



Eight points for effective flood risk communication

Insights from flash floods in Eastern Spain

In October 2024, devastating floods affected the region of Valencia in Eastern Spain resulting in more than 200 deaths, around 4000 damaged houses and buildings, and uncountable loss. A combination of environmental and human factors made the event especially destructive.

The meteorological phenomenon that triggered the floods is known in the region as DANA (it stands for Isolated Depression at High Altitude in Spanish), which brought intense rainfall to a relatively localised area over a short period of time. In crises like this, how we communicate risk can have a big impact – for better or worse.

At **Risk know-how**, we analysed media coverage and listened to dozens of people involved in this emergency – through one-to-one interviews, as well as testimonies shared in traditional and social media.

We identified the kinds of information people said they needed but didn't receive, and common misunderstandings about flood risk.

Every emergency is different, and understanding the specific audience and their context is essential to effective risk communication, but by sharing insights from what happened in this case we hope it will serve others planning flood risk communications. We need to ensure risk communications are useful and actionable to help keep people safe.



1.

Communicate through the channels people already trust and use.

One of the key challenges during a flood emergency is ensuring that information reaches people and keeps pace with how quickly things change. Information needs to be present in the channels people already use and trust. A single communication channel is not enough for a flood alert and all of the relevant information

Think radio, TV, social media, even loudspeakers in public spaces like the underground. Also, try to reach community leaders who can help spread the word.

Many people said they had no idea an alert had been issued or only became aware of it when they were already in the midst of the emergency.

“I didn't know anything about the DANA [emergency] until I saw it through the window.”

— resident of Paiporta.

“In Paiporta, only ten litres per square metre had fallen – that's nothing – and no type of alert had been sent.”

— Carlos, resident of Paiporta.

Image: Manuel Pérez García and Estefania Monerri Mínguez., CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

Risk know-how is an initiative by:



Lloyd's Register Foundation
Institute for the Public
Understanding of Risk

2.

Go beyond warning colours and explain the potential consequences they represent.

The risk isn't the rain – it's what might happen to people. Colour codes like yellow, orange, or red are not enough to help people grasp potential consequences. It is better to describe what those levels mean in practice – for instance, expected water depth and force, and what that implies in terms of blocked streets, damage to vehicles and homes, injuries, or fatalities.

Many people didn't realise the risk included being trapped or losing their lives.

"[...] This time it cost many their lives, no one warned them that it wouldn't be like the other times."

— @Solterav2, on X. 8:39 PM · 1 November, 2024

3.

Be as precise as possible about when and where flooding is expected.

A clear alert starts with clearly stating the date, time, and area expected to be affected. Always clarify that these estimates may shift as the event develops, and stress the importance of keeping up with updated information.

"People didn't go to save the car because they thought it was more important than their life. It's because they thought they had time. It's because they weren't warned when they should have been."

— @pilar__af, on X. 3:38 PM · 31 October, 2024

4.

Specify who might be affected.

The more specific you can be about who is at risk, the more useful the message will be.

For example, people living in specific areas or types of housing, or people of certain age groups, genders, or occupations.

Use clear phrasing like:

"If you live on the ground floor..."

"If your home is near a riverbed..."

"If someone in your household has reduced mobility..." etc.

so that individuals can recognise when the message is directed at them.

"We were worried about my friend's 92-year-old grandmother who lives on the ground floor. The water came in with such force, it destroyed the walls and she had to be rescued with bedsheets."

— Laura, resident of Paiporta. Live on Hora25, 29 Oct 2024



5.

Correct common misconceptions about flooding – like the idea that floods only happen in places with heavy rainfall.

Many people believe that flooding only happens after heavy rain in areas with intense precipitation. Alerts should explain that flooding can occur in places where it hasn't rained at all – water can travel quickly from higher areas and flood lower regions. Clarifying this can help people prepare even when they “don't see it coming”.

Another common misconception is that cleaning out a riverbed eliminates the risk of overflow. It's crucial not to overstate the protection such measures provide.

“It wasn't raining, just very windy – and the streets started flooding as if a tsunami had hit.”

— Rocío, resident of Catarroja

“**There hadn't been a single drop of rain. Within MINUTES the power went out, and what had been 3 centimetres of water turned into 30. People kept driving, trying to get home, not realising that soon the water would reach 2 metres and cars and garages would become death traps.**”

— @RiddleZone, on X.

11:24 AM · 1 November 2024

6.

Give practical advice that takes into account how people in the area have behaved in similar situations in the past.

In an emergency, people must make quick decisions in real-life contexts: Can I get the car out of the garage? Should I send the children to school? Should I seek shelter with neighbours? Do I need to move livestock to higher ground?

It's important to identify possible scenarios, anticipate the choices people might face or how they might act given past experiences, and offer tailored recommendations for each one.

For example, in the Valencian region in the past, people have been advised to move their cars out from underground garages, so it could have been anticipated that people would do that again.

During the DANA flood emergency, advice was very general – “use common sense”, “don't take risks”, “avoid the river”, “head to higher ground”. But there was a lack of practical guidance for specific contexts: whether to climb to rooftops, retrieve cars, move to upper floors, stay put or evacuate. Many had to act on instinct rather than clear instructions.

“**Unaware of what was coming, I did exactly what you shouldn't do: I went down to the garage to move the car. I was the last to get it out. I parked it on the pavement and the water was already up to my knees, pouring into the garage like a waterfall.**”

— @RiddleZone, on X.

11:24 AM · 1 November 2024



7.

Remind people that uncertainty is part of flood emergencies and explain where and when to get updates.

Uncertainty is inherent to flood emergencies – you cannot predict exactly what will happen or when. The situation evolves quickly, leading to confusion, anxiety, and rushed decisions if people don't have access to clear and regular information.

That's why it's essential to keep the public informed on various aspects: the behaviour of the flood, progress of evacuations and rescues, distribution of aid, safety measures, and government/emergency service actions.

To help people manage uncertainty, communicate:

- what is known,
- what is still unknown,
- what the advice is in the meantime,
- and that advice may change.

Also, tell people where and how often the information will be updated, so they know where to turn.

During the DANA flood emergency, many people said they felt lost, helpless, and abandoned by the authorities and emergency services.

“No emergency number answers – not the fire brigade, not by phone, not even on Instagram.”

— Mireya, live on Hora25, 29 October 2024



Image: Manuel Pérez García and Estefanía Monerri Mínguez., CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

8.

After the event, follow up.

Flood risk communication shouldn't end with the emergency. A long-term perspective is needed. People have questions: Could this happen again? What's being done to repair the damage? What long-term solutions are being put in place to prevent future tragedies?

People voiced concern about a lack of information on recovery plans – and feared being forgotten.

“Influencers were coming here on scooters or bikes livestreaming what it looked like. We're a media circus now, but in a few weeks no one will remember us.”

— @RiddleZone, on X. 11:24 AM · 1 November 2024



Learn more about Risk know-how

www.riskknowhow.org

hello@riskknowhow.org