



## **Integrating Hydrology and Historical Geography in an Interdisciplinary Environmental Masters Program in Northern Ontario, Canada**

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Research in hydrology and other sciences are increasingly calling for new collaborations that “... simultaneously explore the biogeophysical, social and economic forces that shape an increasingly human-dominated global hydrologic system...” (Vorosmarty et al. 2015, p.104). With many environmental programs designed to help students tackle environmental problems, these initiatives are not without fundamental challenges (for example, they are often developed around a single epistemology of positivism). Many environmental graduate programs provide narrow interdisciplinary training (within the sciences, or bridging to the social sciences) but do not necessarily engage with the humanities. Geography however, has a long tradition and history of bridging the geophysical, social sciences, and humanities. In this paper, we reflect on new programming in an Interdisciplinary Master’s program in Northern Ontario, Canada, inspired by the rich tradition of geography.

As Canada Research Chairs trained in different geographical traditions (historical geography and hydrology), we aim to bring together approaches in the humanities and geophysical sciences to understand hydrological and environmental change over time. We are teaching in a small, predominantly undergraduate University located in Northern Ontario, Canada, a region shaped significantly by colonial histories and resource development. The Masters of Environmental Studies/Masters of Environmental Sciences (MES/MESc) program was conceived from a decade of interdisciplinary dialogue across three undergraduate departments (Geography, Biology and Chemistry, History) to promote an understanding of both humanistic and scientific approaches to environmental issues.

In the fall of 2015, as part of our 2015-2020 Canada Research Chair mandates, we introduced new initiatives to further address the integration of humanities and sciences to our graduate program. We believe the new generation of environmental scientists and practitioners should be equipped to deal with the complex histories of colonialism, resource development, and scientific practices in addition to the skills necessary to conduct rigorous scientific environmental research. The following paper discusses some of our initiatives, including (1) a cross-disciplinary ‘Workshop’, which assembled students, faculty and community members on a cruise of the 800 km<sup>2</sup> Lake Nipissing to explore imaginative geographies of the lake; (2) a co-taught core course (Perspectives on the Environment) which included a theme specifically on the hydrosocial cycle (Linton and Budds 2014); and (3) student-group projects focused on developing interdisciplinary research proposals. Early reflections on this new programming is illustrating how existing literature in geography is adding ability to help bridge the sciences-humanities divides in our environmental graduate program.