Preface

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Biographical notes: David Etkin is Coordinator of the Emergency Management Programme at York University, Canada. His area of research and teaching focus on disasters and their mitigation, emergency management, natural hazards, and risk. He was the principal investigator of the Canadian Assessment of Natural Hazards Project and is Co-Chair of the Canadian Risk and Hazards Network.

Brenda L. Murphy is an Associate Professor of Geography and Contemporary Studies at Wilfrid Laurier University, Brantford Campus. She studies and teaches about risk, emergency management, social capital and environmental justice issues that affect communities around the world. Her most recent publication in Natural Hazards focuses on communities and altruism in disaster response. She is a member of the Canadian Risk and Hazards Network.

Laurie Pearce has been involved in emergency preparedness for over 20 years and is a part-time faculty member at Brandon University, the British Columbia Institute of Technology, and at the Justice Institute of British Columbia. Her primary interests are in the areas of hazard, risk and vulnerability analysis and community resilience. She is a member of the Canadian Risk and Hazards Network Steering Committee.

This issue of the *International Journal of Emergency Management* is both special and needed for several reasons. First, in many ways the world is becoming a more dangerous place as the number of disasters and social and economic losses are increasing from many forces, including urbanisation, globalisation, ecological devastation, climate change, and political and religious ideology. By continuing to explore issues related to risk in its many aspects, progress can be made towards increasing safety. Second, emergency management is continuing to emerge as a growing academic discipline; particularly, it is in its infancy in Canada and a special issue such as this helps to lead the way for emergency management students and increases the legitimacy of the discipline. Third, as the theory and practice of emergency management evolves there is growing recognition of the need to increase the emphasis on the proactive phase of the emergency management cycle, namely disaster preparation and mitigation. All of the papers in this collection offer insights useful in developing more robust approaches to emergency management. Fourth, there is a need to reduce the gap that exists between the practice of emergency management and its theory. Bridging this gap helps to create research that is more relevant to social problems and to promote a more effective discipline.

Canadians tend to view themselves as living in a very safe country – and it certainly is safer than many other places in the world. Nevertheless, there have been significant disasters during the past decade, and their number and magnitude appear to be increasing, largely and ironically because of the very indifference that most Canadians and the Canadian political system have towards this issue. Examples of this include increased development in hazardous zones in many parts of the country, a lack of progress towards the development of a National Mitigation Strategy, and Canada's failure to live up to its Kyoto Protocol commitments. Canada is not unique in this regard. Many societies have barriers towards the development of good emergency and disaster management policies and practices. The USA, for instance, which has led the world in the development of disaster theory, demonstrated how difficult emergency management can be to implement during the Hurricane Katrina disaster.

Emergency and disaster management (and perhaps we should also include the phrase 'catastrophe management', though this is likely a rather severe oxymoron) does not exist in isolation from other social and scientific issues. It is, rather, as interdisciplinary a problem as can exist, intertwined as it is with issues such as environmental degradation, social justice, poverty and technology. It is only through the tearing down of the barriers between knowledge silos that significant progress will be made in both the theory and practice of emergency management.[1]

Increasingly, words of warning are being sounded by scientists and environmentalists about the path of grave danger that humans have chosen – a path that undermines the foundation upon which our societies exist. This dangerous trajectory seems certain to make the understanding and practice of emergency and disaster management of increasing importance in the future. Many of the hazards we face and vulnerabilities we have are evolving over time, due to changes in our climate, our environment, our technology and our social situation. Similarly, our understanding must evolve as well, if it is to be successful. Like the general who fights the last war, old ways of approaching emergency and disaster management will become increasingly ineffective. Through research and the reaching out to other communities, Canadians can develop more effective ways to live in this risky world.

The papers in this issue are organised around several themes. The first three papers on communications, geomatics, and infrastructure revolve around the theme of disaster management and technology. These papers are very different from the traditional technocratic paradigm, in that they merge technological issues with those of social vulnerability, and reflect how much progress has been made in viewing disaster management from an integrated perspective. Gow emphasises the importance of technological change in terms of reducing social vulnerability. Friesen *et al.* emphasise the importance of complexity and integrated solutions, and how technology can assist decision making. Robert *et al.* also reflect this perspective within the context of lifeline networks, and how their growing complexity creates new vulnerabilities. In the fourth paper, focused on flood mitigation and the National Disaster Mitigation Strategy in Canada, Shrubsole argues that we need to move to a more integrated approach, not primarily dominated by infrastructure-oriented solutions. Instead, he suggests that a sustainable development approach provides a better balance between structural and non-structural management policies, ultimately serving to reduce all forms of vulnerability.

The next two papers by Rostis and Scanlon, explore what we have, or have not, learned from disaster case studies. Do theoretical models and lessons learned actually make a difference in how hazard and disaster management is practised? Rostis suggests that emergency management organisations have great difficulty in effectively learning lessons, while Scanlon uses the Tsunami case study to illustrate examples of both success and failure.

The papers by Regehr *et al.*, Cox, and Jones and Andrey relate to the theme of capacity building and vulnerability reduction. Regehr *et al.* look at the important issue of providing crisis support for responders, their families and other affected workers, and how this can be extended into the community. Cox evaluates the development of community-based capacity building using the experiences of two rural Canadian communities that were affected by fire. The psychosocial response and recovery of communities is critical, but one that has been traditionally overlooked in practice, though it is often emphasised in theory. The purpose of capacity building is to reduce vulnerability. But, how can one measure vulnerability? It is an extraordinarily difficult thing to do in practice, as shown by Jones and Andrey, using flood risk in Vancouver as an example. They demonstrate that the creation of vulnerability indices is a complex process that can have a significant affect on our interpretation of vulnerability within particular communities.

Finally, the paper by Lemyre *et al.* considers how the Canadian public perceives the threat of terrorism, a very new hazard within the national context, but one that since 11 September 2001 has greatly affected much of Canadian emergency and disaster management policy.

The editors are grateful to both the reviewers and the authors of these fine papers, who together have created a unique discussion on the theory and practice of hazard and emergency management.

Note

1   It is for reasons like this that the Canadian Risk and Hazards Network was created – to make links between people of different disciplines and educational backgrounds, and to disseminate and transfer knowledge.