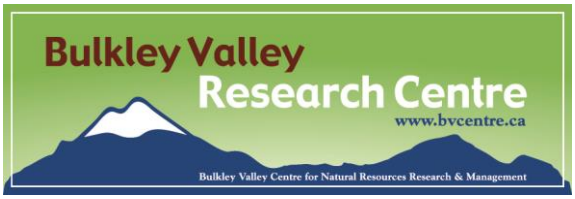

Recovery of unsalvaged mountain pine beetle stands: individual tree and stand growth responses

Amalesh Dhar, NSERC Industrial R&D Postdoctoral Fellow

Bulkley Valley Research Centre, Smithers, BC

Abstract:

The mountain pine beetle infestation has altered forests of lodgepole pine to an unprecedented extent in the interior of BC. The epidemic is the most significant forest management challenge BC has ever faced. It has major economic and social implications for the forest industry and affected communities. In the operable land base, where logging occurs, about 5 million ha of pine-leading stands have been impacted. Of these, about 1 million ha have been salvaged logged at this point. A large percentage of this area will remain un-salvaged due to timber quality declines, lack of accessibility and milling capacity. Now the peak of the epidemic has passed, information regarding growth dynamics of these un-salvaged stands will be of considerable importance for assessing the need for silvicultural investments and to set sustainable mid-term harvest levels for impacted landscapes. Our study aims to understand the factors affecting individual tree and stand growth dynamics and how these stand types will contribute to mid- and longer-term timber supply. Our early results indicated that basal area killed by MPB and density of surviving secondary structure varied from stand to stand which could provide significant opportunity to mitigate the effects of MPB attack on timber supply. This project will also provide guidance for forest managers or practitioners who make decisions regarding management of MPB-attacked stands to reduce the cumulative effects of resource development on biodiversity and wildlife habitat in forestry and other resource sectors.