

A guide to implementing climate resilience in construction risk management : A summary (2021)

As a companion piece to its recent report, *Strength, resilience, sustainability: Canada's construction sector recommendations on adapting to climate change*, the Canadian Construction Association (CCA) has developed a guide for project owners, designers and contractors in developing their understanding of climate risks and incorporating that information into the way projects are conceived, proposed, designed, and built.

The goal is to equip the sector to better manage climate impacts now and in the future. It is CCA's recommendation that all Canadian construction companies consider a climate resilience framework as part of their overall risk management strategies, to reduce and manage uncertainty by developing data, structuring processes and accountability, and fostering a continuous feedback loop.

CCA recognizes that every member company is different. However, a well-designed framework is broadly applicable. It can validate an already robust approach or can serve as a step-by-step checklist for a company getting started on its own path to climate resilience or for the projects it owns, builds, or maintains.

Boiled down to its essence, CCA's recommended approach to each project includes the following steps:

1. Risk identification

- Inventory vulnerabilities related to your project commitments and the type of contract you have; as well as projects to be bid on.
- Build an understanding of the expected impacts of a changing climate, including both gradual change (e.g. higher average temperature) and a higher frequency and intensity of short duration events (e.g. heat waves).

2. Risk analysis

- Determine the relevant climate parameters, the appropriate timeframes (e.g. the lifespan of the asset), and the appropriate geographic resolution.
- Generate or purchase climate modeling data to understand what an asset will face related to your responsibilities.
- Plot risk on a heat map as a function of impact and probability.

3. Mitigation planning

- Mitigate risk by assessing risk controls, determining the acceptability of residual risks, generating a new risk treatment if residual risks are not tolerable, and assessing the effectiveness of the treatment.

4. Plan implementation

- Develop internal risk management controls.
- Communicate climate risks and mitigation approaches to clients and project development partners so that they see the value in investing in mitigation, where required.

5. Monitoring and evaluation

- Regularly take stock to ensure the framework is generating the desired results; buy-in remains high; new data is being incorporated; the framework is informing discussions with clients and partners at an early stage in the construction planning process; maintenance and required adjustments are being addressed in a timely manner.

CCA hopes that this guide is a useful tool. As noted above, there is no uniform approach to managing climate risks. Each company must develop and implement a framework that aligns with its own corporate objectives and existing management frameworks. That said, CCA also believes that no company can afford to ignore climate risks altogether.