



Nuclear Emergency Preparedness and Response in Taiwan- Notification and Response Systems

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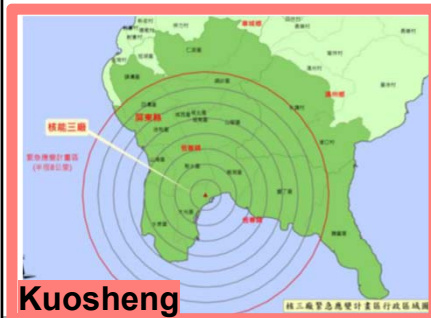
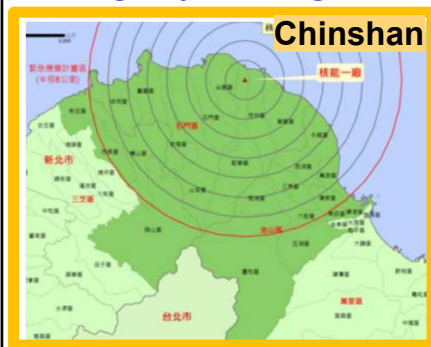
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Nuclear Power Plants in Taiwan

Emergency Planning Zone(EPZ) : 8km



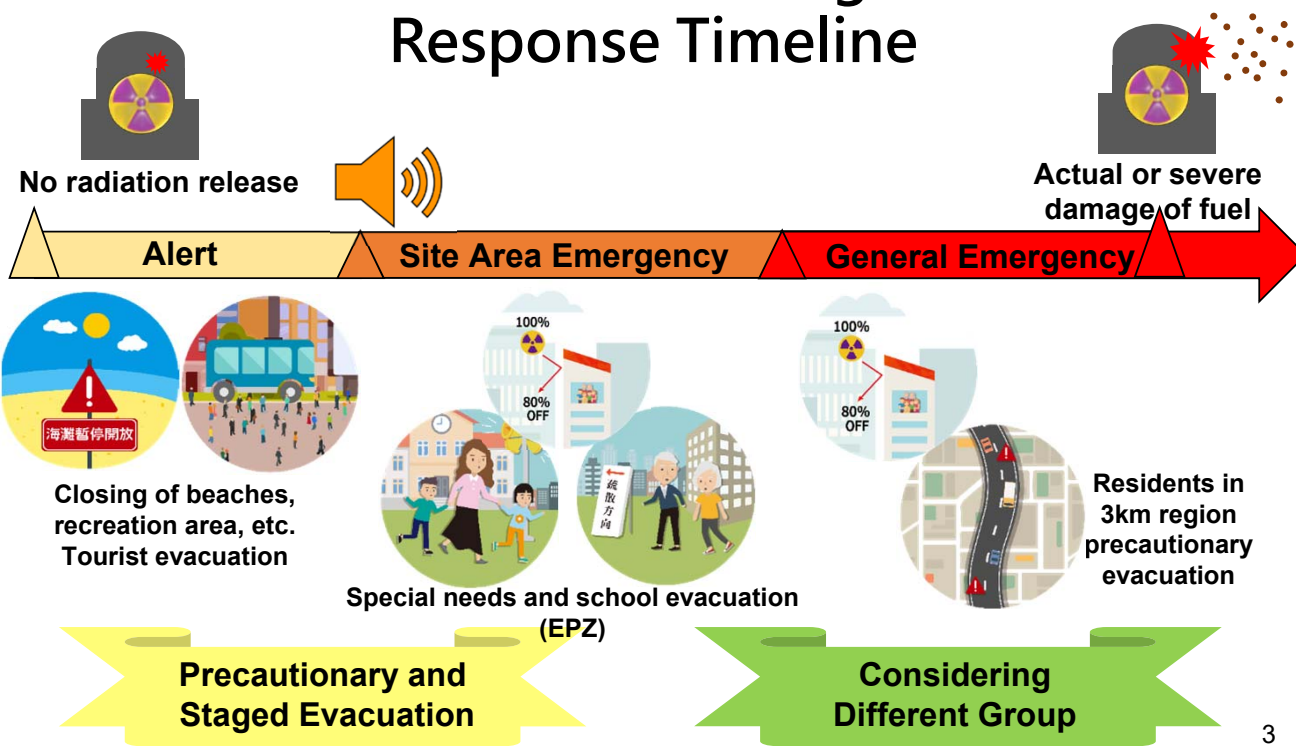


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Nuclear Accidents Progression/ Response Timeline



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Evolution Alert and Notification System in Taiwan

Version 1



Paper · Audio



Version 2



Television · Internet



Version 3



Multiple Media



Version 4



Mobile phone



To be real-time,
active and free.



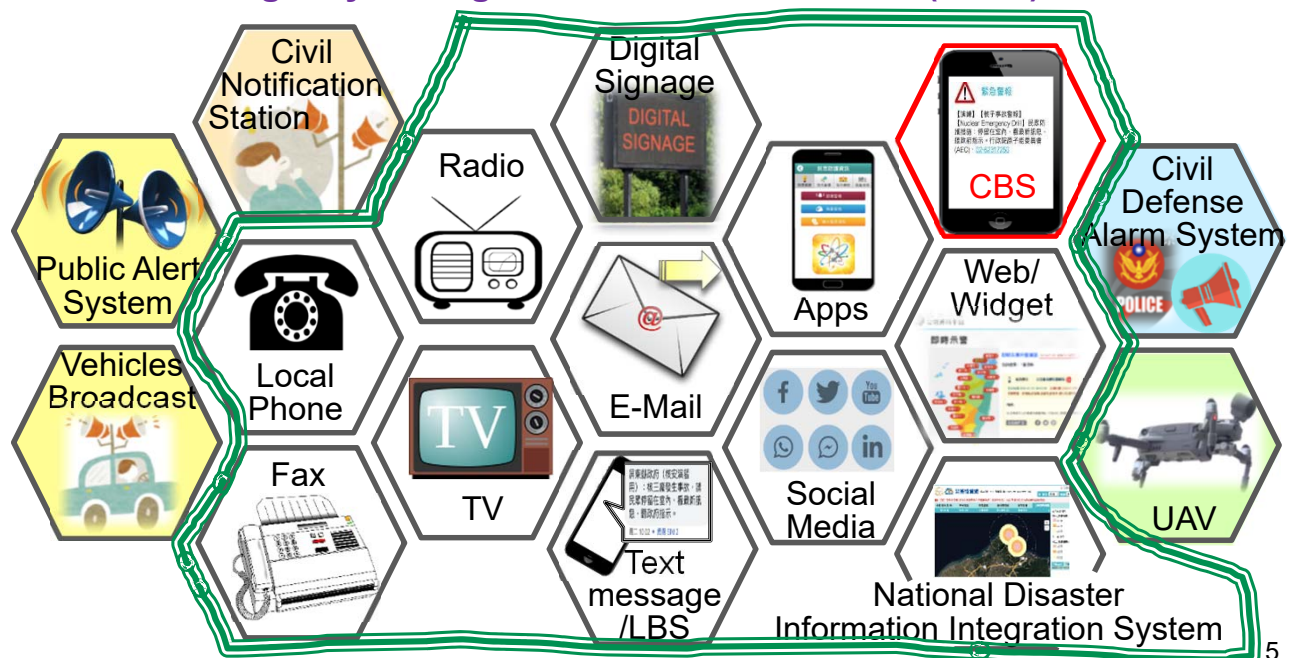
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Alert and Notification Systems for Nuclear Emergency

Emergency Management Information Cloud(EMIC) Platform



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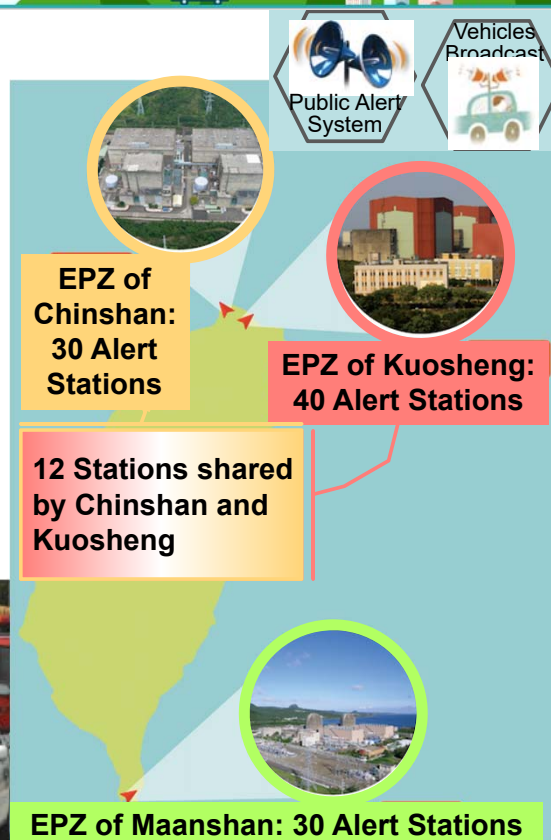
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Public Alert System & Vehicles Broadcast

- Residents within EPZ shall be notified within 45 min.
 - 0~3km : Alert stations must cover 100% residents.
 - 3-8km : Alert stations must cover 75% residents.



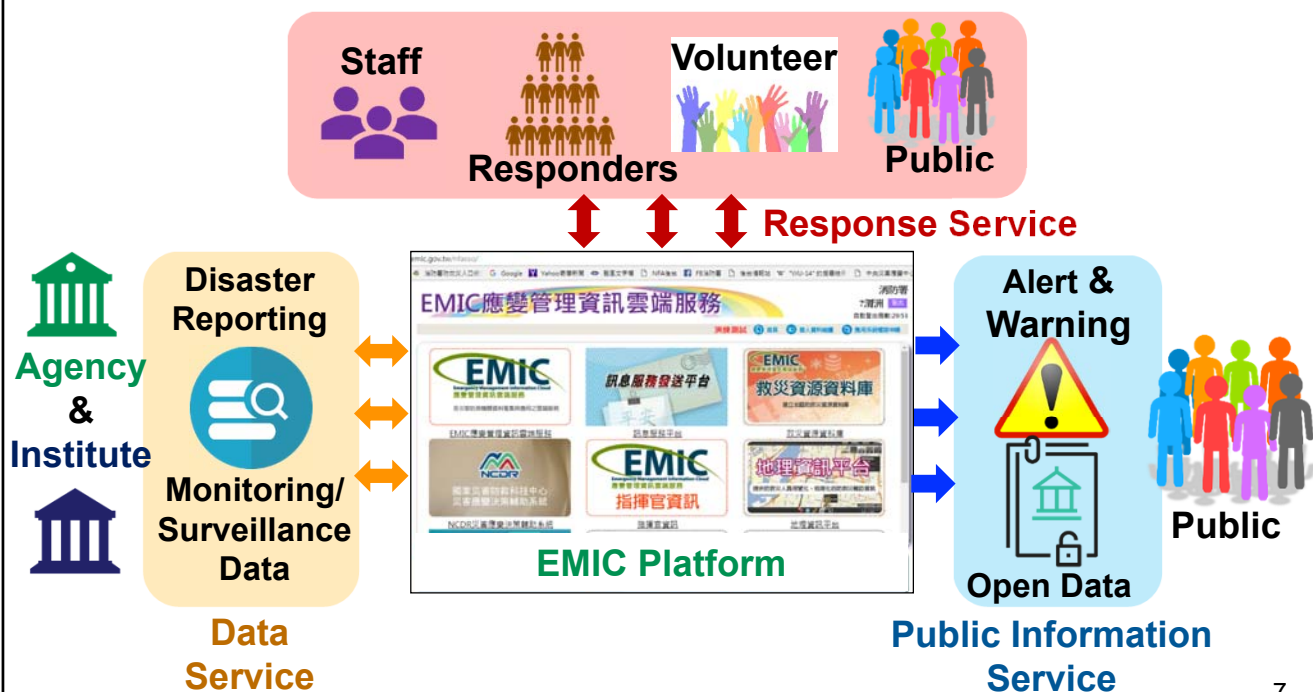


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Emergency Management Information Cloud (EMIC) Platform

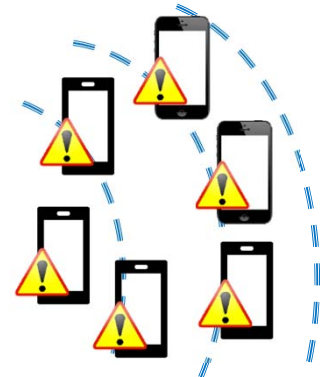


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Cell Broadcast Service(CBS) (1/3)

- ▣ A point-to-multi-point messaging service.
- ▣ Sending out a public warning message
 - to a few or millions of people.
 - location specific.
 - near real-time.
 - even when network is congested.





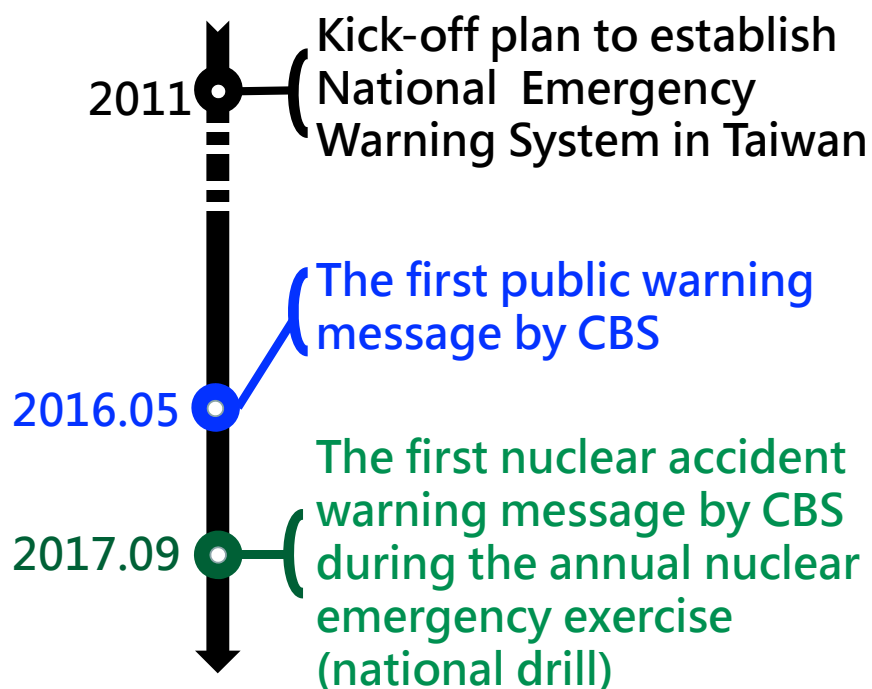
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Cell Broadcast Service(CBS) (2/3)



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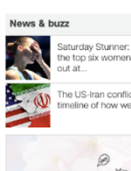
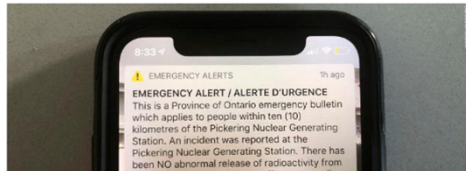


Cell Broadcast Service(CBS) (3/3)

If the false alarm happened.....

World Africa Americas Asia Australia China Europe India Middle East United Kingdom
Canadians got an emergency alert about a nuclear power plant incident. It was sent in error, the plant says

By Matthew Friedman, Elizabeth Joseph and Eric Léverson, CNN
Updated 1945 GMT (0345 HKT) January 12, 2020



台南開山里登革熱警示 誤把公尺當公里發送全國
m→km

最新更新：2019/07/09 15:25

7月9日 星期二
己亥年六月初七

緊急警報

現在

青
有
快

The lack of clarity within an emergency alarm can incite mass panic and confusion, it can also cause distrust between the public and emergency systems.

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Civil Defense Alarm System



- An auxiliary system to notify people outside EPZ.

A nuclear emergency drill message released by the Civil Defense Alarm System in 2019 nuclear emergency exercise

Zhonghua Road during the 2019 Wan An drill(annual air-raid drill) in Taipei



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Unmanned Aerial Vehicle(UAV)



- Additional tool to inform to evacuate or to identify hot spots in a nuclear emergency.



2019 nuclear emergency exercise @South Bay



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National Disaster Information Integration System-Nuclear Accident



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Our Experience

- ❑ Use different kinds of media for notification to prevent from common cause failure on public alert and warning.
- ❑ CBS is fast and efficient tool for release of public warning messages, yet lack of clarity within an emergency alarm can incite mass panic and confusion.
- ❑ UAV will play a crucial role in emergency response because of aerial mobility.



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Taipei 101 (the tallest building in Taiwan)

Thank
You



Lungshan Temple



Jiufen (the center of gold mining)

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