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Assessment of house vulnerability to wildfires in Portugal

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The present research analyzed which variables influence the probability of a house to burn at the wildland urban interface in the sequence of wildfires. The case study focused on the wildfires in Portugal in 2003 when a very high number (2383) of buildings and households were burned. From the households burned (548), 23% were first residence, 39% second and seasonal residences and 19% were not used. In this study, 9 municipalities were visited and an observation grid was filled with data of 158 houses, 79 houses that were burned and a paired similar non-burned house (control). Using the statistic of Chi-Square the physical variables that were statistically significant to explain the probability of a house to burn were: land-use (houses surrounded by agricultural fields were less probable to burn); slope (houses in the slope or located less than 10 meters from the slope were more probable to burn); house characteristics (houses with a garage had a lower probability to burn).

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