The contribution of operational drills to risk and disaster management: a case study of drills in areas of geological risk practiced in the São Gonçalo resilient project

A contribuição do simulado operacional na gestão de risco e de desastres: um estudo de caso do simulado nas áreas de risco geológico praticado no projeto São Gonçalo resiliente

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INTRODUCTION

The inclusion of society in the decision-making process and the identification of popular needs have been recognized as crucial elements for effective risk management in geological areas characteristic of natural disasters.

The lack of community involvement and the absence of strategies to promote resilience can lead to disastrous consequences, such as material damage and loss of life.

However, it is possible to mitigate these challenges by implementing operational drills, which have the potential to strengthen community participation and risk management.

Operational drills in areas of geological risk offer a systematized and tested methodology capable of improving civil protection and defense processes and actions. This approach reduces damage and minimizes human losses by providing a controlled environment for training and simulating emergency situations.

Through the drills it is possible to assess the effectiveness of the prevention, preparedness and response measures adopted by the competent authorities, as well as to identify gaps and opportunities for improvement when it comes to recovery actions.

Encouraging community participation in operational drills also raises awareness and trains residents about the geological risks present in their localities.

Through direct interaction with authorities and specialized professionals, individuals acquire relevant knowledge about preventive measures, evacuation procedures and response strategies in the face

of unexpected natural disasters. This collaborative approach strengthens community resilience by empowering citizens to be active agents in protecting their lives and property.

This article will highlight the importance of operational simulations in areas of geological risk as a fundamental tool for risk management and the promotion of community resilience.

OBJECTIVE

This work aims to propose a methodology and standard procedures for carrying out operational drills in areas of geological risk, in order to increase knowledge about drills and preparedness actions.

METHODOLOGY

This article is based on a bibliographical and documentary study, seeking sources that will expand the development of the subject under investigation, using proposed legislation, current laws, amendments, published scientific articles, books and institutional documents, as well as the knowledge and experience of the authors.

The bibliographic survey will focus on simulations aimed at civil protection and defense actions, identifying good practices at national and international level, in order to identify measures and procedures that promote social inclusion and community resilience in simulations, in order to propose simulation procedures as recommendations for civil protection and defense agents and managers during their preparations to act in disasters that arise in which they will participate.

In addition, the research was also exploratory, where the researchers were inserted into the proposed geographical context, previously identified as areas of geological risk in São Gonçalo, based on the latest update of the Municipal Risk Reduction Plan, where data was collected for the preparation action, for discussion, then carrying out a Case Study with the São Gonçalo Civil Defense Undersecretariat.

DEVELOPMENT

The National Civil Protection and Defense Policy (PNPDEC), according to Brasil (2012), establishes that civil protection and defense throughout the Brazilian national territory encompasses prevention, mitigation, preparedness, response and recovery actions.

Therefore, this study will serve as an academic and professional contribution to the target audience of the research, which are all the agents and managers who work in the large professional area of Brazilian civil protection and defense.

Since the beginning of 2021, the Civil Defense of São Gonçalo has been carrying out an integrated preparedness action called São Gonçalo Resiliente. The action takes place monthly and aims to prepare communities located in areas of geological risk to act in the event of the municipality's alarm system being

activated. After the siren sounds, residents meet at strategic points and are directed along escape routes to the Support Points, usually located in municipal schools.

The operational simulations, through the Resilient São Gonçalo Project, aim to guide and prepare the local community to act in the event of mass movements and other types of disasters, according to the classification and Brazilian Disaster Coding (COBRADE), making it relevant as a contribution to a systematized methodology for possible future protocols, with pertinent application in adding high-level values, together with civil protection and defense professionals (SÃO GONÇALO, 2021).

One of the main contributions of operational drills in disaster risk management in areas of geological risk is the ability to assess the effectiveness of existing prevention and mitigation measures. During the exercises, it is possible to see if the protection structures are working as expected, if the warning and alarm systems are being properly activated and if the evacuation protocols are being followed correctly.

According to São Gonçalo (2021), the case study of the practice with simulated agents in São Gonçalo shows the possibility of strengthening the community in terms of risk perception and developing local resilience, in a context of high social vulnerability, where it is hoped that the implementation of the systematized and tested methodology in areas of geological risk will further improve civil protection and defense processes and actions, serving as a paradigm for reducing damage and loss of life.

FINAL CONSIDERATIONS

Operational drills in areas of geological risk play a fundamental role in risk management and promoting community resilience.

The research proposes the adoption of a methodology and standard procedures, which have been tested and analyzed by civil protection and defense managers when preparing for disasters.

The identification of good practices and social inclusion measures in the drills is also recommended, as it could strengthen preparedness and improve response to natural disasters.

Therefore, the emphasis on community participation and increasing knowledge about simulations will contribute to a more prepared and resilient society, capable of facing and overcoming the challenges posed by adverse geological events.

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