

EGU21-15647

<https://doi.org/10.5194/egusphere-egu21-15647>

EGU General Assembly 2021

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## Integration of operational Multi-Hazard Early Warning Systems and COVID-19 data for the humanitarian community

**Chiara Proietti**<sup>1</sup>, Alessandro Annunziato<sup>1</sup>, Pamela Probst<sup>1</sup>, Stefano Paris<sup>2</sup>, and Thomas Peter<sup>3</sup>

<sup>1</sup>European Commission / Joint Research Centre, Directorate for Space, Security and Migration, Ispra, Italy

([chiara.proietti@ec.europa.eu](mailto:chiara.proietti@ec.europa.eu))

<sup>2</sup>FINCONS, Vimercate (Italy)

<sup>3</sup>United Nations, Office for the Coordination of Humanitarian Affairs (OCHA)

To improve preparedness and response in case of large-scale disasters, the international humanitarian community needs to understand the anticipated impact of an event as soon as possible in order to take informed operational decisions. The European Commission's Joint Research Centre (JRC), DG ECHO, and the United Nations' OCHA and UNOSAT launched the Global Disaster Alert and Coordination System ([www.GDACS.org](http://www.GDACS.org)) in 2002-03 as cooperation platform to provide early disaster warning and coordination services to humanitarian actors. After more than 15 years, GDACS has around 30k registered users among humanitarian organisations at global level.

At the beginning, one of GDACS's main tasks was the dissemination of automatic alerts for earthquakes, tsunamis and tropical cyclones; today, the system has been augmented to include also floods, droughts and volcanoes, and it will soon include forest fires. Alerts are sent to the international humanitarian community to ensure timely warning in severe events that are expected to require international assistance. Alert levels are determined by automated algorithms without, or with very limited, human intervention, using automatic real-time data-feeds from various scientific institutes or the JRC's own systems.

From 2020, because of the potential impact of the COVID-19 emergency on international preparedness and response activities, the COVID-19 situation in affected countries is now also monitored by the system, providing real time information updates on the website. This new feature allows to consider in the planning of the emergency response, the severity of the outbreak in the affected countries.

This contribution presents the challenges and outcomes of combining science-based information from different independent systems into a single Multi-Hazard Early Warning System and introduces new functionalities that were recently developed to address the new challenges related to the COVID-19 emergency.