



## Response to Natural Hazards: Multi-Level Governance Challenges in Newfoundland & Labrador, Canada

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Newfoundland and Labrador's perspective on emergency measures in response to natural hazards is shaped by several factors. Climate, meteorology, and terrain are the dominant factors both in the occurrence of events and the responses to them. The economy, dominated by resource-based activities, is a significant influence in accentuating exposure to natural hazards. In this situation, the role of earth scientists is critical. However, effective input from geographers, geomorphologists, and climatologists requires an understanding of the governance regime.

For emergency services, both formal public policy responses, informal mechanisms, and the interfacing that exists between public policy mechanisms and social forces are significant. In an era where more and more problems are considered as "interdependent", and require different governmental, social, and professional expertise forces to come together to address objectives, there is interest in exploring and analyzing patterns of communication, interactions and policy learning across inherited silos.

A major political-policy struggle is the challenge of managing rural-urban differences in capacity and perspective. Another challenge involves finding ways for professions to merge their protocols and cultures. Embracing best practices associated with natural hazards and emergency preparedness is influenced by the power and independence of various groups involved. Critical events provide windows of opportunity for urging new approaches, but whether these become institutionalized or not normally depends on the interplay of ideas, interests, individuals, and institutions. In coping with natural hazards, renewing governance required finding new incentives to integrate across jurisdictions and disciplinary and governmental-society boundaries.

Perception and response to natural hazards is very much connected with the historical-policy context. The pace of effective response indicates the impact of culture, capacity, institutions, and interests in the struggle to shift priorities, especially if these are being imposed externally. Emergency planning involves contestation, shifting priorities, building knowledge capacity, and merging policy and jurisdictional networks based on best practices. It requires renewing governance, coordinating planning, data collection, building infrastructure and establishing a common vision where different interests can work together to promote common values and objectives.

However, emergency planning is difficult to change and reform based on a common vision and approach, because the inherited formal and informal structures tend to be very complex multi-disciplinary systems. Not only does this pose difficulties in renewing governance, establishing clear lines of authority, and responsibility across jurisdictions, it is very difficult for previously unrecognized groups to participate. Natural hazard researchers, unfortunately, frequently fit into this latter category.