

Leaving trees on the ground of a cut operation... even in a burn!

A waste or a legacy for biodiversity?

Many people think that leaving trees, alive or dead, on the ground of a cut operation is a waste. This is not surprising as it was the government's shared view for many years. However, and quite fortunately, forestry knowledge is developing and we are changing our views on this subject.

When a major disturbance occurs, like a fire or a cut operation, many species will move around to find habitats of high quality. This is the case for the woodland caribou and the American marten. However, other species that cannot move as easily will have to adapt to the new conditions created by the disturbance or seek refuge in the residual trees and patches, big or small, remaining after the disturbance. The presence of the refuges allows these species with limited mobility to colonize the forest in regeneration, where it will offer better survival conditions, many years after the disturbance. The absence of these refuges after the occurrence of frequent or large-scale disturbances could lead to the regional or local extinction of certain species, thus affecting the biodiversity of the forest. But is this really troublesome? Well, certain species can actually help on different levels, of which the ecological and economical importance is difficult to evaluate. For example, a mushroom, which can only travel from 15 to 20 m, parasitizes the needles of the black spruce but also provides it with a resistance to spruce budworm attacks.

This standard can apply in a healthy forest as well as in a burned area since the absence or residual forest in its diverse forms can have other long-term consequences on forest functions. One of these functions is natural regeneration. Thanks to this process, a new forest can be established after a fire. Natural regeneration depends on the presence of a good seed bed, favourable climate conditions as well as the presence of seed trees! This is another good reason to leave trees on the ground during forest salvaging operations. Also, species in the Boreal forest have adapted to forest fires for thousands of years. Logical thinking suggests that certain species, like the black-backed woodpecker, have evolved to adapt specifically to inhabit recently burned forest. In reality, many species visit or live in burns, either for feeding or for mating. Thus, maintaining dead trees on the ground during salvage operations is very important.

This is why the Boreal norm of the **Forest Stewardship Council (FSC)** requires the maintenance of 10 to 50 % residual forest in the annual harvest area and 5 % residual forest in individual cut blocks. The residual forest must be representative of the standing forest's structure, composition and age and must be left in a variety of forms (individual trees, living or dead, big or small forest clumps). The residual forest is said to be permanent and thus must not be harvested before the next rotation (indicators 6.3.10 and 6.3.11).

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