學者提供寶貴意見，使本白皮書益臻專業並更具邏輯性，亦感謝教育部提供校園災防獲獎繪畫供本白皮書作為插圖使用，使本白皮書更增添童趣並貼進民眾防災生活。另為增進社會各界對政府災害防救施政的瞭解與認識，將送相關政府機關、圖書館、專家學者及委員會等卓參。

摘要

109 年全球重大天然災害根據聯合國國際緊急災害資料庫 (Emergency Event Database) 統計，重大天災衝擊影響嚴重事件數共計 350 件，其中印度的洪災造成高達 1,925 人死亡，最為嚴重。在前十大死亡人數事件中，都為颱風和洪災之強降雨導致的災害。重大經濟損失排序前 5 名中，印度與美國分列第一、第二。印度是 109 年天然災害造成經濟損失最嚴重的國家，因氣候變遷引致氣候型災害，其中風暴 - 安攀氣旋造成損失達 130 億美元，接續又受到洪災損失約 60 億美元，顯見全世界受到災害的威脅與衝擊仍相當鉅大。

《民國 110 年災害防救白皮書》係依災害防救法第 17 條規定編纂，研析國內外災害情勢、揭櫫災防預算配置、未來災害防救新興議題及載錄政府重要災害防救政策。全書分為四大章節，第一章為「109 年災害概況」概述 109 年國際災例，包括：全球嚴重特殊傳染性肺炎 (COVID-19)、希臘愛琴海規模 7.0 地震及東北亞地區梅雨滯留強降雨事件；我國重大災例，包括：國內嚴重特殊傳染性肺炎 (COVID-19) 事件、極端氣候造成旱災與低溫寒害，及消防安檢管理上所造成的火災事故 (臺北市林森北路 KTV 事件)，期藉由通盤性災害探討、改進策勵，做為未來政策規劃之建議。

第二章彙整並分析各級政府災害防救相關施政預算配置，內容包括 110 年中央各相關部會編列之災害防救預算及特別預算共計約 575.93 億元，以及各地方政府災害準備金預算約 134.08 億元，109 年中央特別統籌分配稅款，撥付各地方政府天然災害經費約 27.7 億元等統計資料及分析。

第三章災防新興挑戰與對策，就 109 年相關災害事件由中央災害防救業務主管機關因應災害環境變遷及災害經驗，所提之新興具體措施，包括八項重要議題：嚴重特殊傳染性肺炎 (COVID-19) 之防疫處置作為、鐵路邊坡安全管理與預警機制、大規模地震情境模擬及因應、強化民眾登山安全管理作為、沿海致災異常波浪預警應用、海洋污染應變、離岸風電公共事業災害防救業務計畫及高溫資訊之預警與預防熱傷害應對措施。探究新興災害防救重要挑戰，並提出具體對策。

第四章政府重要災防政策與成果，首先對去年編輯之「109 年災害防救白皮書」具體對策與措施盤點執行成果；並綜整政府在災害防救減災、整備、應變及復原重建四個階段之施政重點與成果，包括健全災害防救體制與法制、重要災害防救中長程計畫推動情形、災害防救科技之研發及應用、防救災能力之整備及演練、應變及策進措施、災害復原及重建、國際防救災交流與合作等事項，內容展現政府對災害防救施政之亮點及具體績效。

基此，本白皮書 109 年的災損統計及災害環境趨勢變化分析置於「附錄」，如：平地測站年大豪雨日趨勢圖、重大地震災害統計、地層下陷速度分析及危害性化學物質事故分析等，有助於對災害環境變化的掌握與提升災害管理的因應作為與能力，謹請各界應用及參考。

有關本書全文及附錄：
行政院中央災害防救會報 / 政策及計畫 / 災害防救白皮書
網址：https://cdprc.ey.gov.tw/Page/26D63F7B75BA273

Abstract

According to the United Nations' Emergency Events Database, a total of 350 major natural disasters occurred throughout the world in 2020, among which floods in India were of the greatest severity, causing as many as 1,925 deaths. Among the 10 deadliest disasters, the top causes were heavy rainfall during cyclones and floods. In terms of the top five countries sustaining major economic losses, India and the United States ranked first and second. In India in 2020, climate change caused many climate-related disasters, including Cyclone Amphan, which caused losses amounting to US$13 billion. India was later struck by devastating floods that brought on losses of approximately US$6 billion. It's significant that the threatand impact throughout the world is staill considerable.

The 2021 Disaster Management White Paper was prepared in accordance with Article 17 of the Disaster Prevention and Protection Act. It analyzes disaster trends in Taiwan and foreign countries, outlines the allocation of disaster prevention budgets, discusses emerging topics for future disaster prevention, and summarizes the government's important disaster prevention and rescue policies. The White Paper is divided into four main chapters. The first chapter, "Overview of 2020 Disasters," includes a summary of disasters around the world in 2020, such as the COVID-19 pandemic, the magnitude-7.0 Aegean Sea earthquake, and the heavy rainfalls during the Northeast Asian plum rain season. Cases of disasters in Taiwan included the domestic COVID-19 outbreaks, droughts and cold snaps caused by extreme weather, and the karaoke lounge fire in Taipei's Linsen North Road caused by lapses in fire safety inspections and management. The comprehensive discussion of these cases and suggested improvement measures are expected to serve as reference for future policy planning.

The second chapter presents a summary of relevant budgets allocated by government agencies at all levels for disaster prevention and relief efforts. This includes disaster prevention and relief budgets and special appropriations for central government ministries and departments for 2021, amounting to about NT$57.593 billion (US$2.1 billion), as well as disaster preparedness budgets allocated by local governments, amounting to approximately NT$13.408 billion (US$480 million), in addition to about NT$2.77 billion (US$99 million) in specially designated central government tax revenues distributed to local governments to cover natural disaster expenditures incurred in 2020.

The third chapter discusses emerging challenges and countermeasures for disasters. It lays out new and concrete measures from the central disaster prevention and relief agency, proposed in response to disaster environment changes and experiences from 2020. These

measures include eight important issues: epidemic prevention and response measures for COVID-19, safety management and early-warning mechanisms for railway-adjacent slopes, simulation and response to large-scale earthquakes, enhancement of people’s safety awareness for mountain-climbing activities, early-warning applications for rogue waves in coastal areas, response to marine pollution, offshore wind farm disaster prevention and rescue operational plans, and high-temperature early warnings with prevention and response measures for heat strokes. The important challenges of newly identified aspects of disaster prevention and rescue are examined, and specific countermeasures are proposed.

Chapter 4 describes the government’s major disaster prevention policies and results. It begins by enumerating the implementation results of the specific countermeasures and responses formulated in last year’s Disaster Management White Paper. It then provides a comprehensive overview of the key administrative aims and results of the government's four-phased approach to handling emergencies, namely disaster mitigation, preparedness, response measures, and recovery and rebuilding efforts. This chapter covers the development of a comprehensive disaster prevention and relief mechanism and associated legal framework; the status of important medium- and long-term disaster prevention programs; research, development, and applications of disaster prevention and relief technology; disaster prevention and response preparedness and practice drills; response measures and strategies; post-disaster recovery and rebuilding; and international exchanges and cooperative initiatives on disaster prevention efforts. These collective endeavors demonstrate the government’s substantial achievements and performance in disaster prevention and rescue policy implementation.

Finally, the Appendix contains disaster loss statistics and analyses of disaster environment trends for 2020 as covered in this White Paper. It includes such information as trend charts of annual torrential rain days at lowland stations, statistics of major earthquake disasters, analysis of stratum subsidence rate, and analysis of hazardous chemical accidents. This information is expected to enable understanding of changes in the disaster environment and improve disaster management response ability, and is provided for future application and reference.

Full text and appendices of the White Paper:
Central Disaster Prevention and Response Council of the Executive Yuan / Policies and Plans / Disaster Management White Paper
URL:https://cdprc.ey.gov.tw/Page/26D63F7B75BA273

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