

The summer of dangers

Has Canada become a risk society? In a very short time, in Quebec, the fires in the North have been followed by intense and frequent rains in the south of the province, creating floods or situations of vulnerability in the face of rising waters. With these scenarios formerly associated with spring floods and high tides, Quebec will have experienced a summer of 2023 under one of the most turbulent El Niños. In the West, persistent drought and out-of-control wildfires are keeping several population groups on alert in British Columbia, the Northwest Territories, the Yukon, Alberta and Ontario, in addition to others in eastern Canada that have already been brought under control (Nova Scotia and New Brunswick). This not to mention the significant damage to wildlife and plant life and to air quality!

This, while unusual, may be just the prelude to more profound changes in precipitation patterns in Canada with the growing threats of climate change. Although we often talk about risk management, according to Ulrich Beck (1986), the first theorist of the risk society, risk is dependent on the vulnerabilities present in systems. In order to develop a greater ability to protect and recover from crises (resilience), it is important to reduce these vulnerabilities. Our towns and villages have not been designed with these potential threats in mind: it will be necessary to review the protection systems and build back better, by reducing people's levels of vulnerability. People's exposure to risk also varies according to their socio-economic and demographic indicators. When disadvantaged population groups are exposed (e.g.: East End of Montreal), there may be a question of environmental injustice.

If several municipalities – having already seen their vulnerabilities exposed previously – have been able to benefit from their experience in terms of managing forest fires or flood waters, some in the summer of 2023 are experiencing their first event that exceeds the thresholds to which their populations are accustomed. The factors behind these phenomena are relatively well known, but disturbances or a particular context can turn into unpredictable variables that aggravate and trigger real perfect storms. Thus, the Gouffre River in Charlevoix, east of Quebec City, took many citizens and trailer owners by surprise at Le Génévrier campground in May 2023 when the width of the riverbed tripled; elsewhere in the south of the province, the floods of July 2023 threatened infrastructures that were thought to be out of danger and caused traffic disruptions and inundated several streets and residential basements (East of Montreal, Boulevard Décarie). Still in Montreal, water treatment plants were overflowed with the rains and reached their maximum capacity. Consequently, the City of Montreal discharged over a billion liters of wastewater directly into the river in July - the equivalent of its annual discharge!

Municipal and public security actors are quickly challenged by the limits observed in our management and channeling systems, but what about the other actors in the field? What are their roles, and when do they intervene in crises such as the recent fires and floods in Canada? A conversation with community organizations, NGOs and environmental monitoring networks is needed, and geographers are well placed to carry it out and map these actors. It is also important to clarify their roles and the interrelationships with other actors and citizens, as part of a collective learning and prevention dynamic. How can we build blue-green cities and demineralize urban environments (remove asphalt) so as to create bio-retention zones and let plants absorb excess water? What successful initiatives around the world and closer to home can inspire Canadian decision-makers in forest management? Could consultative territorial planning tools (urban development schemes) be refined to find tailor-made local solutions that take into account specific territorial contexts and the threats associated with watersheds?

CBC has published a map of Canadian forest fires, which is updated as the fight against them progresses. I'm sharing it with you to highlight the role of cartography in understanding the phenomena that affect Canadian territory. <https://www.cbc.ca/news/canada/canada-fires-map-air-quality-1.6871563>

The flooded and burned areas will have to be redesigned in the near future. Geographers will undoubtedly be called upon to carry out this work and feed their data into territorial analysis tools. The summer of 2023 offers opportunities to think about solutions to do better and rethink the uses of our territory. I hope that geographers from all sub-disciplines will contribute to this important effort of reconstruction based on improved territorial intelligence. I could not ignore these moments of tension and loss experienced across the country without calling on the community of Canadian geographers to give a little of themselves to help disaster victims and help rethink our territory. My best thoughts are with all the victims who have experienced traumatic and destabilizing situations during the summer that is ending.

Nathalie Gravel,
President of the CAG