Application of Disaster Management Information for the COVID-19 Pandemic

Purpose: Information
Submitted by: Chinese Taipei
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Chinese Taipei

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Challenges met during the COVID-19 Pandemic - crowd movement for keeping social distancing

• Where and how to identify crowd movements
  – Locations and numbers of crowds
  – Density of crowds exceeds allowable capacity or not
  – Time-dependent increments to forecast the trend
  – Channels to inform citizens to take actions

• Quick solutions by applying near-real-time dynamic population data
  – In case of earthquake, no matter planning or emergency response, population distribution is a critical factor
  – All non-privacy information produced by cell phones to monitor the movements
  – Update interval: every 10 minute
  – Data format: at 500mX 500m grids to identify hot spots
Pandemic Alerts sent by Cell Broadcast Service during Spring Break (April 02-06, 2020)

Alerts dispatched at 12:05 pm on April 04\textsuperscript{th}, 2020

1. Hualian County: Hualian City
2. Yunlin County: Beigang Township
3. Chiayi County: Zhuqi Township, Alishan Township, Meishan Township
4. Chiayi City: East District
5. Tainan City: Liuying District, Guantian District, Xinhua District, Baihe District
6. Kaohsiung City: Qishan District, Qieding District
7. Pingtung County: Hengchun Township
Crowd started to increase in the afternoon of 04/02; the population reached its peak on 04/03 (2 times than normal population); the crowd started to decrease in the afternoon of 04/04.
Population movement during spring break in Hengchun Township, Pingtung County

- Crowd started to increase in the afternoon of 04/02; the population reached its peak on 04/03 (2 times than normal population); the crowd started to decrease in the afternoon of 04/04

(Data source: Chunghwa Telecom)
Findings and lessons learned

• The cross-cutting usage of information should be the trend
  – Data and information should provide **multiple functions for diverse emergencies**
  – All-hazards approaches

• How disaster managers or researchers to extend collaboration with others
  – A mechanism or platform to **engage key stakeholders**

• How information well transferred and understood by the general public
  – **Risk communication** always required
  – **Effective and efficient channels** to reach end users
Thanks for your attention