The Development of COP for Tzu Chi Disaster Prevention System by Using QGIS-Taking 2018 Hualien Earthquake as an Example

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The Hualien earthquake occurred at 23:50 and 41.6 seconds on February 6, 2018. The epicenter was located in the coastal area of Hualien County. The earthquake scale was 6.2 and the Seismic source depth was 6.3 kilometers. The earthquake disaster along the Milun fault was mainly concentrated in Hualien City, and collapsed the first and second floors of the "Tongshuai" building. The "Yunmen Cuidi" Building showed a 45-degree tilt. The lower floors of the residential community building "Baijin Shuangxing" and "Wuzhu Wusu" at Guosheng Sixth Street were destroyed. This study mainly uses the powerful geospatial analysis capabilities of Geographic Information System (GIS) to provide Tzu Chi's plans for disaster mitigation. The projects include: (1) humanitarian cares; (2) visiting and reporting of damage situations around main disaster areas and (3) "Reassuring Homes Visits" in order to provide assistance to Tzu Chi people for operations of disaster mitigation.

Keywords: Millun fault, geographic information system, spatial analysis, Tzu Chi Foundation