



國立中央大學太空科學與工程學系  
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## 專題演講

# Integration of multi-sources data for rapid food security assessment in post-disaster regions

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Time : 111年7月11日 星期一 09:30

Place : 太遙中心 R2-223-2 教室

摘要/Abstract :

This study uses satellite imagery and geospatial data to examine the impact of floods over the main planting areas for double-cropping rice and grain crops in the Yangtze River's middle reaches. During summer 2020, a long-lasting 62-day heavy rainfall caused record-breaking floods over large areas of China, especially the Yangtze basin. Through close examination of Sentinel-1 / 2 satellite imagery and Copernicus Global Land Cover, between July and August 2020, the inundation area was up to 21941 and 23063 km<sup>2</sup>, and the crop affected area was up to 11649 and 11346 km<sup>2</sup>, respectively. We estimated that around 4.66 million metric tons of grain crops were seriously affected in these two months. While the PRC government denied that food security existed, the number of Grains & Feeds imported from the U.S. between January to July 2021 increased by 316%. This study shows that with modern remote sensing techniques, stakeholders can get critical estimates of large-scale disaster events much earlier than other indicators, such as disaster field survey or crop price statistic. Potential use could include but is not limited to monitoring floods and land use coverage changes.

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