

# 強化小區域及劇烈天氣即時預報系統

## Enhancement of Operational Nowcasting System for the Small-scale and Severe Weather

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### 摘要

為提升災害性天氣的即時監測及預報技術，並持續精進小區域（鄉鎮尺度）劇烈天氣的即時預報技術，以發展本土化之機率型預報指引，建置災害性天氣警特報的作業機制。因此本計畫由「資料蒐集分析與預報技術研發」及「輔助系統建置與資訊效能升級」2大分項目標組成。以現有的氣象監測網及預報技術為基礎，透過觀測資料分析技術，產出高精密度地面分析場，應用觀測結合數值模式於預報技術的開發，至下游的輔助系統與軟硬體優化之目標策略，再輔以科技研發動能與資訊系統服務的支援，強化小區域劇烈天氣即時預報技術，並完善鄉鎮尺度警特報的發布作業流程。

**關鍵詞：**小區域及劇烈天氣、即時預報系統、鄉鎮預報。

### Abstract

To improve the real-time monitoring and nowcasting technique for the small-scale (township) hazard weather, this project that continues to increase the short-term forecast ability is proposed. Two main strategies, “data analysis and forecast technique development” and “supportive system construction and efficiency upgrade”, are planned and conducted to achieve the project goal. Based on the current observational network and township forecast, the observational data are analyzed to produce the surface meteorological analysis field with high spacial and temporal resolution. This high resolution analyses that are combined with the numerical weather prediction model can assist in developing forecast technique for finer-scale areas. In addition, the functionality and efficiency of supplementary information systems are enhanced to support the subjective decision-making process and to shorten time of issuing

**warning as well. Therefore, both forecast technique development and information system upgrade are implemented to further complete the operational process of issuing the township-scale warning for the severe weather.**

**Keywords: Small-scale and severe weather; nowcasting system; township forecast.**