

State of art of GRDR methodology. Cases of study applied in Chile

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ABSTRACT

Due to the increase in the intensity of the climatic threats to which Chile is exposed due to climate change (strong rains, alluvial currents, forest fire, among others), a series of inspection and intervention methods are proposed on the structures to study the vulnerabilities and possible natural hazards. Thus, over the years, developing has been done on the standardization of vulnerability and threat sheets for the regional disaster risk management methodology (GRDR) and its application in different types of structures in Chile, allowing in each pilot plan to progress, step by step, in its continuous improvement.

From the standardization of handbooks and vulnerability sheets and the automatization of the process (algorithm to define weights and process of the information), the GRDR methodology is implemented to bridges, tunnels, roads and minor structure. This improved allows the Authority (Ministry of Public Works) to have information for an adequate decision-making in the investment of the budget for the intervention of the routes.

This paper provides a review of the case studies of GRDR application on Chile and the improvements of the GRDR method implemented by the MOP and PUCV in the last 6 years, highlighting the aspects that have been improved since the definition of the natural hazard from a qualitative way to deterministic procedures. In addition, future lines of research and development of the methodology is presented, and inspection protocols are set.

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