

Bridging the Gap Between Disaster/Emergency Management and Urban Planning in Vancouver Island Communities

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EXECUTIVE SUMMARY

Vancouver Island communities are becoming more vulnerable to disasters including earthquakes, tsunamis, and severe weather events, due to climate change and increasing urbanization. To ensure communities are resilient to disaster, meaning they can effectively respond and recover after massive change, measures must be in place for all four aspects of Disaster and Emergency Management (DEM): preparation, mitigation, response, and recovery. Best DEM practice includes resilience-based, participatory land use practice and policy that is grounded in an understanding of hazards and their risks to communities and imbedded in all aspects of community functions. Current theory suggests that this is best accomplished by integrating DEM policies into Official Community Plans (OCP) and linking to mandated Local Emergency Plans (LEP); however, there is no legislated mandate for doing this or tools provided for municipalities on how to do so effectively.

The objective of my research was to provide an initial series of recommendations for linking disaster and emergency management and land use planning policies and goals within the Official Community Plans (OCP) of Vancouver Island communities. The three research questions addressed are:

1. How are disaster and emergency management policies currently incorporated into Official Community Plans in Vancouver Island municipalities?
2. What is the relationship between Local Emergency Plan and Official Community Plan policies in Vancouver Island municipalities?
3. How can local governments best integrate disaster and emergency management and land use policies to increase resiliency to disasters?

To answer these questions, I conducted a literature review for best DEM practice and policy frameworks, conducted a multi-level policy review, and analysed the OCPs of four communities for DEM

incorporation. The communities selected were Courtenay, Victoria, Nanaimo and Port Alberni. From the results of the analyses, I generated a series of recommendations for incorporation of DEM in OCPs, which were confirmed by four semi-structured interviews with DEM and urban planning professionals.

Analysis and Results

Current legislation for DEM and land use planning in British Columbia does not relate or mandate policy integration at the municipal level. All municipalities are required to have a Local Emergency Plan (LEP), which deals with identification of hazards and risks and provides coordination objectives for response to disaster but does not give authority to establish proactive DEM policy for hazard mitigation or recovery planning. Official Community Plans (OCPs), which serve as the most comprehensive guiding planning document for municipalities, provide a potentially strong tool for integrating proactive DEM planning into land use policy; however, the legislation is only enabling rather than requiring. Under the *Local Government Act 2015*, municipalities are mandated to include mapping of hazards that are already known in their OCPs but are not required to seek out or update hazard information. The legislation of the LGA is enabling for communities to restrict development in hazardous areas primarily through the designation of development permit areas in Section 488 or development approval information areas in Section 484. With a lack of legislative requirement, it was determined that communities must use their own initiative to implement these policies.

Through the literature review, five themes were identified as being integral to successful DEM. These themes were used as the basis for analysing DEM policies incorporated within the four case study OCPs.

1. Addresses all four pillars of DEM;
2. Is Resilience-based;
3. Uses Hazard Risk and Vulnerability Assessment (HRVA) based land use planning;
4. Is Participatory;
5. Includes planning for recovery.

The results of the case study analysis demonstrated a lack of consistency on how DEM policy is integrated into Official Community Plans across the four communities examined. Three out of four communities did not have any linkages to a Local Emergency Plan. The City of Victoria had the most specific DEM policies, and was the only plan to have a separate plan section for DEM. All of the OCPs had some form of mapping or hazard identification and some form of DPA for hazard areas, but most of the plans did not address all hazards that they were susceptible to. Seismic hazards particular were not adequately addressed in three of the four plans. The concept of resilience was not incorporated into three of the plans and all the plans lacked proactive recovery planning that goes beyond re-establishing normal to build back more resiliently. The lack of consistency in implementation of DEM in the OCPs correlates with the lack of direction and requirement from the Province.

The results of the analyses and further confirmation interviews cumulated in the identification of eight barriers and opportunities for bridging the gap between DEM and planning policy and practice.

Barriers	Opportunities
<ul style="list-style-type: none">• Lack of legislative requirement and political will• Training and knowledge barriers• Lack of public and elected official awareness and support• Capacity barriers	<ul style="list-style-type: none">• Cross training and knowledge sharing• Combining forces and resources• Generating public support through engagement and current events• Incorporating resilience through linkages with climate change priorities

To address these barriers and capitalize on the opportunities, four best practices were highlighted as a basis for integrated DEM and planning policy and practice. The first is to use the HRVA assessment as a starting place for integration. The HRVA must provide a review of all hazards and their risk to existing development and growth. Both planners and DEM managers must be aware and involved in the HRVA. The second best practice is to ensure the community is involved in DEM as it is in planning. This includes both educating the public on hazards and disaster preparedness as well as including them in determining acceptable level of risk and DEM decision making. Third, land use decision making that

incorporates DEM must address both new and existing development in hazard areas. Finally, planning should be conducted to proactively develop a recovery strategy for potential rebuild after disaster. This should include visioning for “building back better” and more resiliently than what was there before.

Recommendations

The recommendations address both Provincial and Municipal governments and synthesize the best practices derived from the analyses. To give communities the capacity and the political weight to incorporate DEM priorities into planning, it is recommended that the Province of BC:

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1. *Update tools for conducting Hazard Risk and Vulnerability Analyses (HRVA)*

 2. *Provide financial resources and training to municipalities to conduct HRVA*

 3. *Update the Local Government Act:*
 - a. *to mandate that HRVA must be updated prior to review of Official Community Plans and*
 - b. *to ensure that the HRVA must inform the Official Community Plan policies*

 4. *Provide additional land use tools to municipalities for incorporation of DEM*

Prior to a Provincial legislation change, municipalities are recommended to harness the OCP review as a catalyst for combining DEM and planning resources, conducting consultation, and integrating policies.

These recommendations are identified in the following table.

Using the OCP review does not address those municipalities who have just completed a plan review; therefore, additional effort and political will would be required to commit to amending an OCP strictly for the incorporation of DEM policies. A mandate from the Province would assist in this endeavour, but it would need to be accompanied by financial support and training, especially for municipalities that are already struggling with capacity challenges. Though not addressed in these recommendations, there are additional opportunities for non-governmental organizations, educational institutions, and professional organizations to lead change and develop a framework for the integration of DEM within OCPs.

Recommendations for Municipalities

<p>1. <i>Conduct a new HRVA/or review recent HRVA as part of the background prep for OCP review</i></p>	<ul style="list-style-type: none"> a. Generate political support for the HRVA update through a Council presentation by DEM and Planning Staff of the Emergency Management Act requirements for HRVAs and implications for OCPs b. Involve planners, public works, and emergency managers in the HRVA c. The HRVA must be completed by a qualified professional and address all hazards and how they relate to existing development
<p>2. <i>Incorporate DEM education and engagement into public consultation process for OCP review</i></p>	<ul style="list-style-type: none"> a. Present the results of the HRVA to the community b. Develop a shared vision for community resilience and risk tolerance c. Ensure vulnerable populations are identified and included in the discussion d. Use the shared vision as a component of all other consultation topics for the OCP
<p>3. <i>Incorporate DEM policy into the context, community vision, and goals section of the OCP</i></p>	<ul style="list-style-type: none"> a. Include updated HRVA mapping and a description of hazards b. Define and incorporate resilience into the vision and goals of the OCP as developed through community engagement
<p>4. <i>Develop a DEM section of the OCP</i></p>	<p>Include:</p> <ul style="list-style-type: none"> a. Reference the LEP and HRVA and the frequency of their review b. A definition of DEM and the four pillars c. Identification of the municipality's role in DEM d. A summary of the community participation and vulnerable populations e. Community goals for mitigation of hazard risk f. Internal (Municipal) capacity building goals regarding disaster preparedness g. External (Community) capacity building goals for community disaster preparedness h. Community goals for effective disaster/emergency response i. Community goals for planned recovery and build-back after large scale disaster
<p>5. <i>Establish DPAs in the OCP for hazard areas identified through the HRVA</i></p>	<ul style="list-style-type: none"> a. The hazard DPA should be distinct from other DPAs b. The DPA must be justified by the HRVA c. The DPA should detail additional hazard assessment and mitigation measures required
<p>6. <i>Reference DEM priorities throughout the OCP</i></p>	<ul style="list-style-type: none"> a. Link to transportation and infrastructure priorities b. Link to climate change priorities c. Link to land use and intensification policies
<p>7. <i>Reference the OCP in the LEP</i></p>	<ul style="list-style-type: none"> a. The LEP should reference the community vision and DEM priorities of the OCP
<p>8. <i>Update municipal bylaws to reflect DEM policies in the OCP</i></p>	<ul style="list-style-type: none"> a. Bylaws should be updated with new hazard information and priorities of the OCP

