

Climate Change Resources on Precipitation Patterns and Flooding

Global temperature and sea level rise climate change graphics; likelihood of changes in climatic extremes. IPCC, 2007: www.ipcc.ch The AR4 WGI (The Physical Science Basis), WGII (Impacts, Adaptation and Vulnerability)

Canada's warming and changing precipitation patterns: Environment Canada's Climate Trends and Variations Bulletin (available online: <http://www.msc-smc.ec.gc.ca/ccrm/bulletin/>)

Canada's temperature and precipitation trends: These graphics are from Environment Canada's Climate Research Division (Lucie Vincent and Eva Mekis). The trend research is published but the publications do NOT include all of the trend graphics shown in the presentation, as only a select number were chosen for publication. These graphics were provided to me directly by Environment Canada's Climate Research Branch, some of which are also available directly from the Ontario node of Environment Canada's Canadian Atmospheric Hazards Network (CAHN) website: www.hazards.ca

General background information on flooding in Canada:
http://www.ec.gc.ca/water/en/manage/flood/e_cont.htm (plus additional resource publications including Hydrology of Floods in Canada: A Guide to Planning and Design (Watt, editor, National Research Council of Canada, 1989)

Great Natural Disasters information: 2008 Munich Re (see www.munich-re.com/en and http://yearofplanetearth.org/content/GLE/Session3_Hoeppe.pdf)

Natural Disasters in Canada Information by Public Safety Canada, based on data from Public Safety Canada's Disaster Database (contact Lianne.Bellisario@ps-sp.gc.ca: database available online at <http://www.publicsafety.gc.ca/res/em/cdd/index-eng.aspx>)

Provincial Perspective on Costs, Occurrence of Flooding: "Flood Damages in Ontario" (2004); Publication available from Ontario's Ministry of Natural Resources. (Joan made available an electronic copy which will be posted on the ARC website shortly.)

Impacts of Sea-Level Rise and Climate Change on the Coastal Zone of Southeastern New Brunswick (2006). Copy of the report is available online at <http://atlantic-web1.ns.ec.gc.ca/slr/default.asp?lang=En> which links to the report on the NRCan website. The project lead was from Environment Canada, with other federal department agencies, academia, Province of New Brunswick, Planning Commissions in New Brunswick, etc. on the project team.

Projections of extreme precipitation events in Canada: The graphic was prepared by Environment Canada's Canadian Centre for Climate Modelling and Analysis (CCCma) and is based on the research results presented in Kharin and Zwiers 2005 and Kharin et al. 2007. *(If you are interested in the most recent Kharin publication, please contact Jennifer Penney at email address below.)*

Climate Change and Extreme Rainfall-Related Flooding and Surface Runoff Risks in Ontario (2007), a Government of Canada funded climate change study with Dr. Shouquan Cheng principal investigator, Environment Canada, MSC-Ontario. *(Joan made available a copy of the executive summary. If you are interested, please contact Jennifer Penney at the email address below.)* The full report will be released pending peer-reviewed journal publications.

Climate change GCM projections for Canadian temperature and precipitation in the 2050s and 2080s: Available online at Environment Canada's Canadian Climate Change Scenarios Network website: www.cccsn.ca

The specifics on the **case study flood events** have been derived from a number of resources within Environment Canada. A Toronto 2005 storm report was also prepared by the Toronto and Region Conservation Authority. If additional information is required for any of these storms, Joan would be pleased to provide. Her contact information is:

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