



The BRACE CENTRE FOR WATER RESOURCES MANAGEMENT



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ISSUES AND CHALLENGES OF SUSTAINING CLEAN AND HEALTHY WATER FOR COMMUNITIES

As we entered the 21st century, the global effort to sustain clean and healthy water and aquatic resources for communities is being challenged by a variety of stressors, such as contaminants, pathogens, toxins, pharmaceuticals associated with land- and resource-use and development, water-level fluctuations from high water demands, and more so now under variable climate extremes. These stressors are leading to chemical and microbial contamination of water used for drinking, aquatic resources and ecosystem services. More and more freshwater ecosystems are becoming unacceptable for public consumption due to high levels of chemical and microbial contaminants, and more recently with high levels of health-care products. We fail to recognize that there could be significant economic returns from sustaining clean and healthy water and aquatic resources. It is often suggested that small, rural and remote communities are at greater public health risks from contaminated drinking water, because of lack of expertise, resources and lack of control over the protection and management of water sources used for drinking. I will make an attempt to show the implications of changing climate and landuse for water quality and community health. Currently, most climate models linked to water focus on water quantity rather than quality, and there are major challenges in modeling the impacts of climate extremes and variability on waterborne pathogens and waterborne diseases. In addition to providing a general overview of these issues and challenges with providing clean and healthy water for global communities, I will present results on some of the innovative tools we developed to track sources of chemical and microbial contamination of water that could be used to develop strategies to optimize and manage public health risks from water and aquatic resources under variable and extreme climate and environmental changes.

After obtaining his PhD from University of Waterloo, Dr. Mazumder served as a faculty at the Université de Montréal for 10 years and as the Director of Laurentian Biological Station. He joined University of Victoria in 1999 as an NSERC Senior Research Chair and Professor in water and aquatic sciences research. During the last 12 years, he has developed extensive partnerships with water utilities, communities, academics, government and industries for interdisciplinary research for sustainable clean and healthy water. He has served on numerous committees on water and environmental issues, many national and international grant selection panels, and as editorial board member for several international scientific journals. His passion is to help small, rural and slum communities with the science and knowledge needed for the protection of health and well-being through sustainable clean and healthy water.

Tuesday, October 15th, 2013

McGill Macdonald Campus, Centennial Building, Room 1-150

10:30 am - 11:30 am

EVERYONE WELCOME