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DThe estimation for temporal and spatial fluctuations of forest fire hazard index

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Mapped estimates of the risk of forest fire would benefit forest management, and could be used to decide restrictions on the public use of forest areas. In this study, the litter moisture content ratios were predicted with this model and forest fire hazard were estimated the forested parks in Japan. Model was adapted to the around 40ha area in this park classified into 9 stands with tree height, tree species and slope direction. Fuel moisture decreased with each speed for each forest stand among simulated days depending the solar radiation on the each forest floor. Litter moisture was less than 0.2g g-1 and fire risk is judged to be highest in 7 forest stands among 9 stands on the day after long drought period. On the otherhand, spatial variation of litter moisture was widest to be 0.198 - 0.811g g-1 on the day during the drying process. This means that litter drying speed and fire risk is different between forest stands. Thus, it is significant to construct the forest fire warning system for each forest stand to manage the people activities in this public forested area to prevent the forest fire.

Keywords: Fuel moisture, Solar radiation on the forest floor