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DISCIPLINES: Management Science, Operations Research, Emergency Management, Nonexperimental Modeling

KEYWORDS: Humanitarian Aid and Disaster Relief, Supply Chain Management, Conceptual Framework Formulation, Linear Optimization Models Evaluation, Canadian Coastal Communities



RESEARCH INTERESTS:

Incidences of natural disasters have grown at an unprecedented rate in recent decades all around the world. Over half of the world's 20 costliest catastrophes since 1970 have happened since 2001 (Michel-Kerjan and Slovic, 2010). To minimize the negative impacts caused by disasters, effective preparedness strategies are needed. As Van Wassenhove (2006) notes, 80% of humanitarian aid and disaster relief require effective logistical work. Thus, one preparatory approach is to develop efficient and effective logistics for disasters and emergencies using aspects of operational research and supply chain management. In spite of this fact, only in recent years – beginning in 2005 – has management of the supply chain of resources and materials for humanitarian aid and disaster relief been a topic of interest for researchers.

Consequently, Mingli Liu's research interests lie in developing a conceptual framework and analytical model for domestic supply chain management in humanitarian aid and disaster relief in Canada. In particular, Mingli's research focuses on quantitative modeling of two specific aspects during the preparedness phase for emergency management: (1) inventory prepositioning and (2) transportation planning. In addition, this research proposes and analyzes the characteristics of an effective supply chain management framework in practice to assist Canadian coastal communities in improving their preparation and performance in disaster relief efforts.

Mingli's research is developed as part of the C-Change ICURA project for managing adaptation to environmental change in coastal communities: Canada and the Caribbean. The results of this research will provide policy advice on coastal communities' facility location strategies for inventory and transportation resources, and characterize effective operational strategies for dealing with the expected impacts of disaster relief and humanitarian aid for coastal communities under the threat of more frequent severe storm and sea-level rise.

BIOGRAPHY:

Mingli Liu graduated with a Bachelor of Management degree in Information Management and Information System from Renmin University of China, Beijing, China (2012). She started pursuing her Master degree in Management Science at University of Ottawa in 2012. Currently, Mingli is working on her research – Supply Chain Management in Humanitarian Aid and Disaster Relief – under the supervision of Professor Daniel E. Lane.