



Using open data in near real time disaster analysis and knowledge generation

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This presentation will address the value of using open operational geo data in near real time disaster analysis and knowledge generation. In the past, mechanism analysis of a meteo-hydrological extreme event may take months and years with lots of resources since there exist many kinds of restrictions on the model and observation data, e.g., in availability, accessibility, adequacy in resolution, quality and delivery time etc. In recent years, thanks to the open data and open service programs such as Copernicus, EMODnet (European Marine Observation Data Network) and data sharing activities in ROOSs (Regional Operational Oceanography Systems) and national agencies, the disaster analysis becomes a much faster and efficient procedure. The study will present such a case study for analyzing a hundred-year storm event in January 2017 which affects Danish and German coasts in the western Baltic Sea. The event and its forecasts have caused lots of attention in Danish and German media. However, the explanations on how the storm surge is formed and why the prediction is good or bad in this or that country are still largely absent in the media reports. All the data and plots used in the analysis are from open sources. It is found that with the open data, the spatiotemporal variation and the internal links between weather, sea level and water mass movements can be well understood. New knowledge on key factors for the unusual high waters in the western Baltic is obtained from this analysis. Finally, recommendations for using open operational data in generating open science are given.