

Way to Go. Combining Technical, Human, Contextual and Structural Aspects for Effective National IPAWS



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A Common Definition...

We all agree with the purpose of alerts...

« To **deliver messages** to warn populations at risk of imminent threats or dangers with the goal of **mazimizing the probability** that people take protective actions and **minimizing their delay** in taking those actions... »

... but the alerting process is more complex!

Who?
What?
When?
Why?
For what?
...



Technological Aspects...



Mails. Web



Smartphone



Phone number



Social media



Radios



Televisions



Sirens



Phone call.



Door-to-door



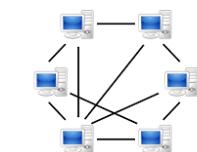
Megaphones



LB-SMS



CBC



Peer-to-peer



E-Call



Citizens



4G / 5G/ LTE

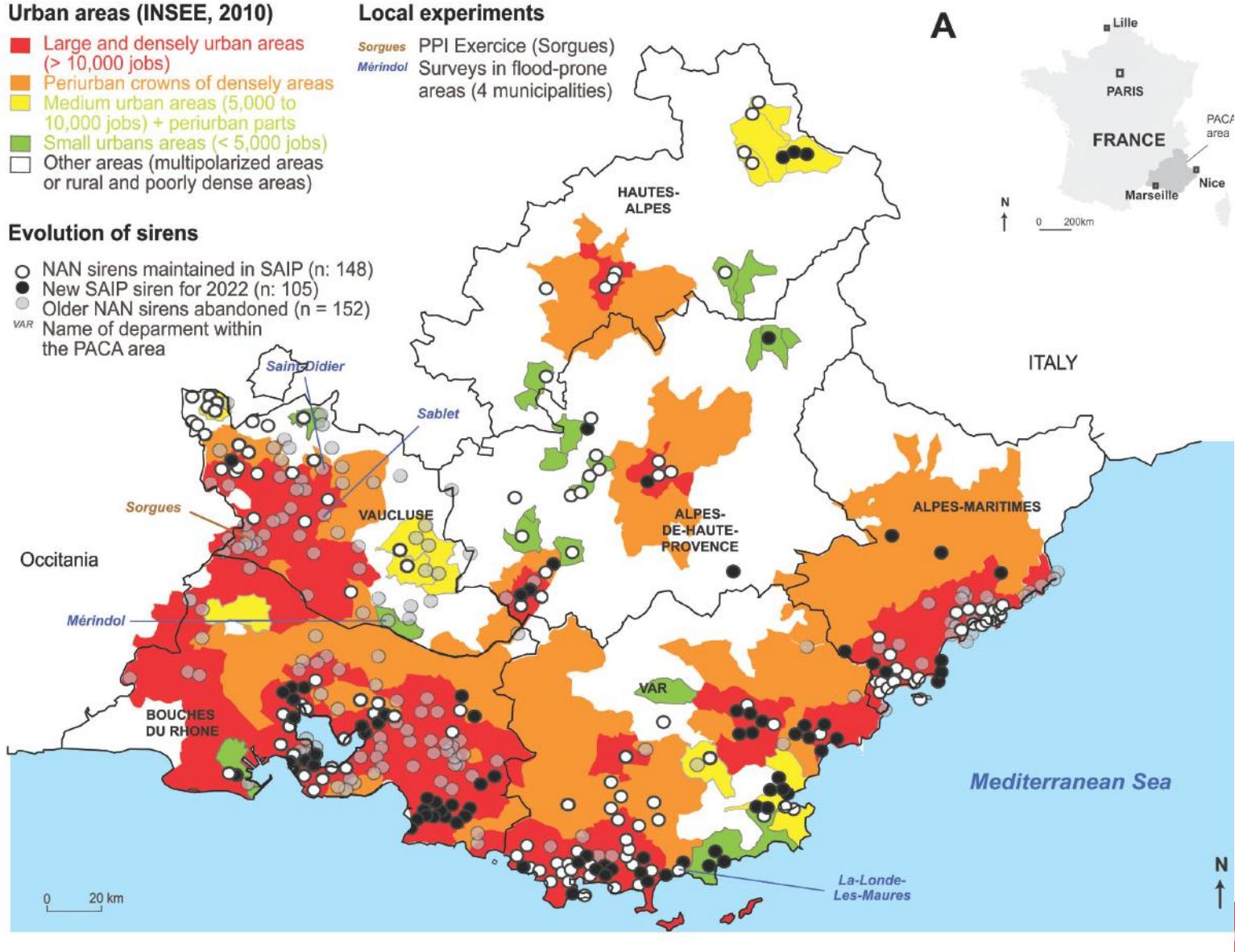


Geotargeted



And more !

SAIP Sirens (2020) (South of France)



Technological Aspects...

1st challenge :

To coordinate the technological solutions
in a multi-channel and in a single platform,
while being aware that the alert will not
affect part of the population...



Peer-to-peer



E-Call



Citizens



4G / 5G/ LTE



Geotargeted



And more !

Human Aspects...

Flash floods
St-Julien-de-
Peyrolas
(France)
2018/08/12
(1 killed)



Human Aspects...

Fire

Mont Blanc
(France)
1999/03/24
(39 killed)



Wildfire

Matti
(Greece)
2018/07/23
(100 killed)



Tsunami

Dan Lampung
(Indonesia)
2018/05/21
(429 killed)



Dust bowl

Sydney
(Australia)
2018/12/11
(56 killed)



Human Aspects...

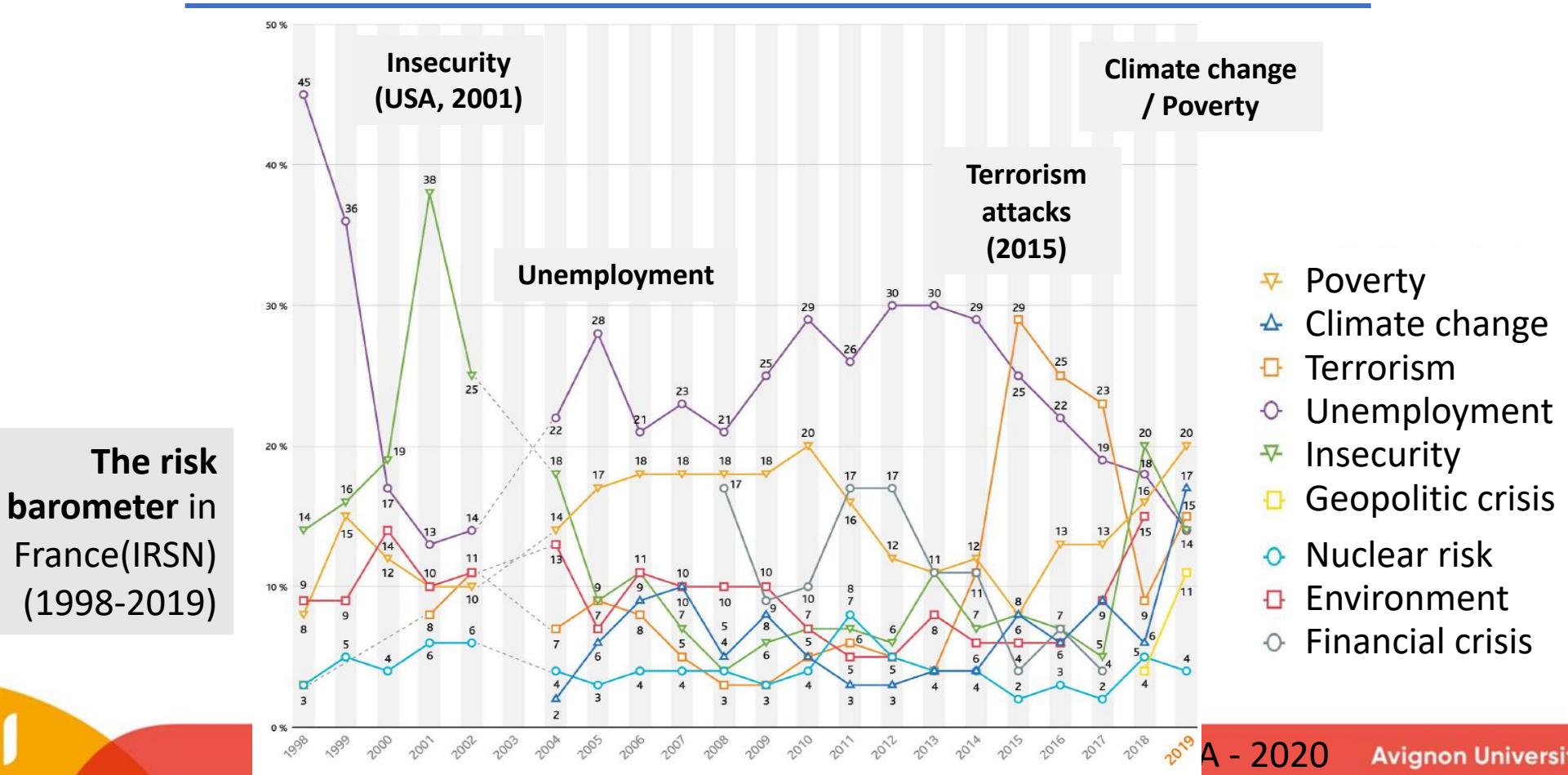
2nd challenge :

To adapt safety instructions to the needs of populations & to their understanding of the situation, and to stop blaming them for their "bad" behaviours !

(Greece)
2018/07/23
(100 killed)

2011/12/11
(56 killed)

Contextual Aspects...



Contextual Aspects...

**Recent results
(Dec. 2020) >>**

Needs of 765
students in case
of local alert



26 %

62 %

6 %

5 %

Not usefull



Contextual Aspects...

3rd challenge:

To adapt technologies to each event/public
and to further explain the uncertainties and
the unpredictability of hazards/threats

Fire
Mont Blanc
(France)

199

(3

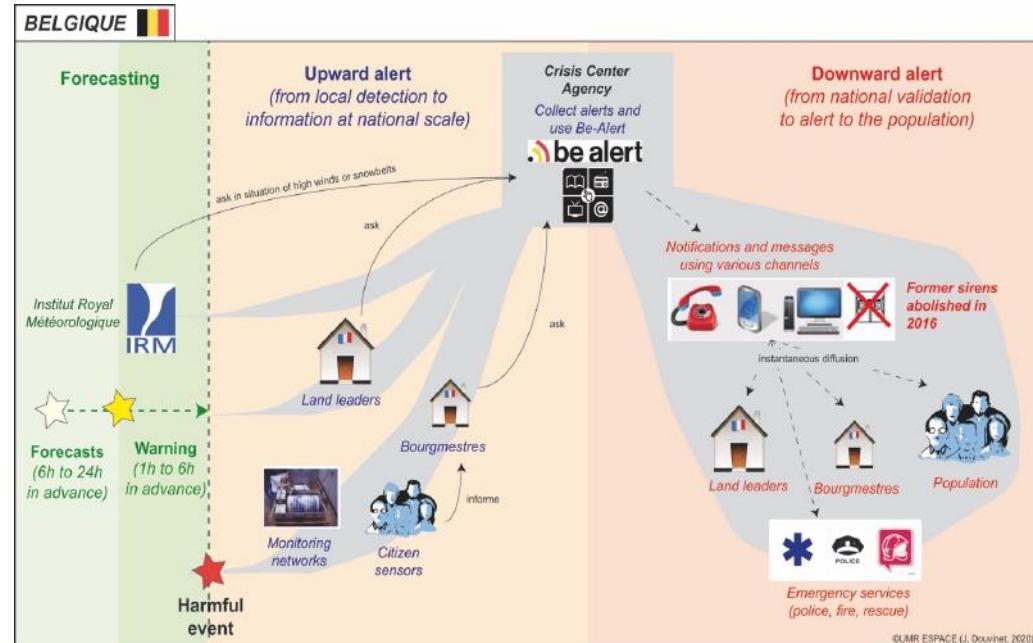
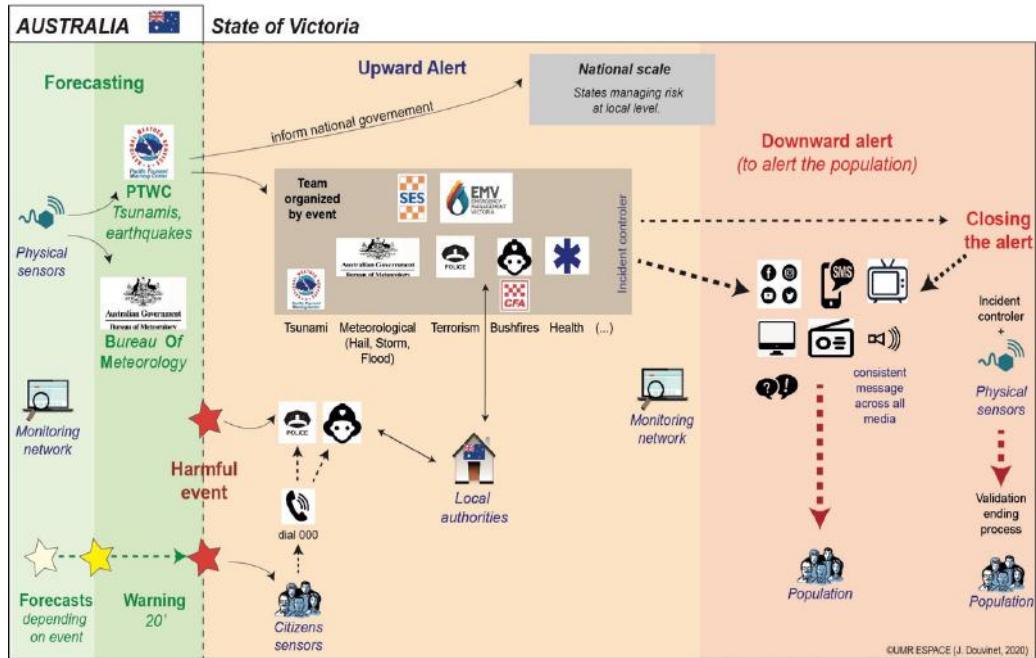
(Greece)
2018/07/23
(100 killed)

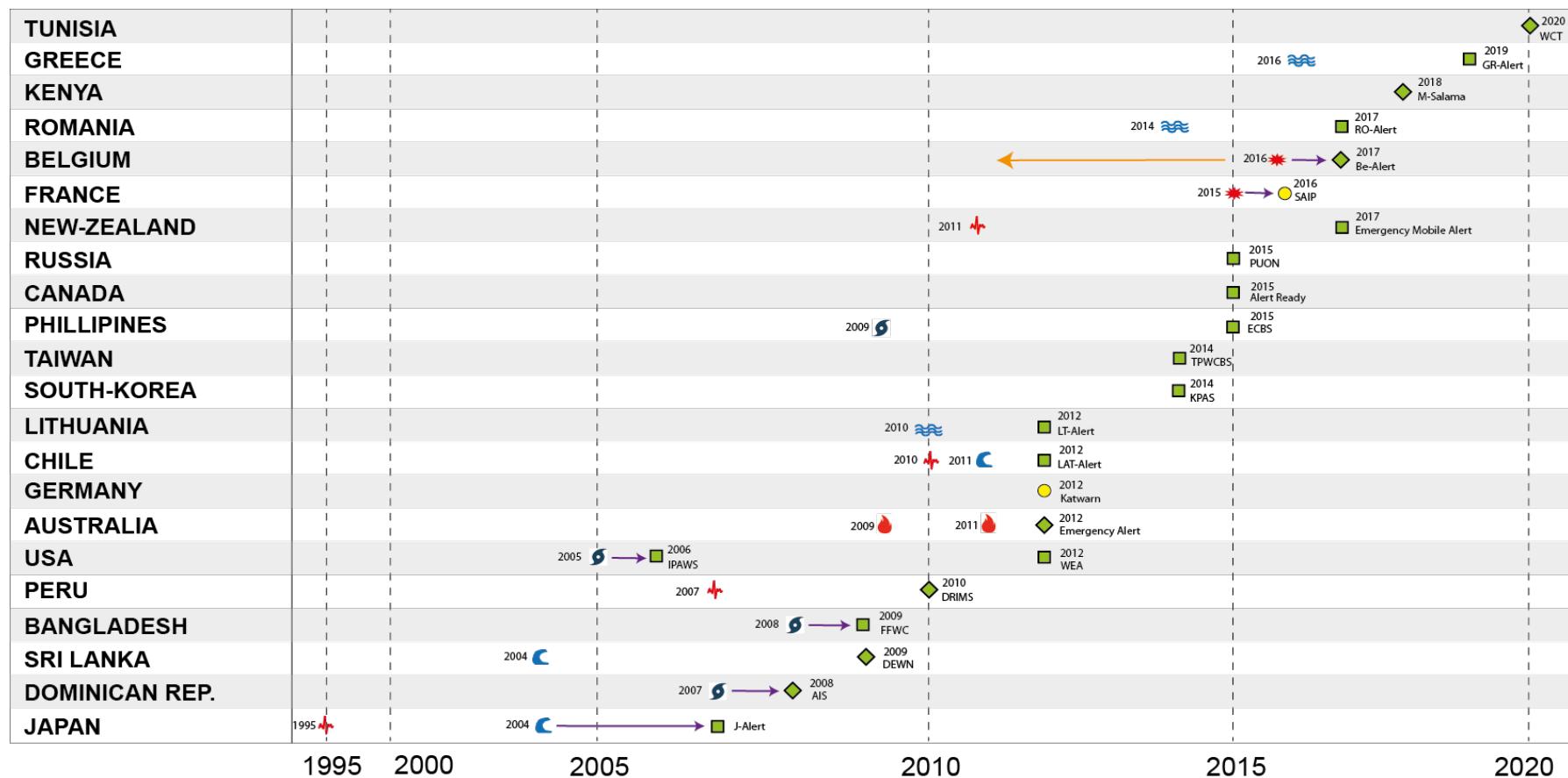
Tsunami
Dan Lampung

a)
[21
d)

(Australia)
2011/12/11
(56 killed)

Structural Aspects...





Event potentially leading to a change

Flood

Earthquake

Tsunam

Hurricane

Wildfire

* Attack

Means of alert set up

■ Cell broadcast

◆ Location-based SMS

● Smartphone app

Other information

 Date of the first reflections

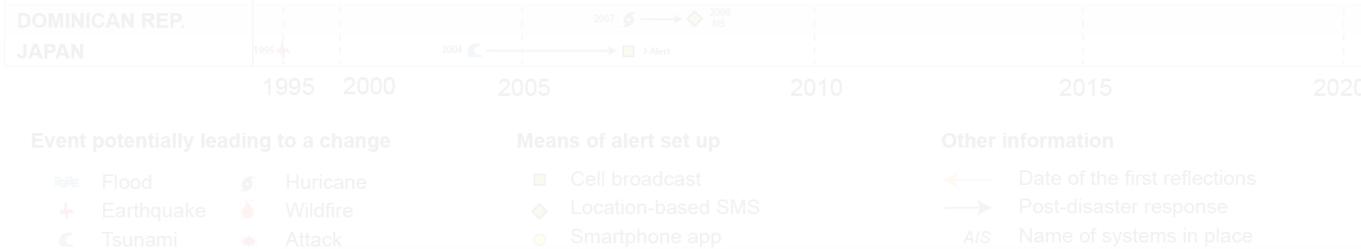
→ Post-disaster response

AIS Name of systems in place

Structural Aspects...



4th challenge:
To adapt technologies to each organisation (rules/laws/managers) / each country, and to take time to create an efficient system



So, what?



Where the people, the structure, the contexts are ?

<https://www.nap.edu/catalog/24935/emergency-alert-and-warning-systems-current-knowledge-and-future-research>

Referees

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Which type of Public Warning System should France adopt by 2021?

<https://capalert.univ-avignon.fr/projet/echelle-internationale/>

Why keep alert sirens in France?

<https://nhess.copernicus.org/preprints/nhess-2019-390/>

Crowd movement and panic

https://www.youtube.com/watch?v=Br5U38OheyM&feature=emb_title