

EDITORIAL PREFACE

Contingency Planning for Constructed Risks and Natural Disasters

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INTRODUCTION

This first issue of 2013 focuses on contingency planning, which is also known as risk mitigation, disaster response planning, response preparedness or just plan risk planning. These manuscripts illustrate how all four phases of risk management are needed in contingency planning, namely: identification, assessment, planning and control. Each author is from a different country, and each presents a different type of crises or risk-related project where contingency planning is applied.

The sequencing of articles in this issues was done according to controllable man-made risks first, and then to uncontrollable natural disasters. Each article presents qualitative and quantitative data applied in risk analysis. The first manuscript is a qualitative case study of risk identification and assessment for a well-known international airport construction project. This is followed by a full-length (peer-reviewed) teaching case using the first case study data. The third article discusses a less controllable man-made disaster - a gas vapor explosion at an oil refinery, but from the perspective of an

insurance underwriting company assessing the uncertainties, risks and damages. The fourth manuscript focuses on disaster response planning as well as mitigation using hurricane Isaac that struck New Orleans in August 2012.

This issue closes with a crises event story from a survivor of both hurricane Katrina (2005) and hurricane Isaac (2012), told from an interesting eyewitness academic perspective (with a few pictures).

LITERATURE REVIEW

Build-Own-Operate International Airport

Build-own-operate (BOO) construction approaches are generally applied when uncertainty is low because the owners accept 100% of the risks. Poulou (2013) discussed how the Indian island-city of Cochin successfully managed the mega-project of building a world-class international airport using the BOO methodology. She extensively reviewed the literature and

used the interview method to capture insights from participants. The key to their success was identifying risks and formulating strategies to mitigate against them. According to Poulouse (2012), this was the first time a large risky international airport BOO mega-project in India was successfully completed and published in the literature. The project was within budget, scope and quality with a baseline adjustment for a revised timeline. It was an interesting case.

Teaching Case for Applying Risk Management

Poulouse (2013) impressed us at IJRCM to the extent that we encouraged her to develop a full-length peer-reviewed teaching case on her successful Indian international airport construction project. She reviewed the literature on risk analysis techniques and applied the generally accepted risk management framework on the original case study (without duplicating the other manuscript). The focus of her teaching case was explaining and applying the expected monetary value (EMV) theory and decision trees to quantify uncertainty, and then developing business strategies to steer around risk events. A unique feature was the decision making payoff table model of two alternatives: the aerotropolis rail system versus city bus subsidization using difference scenarios of user fees with discounted airline and public transit tickets.

Simulated Petrochemical Explosion Risk Analysis

Nejad and Samizadeh (2013) work in Iran at universities but they have experience in the oil refinery industry. They simulate a vapor gas explosion using Decision Support Software to predict losses for a petrochemical insurance company. Their model was very reliable with less than a $\pm 5\%$ margin of error and it was comparable to studies they cited in the literature. The valuable features of their paper were the

detailed discussion of the methods, documentation of the algebraic system of equations, and screen shots.

Disaster Planning using Linear Programming

Returning author Strang (2013) extended his work on linear programming (LP) models published in other peer-reviewed journals by demonstrating how probability theory can be expressed in algebraic formulae. He reviewed the empirical literature on LP applications and explained three common problem-solving techniques: graphing, algebraic systems of linear equations, and using spreadsheet software. He developed two LP models based on a case study of the Federal Emergency Management Agency disaster planning for hurricane Isaac that struck the Louisiana coast in August 2012. The LP models were focused on allocating emergency supplies to strategic point of distribution locations. A unique feature of his article was describing how uncertainty could be quantified as risk by calculating the mean, standard deviation and coefficient of variation for airboat trips by collecting historical data from hurricane Katrina.

Personal Account of Hurricanes Isaac and Katrina

Denas (2013) presents a heart-wrenching survivor account of living through hurricanes Katrina and Isaac. His story is from an academic perspective, yet it is very personal and humanistic. It was ironic that Isaac struck the Louisiana coast seven years almost to the day after the devastating Katrina hit in 2005. Some of his story was very sad, yet very realistic, especially observing the loss of lives. He included pictures of his flooded home and beached boat as evidence to depict Mother Nature's fury. He grounded many of his personal observations from both Katrina and Isaac to the literature.

Denas found that there was better disaster planning by FEMA, USACE, and the City of New Orleans to prepare for hurricane Isaac. In 2012, New Orleans was prepared for a disaster. His opinion was that risk management worked.

FUTURE RESEARCH

Our next issue will include coverage from the successful IDCE conference held at New Orleans, LA during January 8-10, 2013 where IJRCM was a media partner. IJRCM intends to continue the partnership with IDCE and IMAGO since we both cover the same key-words: emergency management, homeland

security, business continuity, economic stability, disaster preparation, response, recovery, and mitigation. Therefore, we plan to collaborate for the upcoming IDCE 2014 event so researchers plan ahead!

Future issues will continue to focus on contingency and risk management theories. We encourage researchers and doctoral students to visit our home page to witness how we can help emerging writers.

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