

Floods changing context

Floods are recognized as Canada's most widespread natural hazard¹. Actual tendencies and observations on climate change indicate that the frequency and magnitude of extreme events, such as floods, will increase in the upcoming years. It is estimated that the temperature in Canada will increase by 2°C in 2050 and 4°C in 2080². This temperature variation will cause more torrential rains events and will accelerate snowmelt. This will highly increase the risk of floods and the cost of damages. So, how can we protect ourselves against multiplying flood events of higher intensity?

Preparation and prevention to generate savings

Preparation is the key solution in a flood context. In fact, it is estimated that every dollar invested in prevention translates into a saving of six dollars in emergency management³. In addition, a better preparation tends to reduce the damages and costs undergone by citizens and municipalities. Encountered damages include physical destruction of goods and material as well as health issues such as exposure to mold and mildew, exhaustion and other psychological effects susceptible to appear following a flood episode. All these damages represent a cost to society that can be prevented if citizens are prepared accordingly.

Preventive measures will in fact help reduce damages on homes, businesses and globally on the municipality who could otherwise be subject to extensive financial loss. As a result of this loss, there is a possibility that families and individuals decide not to return to their home once it has been flooded. This has happened in the past and has highly impacted cities who saw a substantial loss of tax revenues, a decrease in the profits realized by local businesses and a reduction of tourism revenues, especially in locations with cottages⁴.

What role should the municipality play?

The municipality has a role to play in order to reduce the vulnerability of its citizens to floods. A 2017 study from the OQACC recognized that both public security and municipalities have the most influence on residents regarding the adoption of nonstructural behaviors in a flood context⁵. This type of behavior includes actions such as seeking information on how to be prepared for eventual floods and how to make a house more resistant to floods. According to these results, municipalities would benefit from informing its citizens on the suggested preventive behaviors and actions to implement in order to reduce the costs of managing emergency situations.

Our proposition: Innovative absorbent bags to protect you

It's in this context that we invite you to help your citizens protect their homes and businesses with the Oxysac, our innovative absorbent bag. Oxysac acts as both a physical barrier to block out water and as a chemical barrier by absorbing the water it's in contact with. The absorbing properties come from the super absorbing polymer that transforms into a gel and grows in volume as more water is absorbed. The Oxysac is better than a regular sand bag because of its light weight and its fast deployment. There will be no more sand bag filling and no more heavy lifting once you convert to the Oxysac. Our bags reduce the need in human resources and allow people with physical limitations to participate in protecting their homes, giving them a greater independence and making them feels safer.

References:

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- 5) Valois, P., Renaud, J.-S., Talbot, D., Carrier, M.-P. et Caron, M. (2017). *Adaptation des personnes habitant une zone inondable : identification des croyances dominantes*, observatoire québécois de l'adaptation aux changements climatiques. Accessed August 27th 2019 on http://www.monclimatmasante.qc.ca/Data/Sites/1/publications/rapport_2_2_inondation_version_finale.pdf