

“Social Verification” as a Means to Close the Cycle of End-to-end Warning Communication

Nathalie Appenzeller ^{a,*}, Saskia Willemse ^a, Markus Aebischer ^a, Marcel Belz ^a

^a Federal Office of Meteorology and Climatology MeteoSwiss, Switzerland, Nathalie Appenzeller – nathalie.appenzeller@meteoswiss.ch, Saskia Willemse - saskia.willemse@meteoswiss.ch, Markus Aebischer - markus.aebischer@meteoswiss.ch, Marcel Belz - marcel.belz@meteoswiss.ch

* Corresponding author

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Abstract:

Traditionally, most natural hazard warnings are verified based on whether they exceeded the predefined physical threshold, or resulted in the expected impact, in a specific region during the respective time period. If these boxes can be ticked, the warning is generally considered a “hit” - the job is done. In recent years, however, initiatives such as the ‘Early Warnings for All (EW4A)’ and the ‘HIWeather Project’ by the World Meteorological Organization (WMO) have shifted the focus towards the “last mile of the warning value chain”, calling to involve the recipients in the warnings production process. Thus, a natural hazard warning is only a real “hit” if it helps recipients make informed decisions to protect themselves and minimize the damage caused by the hazard. Furthermore, only if the hazard warning levels and thresholds match the perception of the recipients will the warnings have the desired effect and prevent reduced risk perception and negligence of the necessary measures. To this end, the recipients must be given a voice in the warning verification, completing the traditional verification with a “social verification”.

For this purpose, MeteoSwiss has launched an on-going pilot project in 2022 to survey the affected population in the warning area directly after a natural hazard using so-called flash-polls, following the example of other European weather services (e.g., UK Met Office and KNMI). Specifically, people in the affected area are asked whether they received, understood and acted upon the hazard warning, and whether they found the warning useful and helpful in assessing the risk and deciding what action to take. Finally, they are asked whether they consider the warning level to be appropriate given the impact and intensity of the natural hazard event, which serves as a social verification. Taken together, this information provides valuable insights into people's risk perception and behavior and can indicate opportunities for improvement in the current warning process.

The presentation will introduce the preliminary findings of the ongoing pilot project and the flash-polls conducted to date, including insights on the perception of natural hazards by the population and the social verification of the warnings, as well as indications of possible further improvements of the warning system at MeteoSwiss. Finally, the main challenges and limitations of the pilot project will be discussed and an outlook will be given on how the social verification will be continued after the pilot project is completed.