

MODULE 3

Emergency Management British Columbia (EMBC)

Call Partner: Emergency Management British Columbia (EMBC)

Funding level: up to \$1,000,000 in total (\$800,000 from EMBC, up to \$200,000 from MEOPAR)

Anticipated number of projects: 1 per work plan

Timeline: 2.5 years (end date: November 2020)

Website: <http://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/emergency-management-bc>

Notes to applicants/Research Services:

Investigators at universities in British Columbia are not eligible to receive EMBC funds but may receive MEOPAR funds under this module.

This module will fund projects that contribute to EMBC's overriding vision of resilience for communities in British Columbia. Marine transportation networks and port infrastructure are key vulnerabilities that affect the resilience of many communities within British Columbia and must therefore be considered in emergency management planning. EMBC's approach to emergency management is organized into four phases: mitigation, preparedness, response and recovery. Proposals must link their work to these four phases, with emphasis on resilience enhancement. More details on EMBC's vision can be found in the [British Columbia Emergency Management System 2016 guide](#).

Proposals are solicited which address either one or both of the "work plans" described below. The proposed projects should bring researchers together with practitioners and representatives from different sectors (e.g. government, communities, industry) so that diverse perspectives can inform the research and advance the science and practice of resilience. The projects should produce knowledge and information that is actionable and suitable for informing policy and planning that will benefit British Columbia residents.

MEOPAR anticipates funding one project per work plan or, possibly, a single project that addresses both work plans. A description of the activities and deliverables expected for each work plan is provided. Proponents must build teams and describe research plans that can address all component of these "work plans". The selected

project(s) will be expected to engage extensively with end-users and stakeholder groups, and should include a plan and sufficient budgetary resources for this engagement. Projects can identify disaster scenarios for their proposed work plans but these may be subject to modification during the early engagement stage of a project.

Work Plan 1: Marine Transportation

Work Plan 1 addresses marine transportation systems and the diversion of routes following a catastrophic earthquake event, and is designed to support local authorities in their planning for immediate and sustained response phases, when the inflow and outflow of resources is critical.

Research output from Work Plan 1 will produce recommendations to local authorities within the lower mainland and greater Victoria and Vancouver Island regions.

Work Plan 1 projects should address marine transportation network demands along the British Columbia, Washington State and Alaska coastline, post-extreme event consequence management and deliver research outputs in formats that support local communities' resilience and response planning for catastrophic earthquake events.

Research activities and deliverables under this work plan should include:

1. Modelling of marine transportation routes along the British Columbia, Washington State and Alaska coastlines that could be impacted by a catastrophic earthquake event.
2. Evaluation of these routes as critical transportation nodes for ingress and egress of populations and resources during the immediate and sustained response phases of a catastrophic earthquake event.
3. Evaluation of alternate routes and/or transportation modes.
4. Evaluation of the utility and relevance of the methodology developed, or the results produced from other disaster types, or for other regions of Canada.

These research results and deliverables will support recommendations (to local authorities within the lower mainland and greater Victoria and Vancouver Island regions) that:

- a. Address alternate transportation modes and/or transportation routes in support of response efforts. These must meet critical response needs that are aligned with the British Columbia Emergency Management System (BCEMS) response goals for local communities related to immediate response phase of a catastrophic earthquake event.

- b. Support focused future response and resilience planning efforts for local communities.

Work Plan 2: Port Infrastructure

Work Plan 2 addresses impacts on the capacity and functioning of marine port infrastructure along the British Columbia, Washington State and Alaska coastline in response to a catastrophic earthquake event.

Research activities and deliverables under this work plan should include:

1. Modelling of key marine port infrastructure including capabilities, vulnerabilities and potential availability as based on seismic research that links live data refresh for local authorities to support decision-making related to response and recovery efforts.
2. Evaluation of marine port dependencies (upstream, downstream, and interdependencies) and their respective impacts; this may include related infrastructure such as, but not limited to, land and air transportation infrastructure.
3. Evaluation of marine port infrastructure that could be used as critical transportation nodes for ingress and egress of populations and resources during the immediate and sustained response phases of a catastrophic earthquake event.
4. Evaluation of the utility and relevance of the methodology developed, or produced, for other disaster types, and for other regions of Canada.

These research results and deliverables will support recommendations (to local authorities within the lower mainland and greater Victoria and Vancouver Island regions) that:

- a. Addresses marine port infrastructure that can be used to support affected local communities in British Columbia.
- b. Addresses alternate marine port infrastructure that can support response efforts following a catastrophic earthquake event.

- c. Supports focused future response and resilience planning efforts for local communities.