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Slash pile burning like a forest fire initiator

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Abstract

Finding out who or what causes forest fires is one of the basic preconditions for reducing the number of this destructive element. In the study, we are focusing on slash pile burning, a common part of forest management in the Czech Republic. What effect does slash pile burning have on the number of forest fires? Is it justified to prohibit slash pile burning? Or should it be a regular part of Czech forestry management still? In the Czech Republic, about 47 % of forest fires have an unidentified or unexamined initiator. Can be slash pile burning responsible for a large number of forest fires? In the GIS analysis, we compared coordinates of forest fires from a database of the Fire Rescue Service of the Czech Republic with coordinates of slash pile burning from the database of reported burning of slash piles. In the Czech Republic, it is obligatory to report each burning of slash piles in a special online form indicating the place, time of burning, and other necessary information. On the basis of field and statistical analysis, we considered that forest fires were caused by slash pile burning if the distance from the origin of forest fire and place of slash pile burning were 80 meters in maximum and forest fire initiate in the period from the beginning of the reported burning in the online system to the end of the fifth day (120 hours) from the reported end of slash pile burning. The GIS analysis showed that 5 percent of forest fires in the period 2019-2020 were caused by slash pile burning. On the basis of results, we think that slash pile burning is not necessary to prohibit. Nevertheless, it is necessary to raise the knowledge of forest workers about safety principles of slash pile burning and to ensure better control of these workers from forest managers. Also, a reasonable boundary should always be considered between the amount of material burned and the material left in the forest stand, for ecological reasons on the one hand and on the other hand, in order to avoid the overgrowth of secondary pests, usually bark beetles.

Keywords: slash pile, forest fire, forest management

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