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Household Wildfire Risk and the Community Preparedness: A Case Study of Rural Villages of Central Highlands of Sri Lanka

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Abstract

Belihuloya forest reserve, an environmentally sensitive zone serves as a vital catchment in the central highlands, spans altitudes ranging from 589 m to 1,237 m. The range is home to a diverse array of flora and fauna, hosting numerous endemics, indigenous, and threatened species. The region faces recurrent threats from bush fires during May to August, driest and windiest season that significantly impact local agriculture, tea cultivation, and the tourism. The objectives of this study were to conduct scoping study on heavily bushfire affected villages of central high lands of Sri Lanka, to find out the bushfire vulnerability levels of villages and their properties and to identify the status of early warning, community preparedness and fire management. Case study approach was used, followed by in-depth interviews with community members in three GN divisions; *Wiharawela*, *Passaramulla*, and *Kubalgama* in *Imbulpe* DS division and with institutions such as Disaster Management Centre, Department of Forest, Sri Lanka Army, and Tourism Service providers. As per the results of our study, *Imbulpe*, *Passaramulla*, *Wiharawela*, and *Medagedaragoda* GN divisions encountered bushfires in *Hagala* forest, *Helamalkadiya*, *Wewkadura*, and *Kabaragala* forests areas. The villages encounter annual bushfires resulted from unconfirmed causes, including land preparation for Chena cultivation, hunting, camping sites, and other human interventions. Bush fire threat of human lives and properties are high but no recorded incidents on casualties keep them away from preparedness. Highly protected and sensitive forest reserves recorded as highest vulnerable. However, those residing in the forest buffer zone experienced significant impacts and property exposure. A lack of preparedness for bushfire incidents was identified, characterized by the absence of an alarming system, lack of awareness, complacency, and inefficient communication among villagers. However, the community involvement and the participation of Sri Lanka army were noted as key bushfire management strategies.

Keywords: Bushfire, Management Strategies, Vulnerability, Preparedness