Integrating predictive data into emergency decision-making

In this project, we will conduct a multi-jurisdictional review of predictive services in global wildfire management and analogous hazard management agencies, including goals, personnel, functions, organizational structures, services, and products.

1. Hosting Institution- York University, Canada

2. Faculty Supervisor

Name:	Eric Kennedy
Position/ Title:	Associate Professor
Faculty:	Liberal Arts and Professional Studies (LAPS)
Department:	Disaster and Emergency Management
Email:	Ebk@yorku.ca

Biography:

Dr. Eric Kennedy is an Associate Professor of Disaster and Emergency Management at York University. Kennedy serves as Editor-in-Chief of the Canadian Journal of Emergency Management, as well as Interim Director of York University's Emergency Mitigation, Engagement, Governance, Response Institute (Y-EMERGE). Kennedy's work focuses on wildfire management and the human and social dimensions of fire. In particular, his lab works on decision-making and use-ofevidence for wildfire preparedness, response, and recovery. Current projects include supporting international research needs identification in wildfire science; supporting the enhancement of predictive services in wildfire management; and increasing uptake of wildfire mitigation by local governments. He has also led a national COVID-19 monitoring project, tracking the public attitudes, risk perceptions, and knowledge related to the pandemic. In all his work, he focuses on producing research that

addresses real-world needs, supports government decision-making, and helps create a safer and more equitable world.

3. Time Frames for Hosting Scholar

January 2026- March 2026

May 2026- August 2026

September 2026- December 2026

January 2027- April 2027

May 2027- August 2027

September 2027- December 2027

January 2028- March 2028

4. Research Project

Project Title: Integrating predictive data into emergency decision-making

Project Description: In wildfire management, predictive services (PS) help to inform, support, and document decision-making processes throughout the fire program including, but not limited to, computational modeling and data integration in fire behaviour and response interventions. However, PS programs have typically been very quantitative in nature, focusing exclusively on mathematical modeling at the exclusion of other issues (e.g., understanding human behaviours, compliance with instructions, etc). Moreover, the phenomenon itself – wildfire – is changing thanks to climate change and other patterns (e.g., increasing settlement in rural areas). As such, there is a need to understand whether PS need to adjust to meet these new realities. In this project, we will conduct a multi-jurisdictional review of predictive services in global wildfire management and analogous hazard management agencies, including goals, personnel, functions, organizational structures, services, and products. This process will

	include reviewing publicly available documentation of these services. This will result in a series of case studies of PS capacities, uses, and modernizations.
Preferred Academic Background and Research Skills:	Applicants should have experience conducting scoping or systematic reviews, qualitative research (either interview or survey based), and a demonstrated track record of highly effective analytical and writing skills, particularly in qualitative analysis.

5. Leadership, Community Engagement and Cultural Activities (recommended)

Participants will be integrated into the CEMPPR Lab community and YEMERGE Organized Research Unit. They will also be supported in professional development, conference attendance, and publication as appropriate.