Chapter 1

Introduction

On the Use of Information in Humanitarian Operations

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1.1 Introduction

Obtaining reliable information for decision-making to prepare and respond to disasters is difficult. Governments and humanitarian organizations often have to plan complex disaster responses based on forecasts or without having reliable field assessments. Decision aid models can help governments and humanitarian organizations by improving their forecasts during disaster preparedness and by facilitating data collection during field assessments in disaster response. Decision aid models can also facilitate collaboration and coordination between different parties involved in disaster management. This book is an academic study of decision aid models for disaster management.

The interest of academics in disaster management and humanitarian logistics has increased significantly over the last decade. This is related to the fact that many of the challenges humanitarian systems face during disaster response are related to operations research, operations management and management science. For example, disaster management deals with scarce resources. This is because the impact of disasters on human life seems to be increasing at a higher rate than the resources dedicated to disaster preparedness and response. Also, high levels of uncertainty following disasters impose additional pressure on the use of available resources. The complex challenges of disaster management have motivated prominent academic institutions like Universidad Complutense in Spain,
INSEAD in France and Cranfield in England as well as Tufts University, Georgia Tech and Rensselaer Polytechnic Institute in the United States, to create research groups aimed at improving the capacity of humanitarian systems for disaster management.

Academic journals and societies have also exhibited increased interest to topics of disaster management and humanitarian logistics. Journals like the *European Journal of Operational Research* and *OR Spectrum* have dedicated special issues to the topic. In addition, The *Journal of Humanitarian Logistics and Supply Chain Management* published its first issue in 2011. The journal is targeted to academics and practitioners in humanitarian, public and private sector organizations working on all aspects of humanitarian logistics and supply chain management (emeraldinsight.com). The remarkable increase of academic production in humanitarian operations makes literature reviews like the ones included in the first part of this book timely.

Additionally, the Production and Operations Management Society (POMS) founded the College of Humanitarian Operations and Crisis Management (HOCM) in 2011. The establishment of the HOCM College at POMS was followed by a call for papers for a special issue on humanitarian operations in *Production and Operations Management*, still under review when this article was written. Another important milestone of the HOCM College was its first mini-conference, held in Chicago, USA in April 2012.

Plenary sessions at the HOCM mini-conference included high-level practitioners and academics. Dr. Louis Uccellini, the President of the National Centers of Environmental Prediction of the United States – and president of the American Meteorological society –, spoke about the evolution of weather forecast and how accurate information on weather prediction helps reducing disaster uncertainty. Professor Peter Walker, the president of the International Humanitarian Studies Association, and Professor Luk Van Wassenhove, President of POMS and INSEAD Humanitarian Research Group, also commented on the value of information and pointed out that there is a need for inter-sector collaboration and interdisciplinary research in the area of disaster management. We elaborate on the needs identified by the HOCM mini-conference and discuss various examples involving the use of information in humanitarian operations. The discussion is preceded by a short description of different levels of disaster response used as a framework in the examples.