

Wildfire, Floods and Droughts: How Small Alberta Municipalities Adopt Risk-based Approaches in Land Use Planning

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Land use planning is a vital discipline in the discourse on climate change and disaster risk reduction because of its role as a non-structural mitigation measure, yet literature suggests it is underutilized, and small municipalities are the most vulnerable. Planners can gather and analyze evidence-based data to influence decision-makers on how to minimize vulnerability via a risk-based approach. In this talk, I present learnings from my research which examined the role of land-use planning in natural hazard mitigation in four small and mid-sized municipalities that experienced major natural disasters (wildfires, floods, and drought) between 2011 and 2016 in Alberta, Canada. Methods included key informant interviews, focus groups, and content analysis of Municipal Development Plans and land use bylaws.

Results found that small and mid-sized municipalities are using existing legislative planning authorities to manage flood, wildfire and drought risks. However, two critical gaps remain: inconsistencies in the application of risk-based approaches in local plans and bylaws and, except wildfires that has an established FireSmart wildfire management program, there is a lack of stringent legislative or regulatory guidance to reduce floods and drought risk, on private, municipal land. The study concludes that continued development in hazard areas is not a failure of land-use planning, but rather a reflection of the complexities and dynamics of historical settlement patterns, governance, path dependencies and market demand/lifestyle choices. Recommendations are that municipal and provincial governments must proactively prioritize land use planning as a hazard mitigation measure; as a long term adaptation strategy and as a matter of public interest by enabling a framework to reduce future risk exposure and vulnerability.

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