

Bulkley Valley Research Centre

Location: Central Interior British Columbia

Project: Post-fire carbon recovery infographic

Industries: Infographics, Environmental & Natural Sciences

Publication Date: 2022

PROJECT SUMMARY

Bulkley Valley Research Centre engaged Fuse Consulting to assist with developing an infographic on post-fire carbon recovery. Fuse's science communicators drew from the provided manuscript to draft text and develop illustrations to communicate key concepts. At the client's request, Fuse tailored the infographic for sharing on social media and in print.

Post-Fire Carbon Recovery

Many forests are adapted to wildfire, but climate change has increased fire size, frequency, and severity, making it more difficult for new trees to establish afterwards. This could impact the ability of fire-affected forests to serve as a net carbon "sink", as slow regeneration may extend the time needed to reach a state where they can absorb and store carbon.

This study examines whether post-fire tree planting, a common management action, results in greater total ecosystem carbon over time compared to stands that are left to regenerate naturally.

To measure these impacts, we:

- Determined carbon recovery and stores in 21 wildfires across central interior B.C. from the early 1960s to 2015.
- Measured the amount of carbon stored above and belowground to determine how carbon storage changes over time post planting.

Tree planting did not increase total ecosystem carbon over time. If dead standing and downed trees are removed from burned sites (i.e., through site preparation activities), tree planting does not compensate for the loss of stored carbon in the dead wood over time.

To ensure regenerating forests in B.C.'s central interior can serve as carbon sinks, legacy carbon stores, like dead wood, should be preserved, or forests should be left to regenerate naturally.

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