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CONTEXT

Québec's 2014-2024 civil protection policy defines a critical system as a system responsible for the production or provision of services or resources necessary for life and the functioning of communities (drinking water supply, transportation, etc.). Municipalities and their citizens are extremely dependent on the services and resources provided by critical systems, which are often delivered at the regional level through intermunicipal agreements. Climate change affects the frequency and intensity of natural hazards, which can weaken critical systems and threaten those who depend on them. It is therefore essential to assess the risks facing these systems and develop or improve management tools, taking into account the variable context of critical systems (in terms of management, operations, governance, etc.). The large number of organizations that must be coordinated to manage an event that would have cascading consequences requires shared risk management but can be difficult to implement.

OBJECTIVE

In close collaboration with two MRCs, build a global critical systems risk assessment process at a regional scale in a climate change context, supported by a collaborative governance approach.

METHODOLOGY

- Introduce and supervise a collaborative governance process related to the management of critical systems in each MRC;
- Assess the risks facing critical systems in each MRC and identify potential risk mitigation actions across the region;
- Assess, compare and document the process with the two pilot MRCs to allow transfer to other MRCs.

EXPECTED RESULTS

This project will produce technical and climate vulnerability reports for the participating regions, as well as risk maps adapted to the decision-making processes identified by critical systems administrators and the MRCs. Climate change adaptation mechanisms will be established in collaboration with the MRCs, in accordance with legal and regulatory frameworks and each MRC's land use planning, infrastructure and key assets. Finally, a collaborative governance approach that will enhance the participation of the partners involved will be defined.

VULNERABILITIES, IMPACTS AND ADAPTATION PROGRAM: CROSS-CUTTING ISSUES

PROJECT START DATE AND LENGTH
APRIL 2018 • 2 years

INFORMATION

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PRINCIPAL INVESTIGATORS

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OTHER PARTICIPANTS

- MRC d'Argenteuil and member municipalities
- MRC de Brome-Missisquoi and member municipalities
- Ministère de la Sécurité publique

FUNDING



BENEFITS FOR ADAPTATION

The project will provide a better understanding of the vulnerabilities of critical systems in non-urban environments, as well as the mechanisms for risk reduction. In addition to supplying a tool for the Ministère de la Sécurité publique, its regional branches and Québec MRCs to adopt similar initiatives, the project will contribute to the advancement of scientific knowledge about collaborative governance and the interdependence of essential systems.