Alternative warning and alarm system by means of a whistle

Sistema de alerta e alarme alternativo por meio de apito

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1 INTRODUCTION

The Mountainous Region of the State of Rio de Janeiro historically faces a series of adverse events, such as heavy rains and consequently floods and landslides. Inserted in this context, the municipality of Petrópolis has great relevance in this scenario since it was strongly affected by the tragedies of 2011 and 2022, which, in addition to all human losses and material damage, left a trauma in the population.

The Alternative Alert and Alarm system through whistle emerged as a low-cost project and focused on community participation, contemplating communities that do not have an alert and alarm system by sirens, considering that this system requires a significant budget for its application.

It is also important to emphasize that one of the great advantages of the Alternative Alert and Alarm System, through whistles, is to have a very significant community participation, which guarantees a level of commitment that saves lives. This system helps in the dynamics of the locality in the face of a disaster, such as the disaster faced in the year 2022 in the municipality of Petrópolis, where residents left their homes and went to the support points safely. In this way, the system presented itself as a viable alternative for disaster reduction, avoiding the loss of lives and increasing resilience in the community.

2OBJECTIVE

Report the implementation of the alternative warning and alarm system, by means of whistle, in a community of the municipality of Petrópolis-RJ, seeking to save lives.

3 METHODOLOGY

This is a case report of a project developed and applied in the community of Floresta, in the municipality of Petrópolis-RJ, where a group of residents was trained to mobilize the community in case of heavy rain, through the whistle system, to safe places.

4 DEVELOPMENT

From the implementation of the project, it was observed that community adherence was decisive, allowing residents to have a greater perception of risk in the area in which they live, as well as understanding the need to mobilize the entire community to a safe place after the issuance of alerts and alarms.

It is worth mentioning that in the heavy rains of February 2022 that hit the municipality of Petrópolis, the community of Floresta put into practice the alternative alert and alarm system, mobilizing the population in safety, where even with several landslides in the locality there was no record of death.

During the response and recovery actions to that disaster, researchers from the master's degree in Civil Defense and Security at Fluminense University - UFF, coordinated by researcher Professor Alexandre Luís Belchior dos Santos, attended the site and recorded what they observed and heard, obtaining data through a field survey with the Floresta community, ratifying the success of the action, understood as the absence of fatal victims, even in the midst of so much destruction of residential and natural environmental heritage.

The United Nations Office for Disaster Risk Reduction (UNISDR, 2012) defines a warning system as a set of capacities necessary to generate and disseminate, in a timely and understandable manner, information that enables individuals, communities and organizations vulnerable to disasters to prepare and act, appropriately and in sufficient time, to reduce their possibility of suffering damage and/or losses. According to Dávila (2016), early warning systems - EWS are tools that allow the population to be prepared for the occurrence of a disaster and contribute to minimizing the impact of risks on people's lives. According to Saito (2018), the implementation of warning systems contributes strongly to the development of disaster resilient societies.

5 FINAL CONSIDERATIONS

The alternative warning and alarm system, through whistles, has demonstrated its effectiveness as a viable alternative for disaster reduction, avoiding loss of life and increasing community resilience, as well as its mobilization capacity. In view of the reported experience, a protocol is being developed to expand this project to other locations.

REFERENCES

SAITO, S. M. Vulnerabilidades no contexto de sistemas de alerta de risco de desastres. Revista gestão & sustentabilidade ambiental, v. 7, p. 618, 2018.

DÁVILA APOLO, D. Sistemas de alerta temprana ante inundaciones en América Latina. Lima: Soluciones Praticas, 2016.

MARCHEZINI, V. et al. Sistemas Comunitários de Alerta de Risco de Desastres Associados a Inundações e Deslizamentos: Aspectos Teóricos e Metodológicos. Revista de Estudios Latinoamericanos sobre Reducción del Riesgo de Desastres RE-DER, v. 4, n. 2, p. 36, 2020.