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# Predicting Consequences of Technological Disasters from Natural Hazard Events: Challenges and Opportunities Associated with Industrial Accident Data Sources

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The increased focus on the possibility of technological accidents caused by natural events (Natech) is foreseen to continue for years to come. In this case, experts in prevention, mitigation and preparation activities associated with natural events will increasingly need to borrow data and expertise traditionally associated with the technological fields to carry out the work. An important question is how useful is the data for understanding consequences from such natech events. Data and case studies provided on major industrial accidents tend to focus on lessons learned for re-engineering the process. While consequence data are reported at least nominally in most reports, their precision, quality and completeness is often lacking. Consequences that are often or sometimes available but not provided can include severity and type of injuries, distance of victims from the source, exposure measurements, volume of the release, population in potentially affected zones, and weather conditions. Yet these are precisely the type of data that will aid natural hazard experts in land-use planning and emergency response activities when a Natech event may be foreseen. This work discusses the results of a study of consequence data from accidents involving toxic releases reported in the EU's MARS accident database. The study analysed the precision, quality and completeness of three categories of consequence data reported: the description of health effects, consequence assessment and chemical risk assessment factors, and emergency response information. This work reports on the findings from this study and discusses how natural hazards experts might interact with industrial accident experts to promote more consistent and accurate reporting of the data that will be useful in consequence-based activities.