New technologies to fight wildfires

- To avoid tragedies due to wildfires such as the one at Pedrogao Grande, innovative technologies are being developed by the European Project I-REACT.
- First responders who risk their lives to fight fires will have new tools and equipment developed by the international research project I-REACT.
- The new European platform I-REACT will use **social media, smartphones and wearables** to help save lives and lower rescue costs during disasters.

More than 60 lives have been lost in the massive wildfire in the in the Pedrogao Grande area on Sunday, June 18. There are dozens of injured people, including eight firefighters. New tools are required to fight more efficiently and securely these disasters. I-React is a European Project bringing together different innovative technologies to develop these tools.

Comentado [SG1]: With temperatures on the rise due to climate change, risk of wildfires will continuously increase.

Smart glasses and other wearables to improve response

I-REACT will provide civil protection services with wristbands and smart glasses to visualize information in real-time and submit very accurate reports to the operation centres without using their hands. The hundreds of firefighters who risk their lives at tragedies such as the one at Pegrogao Grande will have this innovative technology to help them when most needed.

Aiding decision-making before and during disasters

I-React will also integrate information coming from mobile phones, wearables, and augmented reality tools from on-site operators. All this information will be integrated into a Decision Support System for authorities that will help preventing future disasters, and improve the communication with first responders and citizens during emergencies.

I-REACT will be the first platform to integrate **emergency data** coming from multiple sources, including that from satellites, earth observations, drones, weather forecast or even information from past disasters. Importantly, the project will also use data generated by citizens though their mobile phones. In this way, I-REACT will be able to

provide fast and accurate information to policymakers, civil protection services, and citizens, allowing an effective prevention and response to natural disasters.

Citizens protecting citizens: Crowd participation to reduce disaster impacts

A smartphone application is one of the key elements of the new platform. Through this app, citizens and civil protection agents will be able to submit photos and real-time reports. The platform will also analyse messages from social media such as Twitter and extract key information published about ongoing disasters. This approach has proven very helpful in recent crisis like the 2013 super typhoon Haiyan in the Philippines where Twitter was the single greatest information source for response and recovery efforts.

I-REACT, a collective effort to fight disasters

I-REACT (Improving Resilience to Emergencies through Advanced Cyber Technologies) is a 3-year project (2016-2018) funded by the European Commission Horizon2020 programme.

The project is coordinated by the Istituto Superiore Mario Boella of Turin. Consortium partners include: Geoville, Eoxplore, Terranea, Alpha Consult, UNESCO (Regional Bureau for Science and Culture in Europe, Venice), Politecnico di Torino, Celi, JoinPad, Fondazione Bruno Kessler, Finnish Meteorological Institute, Meteosim, Bitgear, Ansur Technologies, Technical University of Vienna, Scienseed, CSI Piemonte, Aquobex, Answaretech, and Joint Research Centre (JRC) of the European Commission.

Additional information

Official website: www.i-react.eu

Video animation: www.youtube.com/watch?v=4t5ScCh6XU0

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