Linda Mortsch
Research Lead, Adaptations and Impacts Research Group

Linda Mortsch is a senior researcher with the Adaptation and Impacts Research Division of Environment Canada and an adjunct in the Faculty of Environment at the University of Waterloo. She has 20 years research experience in the climate change impact assessment field. Her research interests include climate change vulnerability, impacts and adaptation assessments of water resources and wetlands, climate change scenario development, and "effective" communication of climate change. She was the Coordinating Lead Author for the North America Chapter for the 2007 IPCC Fourth Assessment Report. Linda led a Canada-U.S. integrated climate change impact assessment in the Great Lakes-St. Lawrence Basin from 1992 to 1997 where adaptation to climate change and interaction with stakeholders were key contributions. As the federal co-chair of the Canadian Council of Ministers of the Environment (CCME) Indicators Task Group, she collaborated on a report reviewing the effects of Canada's changing climate on nature and people. She was also a lead author for the Water Chapter the Canada Country Study and a co-author in Environment Canada's "Threats to water availability in Canada".

IC³ Seminar Series 2009

Presented by the Interdisciplinary Centre on Climate Change

Assessing Vulnerability to Flooding:
Case Study of London Ontario in the Upper Thames River Watershed

ABSTRACT

A study assessed the vulnerability to flooding of the centre of the City of London around the Forks of the Thames or the confluence of the north and south branches of the Thames River. A geographic information system (GIS) was used to display the 1 in 100, 250, and 500 year floods under climate change scenarios. Changes in area affected by the new flood lines were calculated, along with estimates of the number of structures and people affected using overlay techniques in GIS. This traditional hazards approach described the exposure to flooding, but it did not explore the distribution of "adaptive capacity" or ability of the population within the community to respond to or cope with floods. To expand the analysis, socio-economic attributes of the population that could affect adaptation and contribute to vulnerability were combined into indicators of vulnerability. The three thematic areas for the vulnerability indicators were ability to cope and respond, differential access to resources, and level of situational exposure. Ten socio-economic variables from the 2001 Canadian Census at the dissemination area and physical factors, such as housing type and age, were used to construct the indices. Maps were created for each theme and combined for a total vulnerability score. The output identifies "hot spots" or areas of vulnerable populations, which can help improve watershed, emergency preparedness and municipal planning. Project details can be found at: http://www.eng.uwo.ca/research/iclr/fids/cfcas-climate.html.

February 11, 2009, 12:00— 1:15 pm EV1—221

Please note, seating is limited. Refreshments will be provided.

For more information, contact Anneliese Burger: aburger@envmail.uwaterloo.ca, x 38480

UNIVERSITY OF Waterloo
FACULTY OF ENVIRONMENT