Flood insurance data for local government use

Findings from a survey of 59 Canadian cities
Summary Report

Executive Summary

- This study investigated whether city government officials saw value in accessing flood insurance data (e.g., industry flood maps) and sharing their data with insurers
- Representatives of 59 cities across 9 provinces completed a survey
- These 59 cities are home to 10.7 million Canadians or 31% of Canada's population (2016 census)
- Survey results found most city officials do not have access to any flood insurance data or information (53/59; 90%)
- City officials reported that knowing which areas are considered as "high-risk" of flood by insurers, such as neighborhoods and postal codes in their cities, would improve their flood risk management efforts (FRM) (41/59; 69%)
- Flood insurance data and information was perceived to be useful for informing municipal flood risk mitigation investments, municipal floodplain regulations and zoning, and for informing residents about flood insurance
- As a potential avenue for integrating available public and private flood risk data, city officials saw utility in a data-sharing platform that could display high-risk areas identified by insurers, enable cities to monitor and compare their progress in FRM with other cities, and share their FRM efforts with upper levels of government
- City officials had mixed opinions about sharing their flood risk data with insurers, particularly without first clarifying the benefits and value of doing so
- A number of cities supported informing insurers about flood risk mitigation measures as a way to improve the availability of flood insurance to residents who have difficulty finding affordable coverage
- Perceived drawbacks of a data-sharing platform included concerns about operational costs for creating and maintaining the platform, copyright and data ownership, data privacy and data quality
- Despite these perceived drawbacks, 32 city officials (54%) indicated they would be "extremely likely" or "likely" to use a flood risk data-sharing platform. Only 4 cities indicated they were "unlikely" or "extremely unlikely" to use a flood risk data-sharing platform, while the remaining 23 city officials were neutral at this time.

1. INTRODUCTION

In recent years, several reports have indicated that government officials and the insurance industry have an interest in data hubs and data curation services for flood risk management (FRM) in Canada (CWN, 2019, 2020). This study aimed to further develop the idea of a shared flood risk data management system (i.e., a data-sharing platform).

By surveying city officials across Canada, this study identified which types of data are of interest to municipal staff, which functionalities could be provided by a flood risk data-sharing platform, and how such a platform could be of use to cities.

2. METHODS

A survey was administered to 166 cities in nine provinces across Canada.[1] Specifically, directors and managers who oversee various aspects of FRM were targeted, such as stormwater management and city planning. Participants were able to collaborate with other staff to fill out the survey on behalf of their city.

The survey was administered electronically in two phases. The first phase ran between July 6th, 2021 and September 1st, 2021. The second phase ran between September 13th, 2021 and September 30th, 2021. Cities who had not participated in the study in the first round were targeted for the second round.

3. RESULTS AND DISCUSSION

Out of the 166 cities, 59 city officials completed the survey (35.5% response rate). There was at least one respondent from each of the nine provinces. Approximately 10.7 million people live in these 59 cities, which represents 31% of Canada's national population according to the 2016 census. Participating cities varied in size.

Out of 59 cities, 50 participants believed access to flood insurance data and information would "probably" or "definitely" improve their city's FRM efforts. The two datasets of most interest were the insurance industry's pluvial (urban) flood hazard maps and the neighborhoods and postal codes that the insurance industry considers to be high-risk for flooding. Nearly 70% of respondents (41/59) indicated that these two datasets would "definitely" or "probably" improve their city's FRM efforts.

Opportunities exist to develop a data management system that integrates FRM data owned by different government agencies and the insurance industry. However, some cities would like to identify which outcomes could be achieved if they were to use such a platform, and how, by providing their FRM data to insurers, their constituents could be benefited. Functionalities provided by this platform would go beyond the interaction between cities and insurers, as officials saw it being useful for enabling collaboration in FRM with upper levels of government as well (Figure 1).

4. NEXT STEPS

Since there is interest to access industry flood maps and related flood risk information, input from insurers will be sought out in early 2022. Their input along with cities' feedback will guide the development of a prototype that integrates public and private FRM data.

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[1] The study area was restricted to provinces where English is the primary language spoken due to research limitations to translate the survey to French.
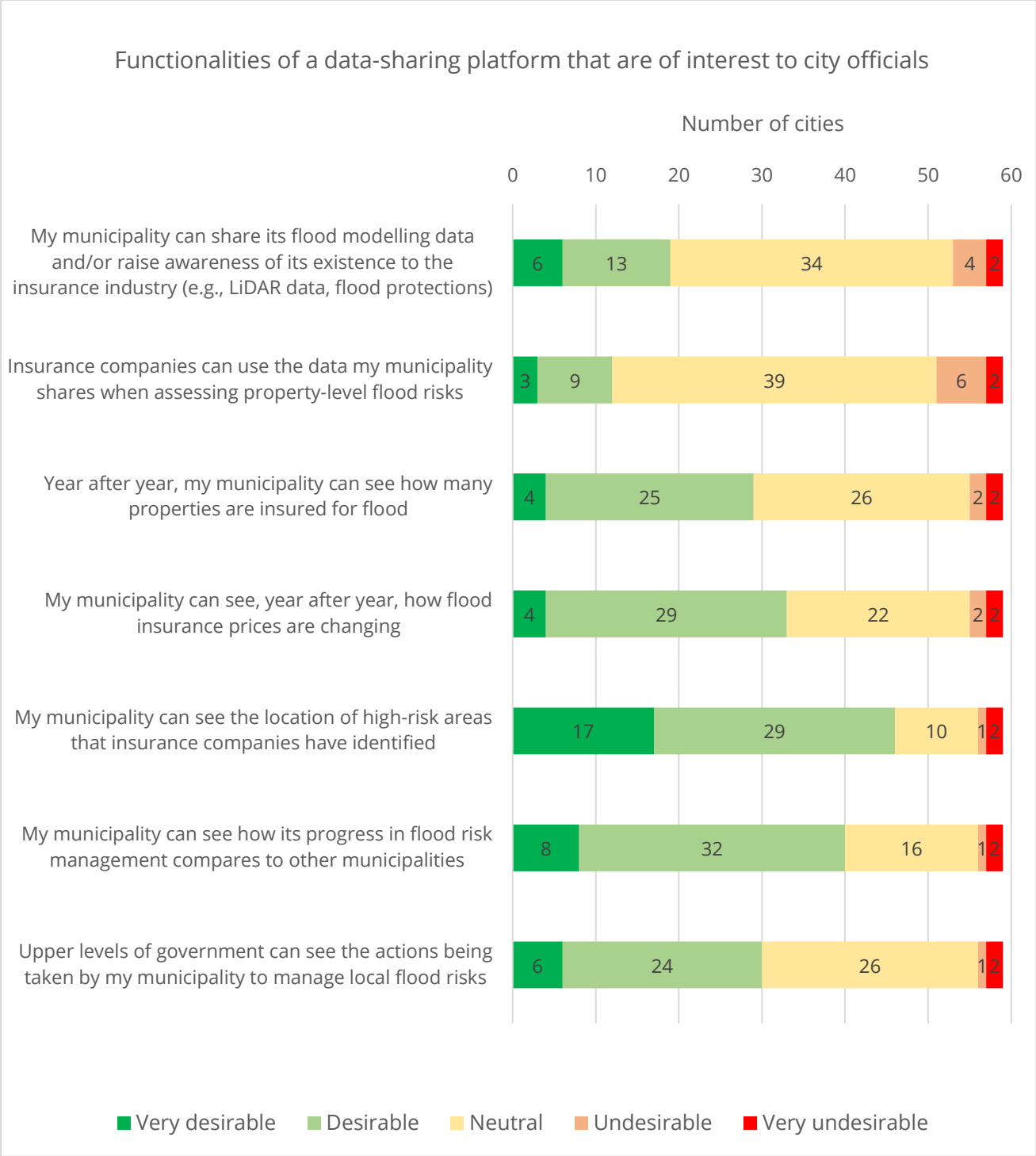
Figure 1. Functionalities of a data-sharing platform that are of interest to city officials

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