



## Mobile phone and smartphone use during disasters

Mobile phones, and to a lesser but significant extent smartphones, are among the most used devices during a disaster. There are many reasons to explain their success and usage during a disaster. First, these devices have become essential to citizens and thus this can be seen as the familiarity principle's paroxysm. Smartphones are now among the most popular ways to access the web. Back in 2012 a survey by the Pew Research Center showed that 17% of the cell phones owners did most of their online browsing on their phone, rather than a computer or another device (Smith 2012). Moreover, mobile phones, whether they are connected or not are small and easily transportable. This is a clear advantage during a disaster compared to the use of a computer that is less easily portable. Mobile phones and smartphones also present the advantage of having limited but nevertheless existent power autonomy, so they can be used for a certain amount of time even during a power outage. Finally, these devices are used every day for a very wide range of purposes, from contacting loved ones through text messages or social media, as an alarm clock, or for watching the news. With the development of mobile applications, the usages have become even more diversified. Following an Apple marketing campaign in 2009 a new phrase has become popular and embodies well this idea: "There's an app for that". During a disaster they can turn essential as they offer the possibility of using very limited bandwidth to deliver timely, geo-targeted information to affected people. Because mobile phones are always in citizens' pockets and because they are so much used to using them, they are naturally and massively used during a disaster. Studies on mobile phone and smartphone uses during a disaster confirm this. For instance, after Hurricane Sandy in 2012, citizens were reported to have used different communication technologies such as cell phones (77%) or landlines phones (41%). 33% used e-mails, 31% Facebook and 7% Twitter. The same study revealed that during the disaster social media usage varied significantly with age. For instance, if overall 31% of the citizens in the affected area used Facebook, 61% of the 18 to 29 years olds did, in contrast to only 5% of the 65+ years old (Tompson et al. 2013). These data reveal the same digital divide as in normal time and is another proof that adoption rates before and during the disaster follow the same pattern and contrast between the different groups within the population. Similar results have been found in the practice of taking pictures during a disaster. Villi has shown that nowadays normal conversation includes visual communication (Villi 2010) especially since cameras are integrated in mobile phones and smartphones and the pictures taken have a high quality. Taking pictures, together with texting, is the most popular phone feature (Yelton 2012). Thus, during a disaster people are also using their mobile phone to take pictures, or even selfies as seen in section 2.2. Eyewitnesses use mainly mobile devices and especially smartphones to access rapid earthquake information (Bossu, et al. 2015). They use it as a reflex because they are used to it, but during a disaster they are using it more intensively and making very specific research. Monitoring this intensified activity on social media and mobile phones can then allow detecting earthquakes and disasters in general (Bossu, Laurin, et al. 2015). More about how this detection works is presented in section 5.2 of the original source document. The use of smartphones during a disaster has become inevitable and can have both good and bad consequences. For instance, after the Charlie Hebdo shootings in Paris in January 2015, people used the smartphone traffic application Waze and this led to a mapping of the police controls which were intended to stop



the terrorists' escape. This could have been useful to the fugitives even though there was finally evidence that they did not use it. There is a need for disaster managers to be aware of such unintended consequence of technology use and to spread good practices.

Note: See source document for full reference.

**Applicable to:**

Stakeholders: [Communication](#)

Disaster Phases: [Response](#)

Types of Actors Concerned: [Non-active citizens](#), [Active citizens](#)

Hazards: [Natural hazards](#), [Man-made non-intentional hazards or emergency situations](#), [Man-made intentional hazards](#)

**Recommendations:**

- [The use of new technologies \(e.g. Bluetooth\) can improve communication strategies in disaster management situations](#)
- [Use cultural factors to improve the effectiveness of disaster communication](#)

## Source

[Deliverable D3.1 "Cultural factors and technologies" \(page 37\)](#)

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