



MOUNTAIN PINE BEETLE ECOLOGY PROGRAM

RESEARCH THEME NO. 4

SOCIAL AND ECONOMIC IMPLICATIONS OF A CHANGING LANDSCAPE

Importance of research theme

When considering potential research needs related to the mountain pine beetle infestation, forest practitioners intuitively recognize the biological and ecological aspects of the issue. The magnitude of the outbreak is precedent-setting, and the scientific community has conceded that the mountain pine beetle will continue to impact Alberta's forests for the foreseeable future. Whereas it is fundamentally important to know as much as possible about the beetle to manage its progression through the forest, it has become increasingly apparent that research related to potential socio-economic outcomes following a forest health-based epidemic is critically important. Inevitably, significant social and economic changes occur at a broad range of scales during and following a mountain pine beetle epidemic and research that will help the province and local communities prepare for those changes is essential.

Implications if information needs are not addressed

Forest-based communities, particularly those with wood products manufacturing facilities, have typically evolved synergistically with the forest industry. Because the forest industry is a "sustainable" industry with relatively predictable sources of raw material, significant capital investments in equipment have been made, and stable workforces have been established in many forest-based communities. Hence, there has been considerable public investment in those communities in the form of schools, hospitals, roads, and utilities. If public and private decision-makers have not adequately anticipated and prepared for the significant changes in the economy and social climate that occur during and following a mountain pine beetle infestation, the existing public and commercial infrastructure may be entirely inappropriate

for ensuing demographic changes. The sustainability of communities in those situations will be seriously jeopardized.

Economic, social and ecological benefits derived from addressing information needs

The most significant benefit of adequately addressing this theme is the maintenance of sustainable rural communities in the province. Vibrant rural communities are an integral component of Alberta's diverse economy and provide an attractive lifestyle for individuals and families that are dependent on one or more of the province's natural resource industries. Whereas the mountain pine beetle infestation will inevitably change some fundamental aspects of the forest industry, the implementation of effective mitigation strategies based on well-founded research can help ensure the sustainability of the industry and forest-dependent communities.

Urgency of addressing information needs

Time is of the essence to realize the opportunities that can be achieved through the appropriate application of research results. While some communities in Alberta have already experienced impacts from the mountain pine beetle infestation, there is still time to provide essential information derived from research under this Research Theme for implementation at both the provincial and local levels.

Priority Research Questions October 31, 2019

Research Theme 4: Social and Economic Implications of a Changing Landscape	
1	What are the characteristics of resilient communities that can ensure their social and economic stability amid a landscape changing due to MPB, and what steps can be taken to enhance the resilient capacity of communities? What are the short and long term social and economic impacts on communities that are impacted by the mountain pine beetle infestation? Do these impacts suggest vulnerabilities that communities can overcome by preparing a recovery plan (becoming a resilient community)?
2	How is fibre quality related to shelf life of MPB killed trees across ecosites in Alberta and what are the subsequent implications for manufacturing?
3	As a result of MPB in Jasper National Park, how do visitor perspectives and their behaviour influence the local economy?
4	What is the range of perceptions regarding MPB across Alberta?

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