Geoffrey and Erika Bruce Fellowships in Canadian Freshwater Policy



Canadians value freshwater as part their well-being and connect with water through many recreational water activities including visiting beaches. In Ontario alone, an estimated 6.5 million annual beach visits were recorded in the most recent survey by the Ontario government. While beaches are an enjoyable and beneficial activity linked to improved physical and mental well-being, and decades of policies have focused on improving water quality at beaches, poor beach water quality from human pollution continues to have negative impacts on ecosystems, society and economies through a reduction in tourism, poor public perception of beaches, healthcare costs, and lost productivity costs associated with beachgoer illnesses.

Maiza Sy is a PhD student in the Environmental Applied Science and Management program under the supervision of Dr. Ian Young. She is driven by a deep passion for research that seeks to understand the forces shaping population health and community well-being and taking meaningful public policy and community actions toward advancing healthy equity and inclusion. Her research builds on her work experience with the Public Health Agency of Canada conducting research to support risk assessment projects, and her work as a student intern with Swim Drink Fish Canada supporting their efforts to protect Canadian waters and enhance the policy and public focus on beaches. Through her recent internship position Maiza helped lead the writing of the updated Canada Beach Report, conducted trend analyses of beach water quality using data from public health units across the Great Lakes, and developed a summary and commentary on how beach water quality and advisories are reported by public health units across the Great Lakes.

Maiza's dissertation research in collaboration with Swim Drink Fish Canada focuses on conducting research on beach water quality and Canadians' perceptions and behaviours. Using mixed-methods, her research focuses on factors related to swimming and other recreational behaviours at beaches across Canada (including sociodemographic, water quality, and environmental factors), the impact of swimming advisories, and how advisories influence beachgoers' perceptions and behaviours. The results will inform water quality policies, beach advisories, and help local municipalities in Canada create effective assessments and policies for improved beach water quality management for safe beach use. It will also help government agencies to provide targeted messaging and outreach to socio-demographic groups that might be experiencing inequities related to their use of beaches during periods of poor water quality.

Becoming a Bruce Fellow provides an important and unique opportunity for her to contribute to policy platforms that facilitate meaningful discussion and action on issues surrounding the use of our shared water resources, especially for the millions of people engaged with recreational beach waters across Canada. This fellowship enables her to dedicate her time and effort to advancing her research objectives and contribute evidence that can inform public policy, water quality and promote safer, more equitable beach use in Canada. She is very excited for the opportunity to connect her research with broader freshwater policy discussions and learn from leaders working to address pressing challenges facing our water resources.

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Ryan Durante's PhD research explores the future potential for transboundary water conflict and contestation in longstanding cooperative basins of North America and Europe in the face of accelerating climate change. Through his doctoral studies in Global Governance in the Balsillie School of International Affairs and building on his Masters of International Public Policy, his research focuses on generating comparative insights for transboundary water governance in Canada. His research, co-supervised by Dr. Debora VanNijnatten (WLU) and Dr. Carolyn Johns (TMU) builds on the scholarship and datasets on transboundary water conflict that primarily focus on basins in other continents but neglect an examination of basins of North America and Europe, which have historically been more cooperative.

His analysis focuses on how accelerating hydroclimatic change, warming temperatures, floods, droughts and new water uses such as data centers present new challenges to transboundary water systems and examines the implications for governance, agreements, policies and future transboundary water relations. With some 3,830 km and 40% of the international Canada-US boundary made up of water, including the Great Lakes and more than 300 connecting rivers and lakes, Ryan's research is critically important for Canada. His doctoral project focuses key factors associated with water conflict from the established scholarly literature and large existing datasets but introduces new 21st century-specific factors and a transboundary water conflict vulnerability assessment tool for comparative analysis of several regions in North America and Europe. Through comparative analysis he hopes to generate important insights and findings from transboundary water regions facing similar emerging challenges.

Ryan is also a graduate student researcher with the Global Centre for Climate Change and Transboundary Waters, a National Science Foundation (NSF)-NSERC Alliance-SSHRC-funded multi-institution research centre that focuses on the hydroclimate, ecosystem, and governance challenges that climate change presents in transboundary regions and the need for Indigenous and local knowledge to transform governance approaches at various scales and strengthen community resilience. Ryan has published his work in *The Conversation* and submitted articles to *Environmental Science and Policy* and *Climate Risk Management*. He has also presented his research at the Canadian Political Science Association conference and will be presenting his research at the International Conference on Public Policy and the Earth Systems Governance conferences in 2027.

Ryan is honoured to have been named one of the 2026-2027 Geoffrey and Erika Bruce Fellows in Canadian Freshwater Policy. This funding will allow him to generate comparative governance findings, make policy recommendations, and advocate for future-oriented understandings of transboundary water governance in Canada to better prepare for potential prospects of water conflict and contestation in a world facing intensifying climate change pressures.

In his spare time, Ryan enjoys bike riding and catching Old Hollywood films at local cinemas.