Multiple perspectives on planning for emergencies: An introduction to the special issue on planning and foresight for emergency preparedness and management

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ABSTRACT

This introduction highlights the diversity of national localities, research methods, case studies, and topics covered by the papers selected for inclusion in the special issue on "Planning and foresight methodologies in emergency preparedness and management." It then provides a detailed summary of each study, emphasizing what the editors feel are the most important contributions. Concluding remarks include a call for future studies that are needed. An example is planning for ways of supporting and integrating citizen participation in all phases of crisis management, a topic that is missing from this collection.

He took the wheel in a lashing roaring hurricane
And by what compass did he steer the course of the ship?
"My policy is to have no policy," he said in the early months,
And three years later, "I have been controlled by events."
"The People, Yes" Carl Sandburg

1. Introduction

In soliciting and selecting articles for this issue, we explicitly wanted to make sure that we represented the diversity of work on planning and forecasting for large scale emergencies. Disasters threaten all societies, everywhere in the world, but there is great variety in the way disaster management is organized in different countries and even in different parts of the same nation. Therefore, first, we wanted to make sure that we have work that spans many different nations, and indeed, we do, including Australia, Cyprus, Finland, Israel, Italy, Malaysia, Romania, Spain, and the U.K., as well as the United States. Secondly, we wanted to include the perspectives of actual managers and practitioners, not just academics; two of the papers selected are case studies by practitioners. Finally, we wanted to include a variety of methods of study, and we have papers based on case studies, unstructured interviews, coding and statistical analysis of the results of a literature review, surveys, and modeling.

2. Case studies and related aspect papers

We are fortunate to have two very detailed case studies of a large scale disaster in this special issue. Good case studies in

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emergency management are hard to come by. From detailed case studies, we can learn about why failures and errors occurred and what we can do to learn how to improve all the phases of emergency management. The theories of behavior for High Reliability Organizations and the associated suggested "Science of Muddling Through" point out strongly that those organizations must seek out and expose any errors or harm that their organization does so they can be corrected to better handle future emergencies [1,2]. Unfortunately, this clear need to understand and improve past performance in disaster planning and response is not the case in most organizations. There is more concern with public images, liability concerns, and political repercussions. It is from the disasters that represented clear failures in response that we have the opportunity to gain insights that are needed to improve planning and response [3].

Both of these case studies use the framework developed by Turner [4]. Turner examined 84 official accidents and associated reports over an eleven year period, published by the British Government. He points out that in the intervals of time between major similar disasters there is decay of awareness and preparation, which is the major cause of poor response to the next similar disaster incident. His framework of the six stages of a disaster is very insightful for guiding an analysis of the fundamental causes of poor planning and foresight as well as the resulting poor response (Table 1). As one reads these two cases, it is easy to see how four recent major disaster response failures can easily be fitted into the same framework: Katrina, the BP Gulf Oil Spill, the Fukushima Nuclear Disaster, and Hurricane Sandy.

The Turner framework serves to uncover many of the fundamental causes of the "failures of foresight" [5, p. 121] that rarely become explicit in the typical "official report" in the past or the present. We offer two summary tables from the Turner paper that give a quick overview of that framework, which is relevant to a good number of the other papers in this collection, consistent with individual points made in Table 2.

One significant feature missing in the incubation period is the conflict in goals and objectives. For a lot of recent disasters one can identify the reduction of maintenance costs, reducing infrastructure investment, and similar decisions which can save immediate costs or raise profits, but which reduce safety and increase risk. An example today is typified by the BP Gulf Disaster [6]. This is an extrapolation of the last item in the features of the incubation period in state II.

The specifics of the two large scale disaster case studies follow.

2.1. The failure of foresight in crisis management: a secondary analysis of the Mari disaster (Panos Constantinides)

This is an analysis of a large explosion in a naval base in Cyprus in July 2011 which killed 13 people and injured 62 others while completely destroying the major power plant on the island. This paper examines how foresight into crisis management decisions was compromised by red tape, bureaucracy, poor communication and poor information flows.

The emphasis in this analysis focuses on the problem of communications among many diverse organizations in governmental, public, and private roles. It shows a lack of the exchange of important information, the lack of exchanging and collaboration on plans and the limited approach of not considering how one disaster can trigger others. Clearly, there was no perception of disasters in one area triggering disasters in other areas.

2.2. Plans never go according to plan: an empirical analysis of challenges to plans during the 2009 Victoria bushfires (Richard Oloruntoba)

This paper deals with the challenges to the Victoria State disaster plan before and during the "Black Saturday" Australian bushfires of February, 2009 where 173 persons perished. This involved over 300 separate large fires and 1000 smaller fires burning simultaneously with over 50% of the Murrindindi Shire council area of Victoria being under fire. Given that fires are a very serious and frequent problem in Australia and that the area had a long history of droughts and fires, there seemed to be a buildup of over-confidence in the existing plans and preparedness.

It turned out that in the incubation stage there seemed to be quite a few unnoticed failings in regulatory land-use planning and building codes and laws. Emergency planning did not keep up with the spread of numerous small towns in a very fire-prone area, and maintenance, such as controlled burning of forests for fuel load reduction, was not sufficient. An increasing number of "strangers" moved into the area who did not understand the possibility of a compound threat made up of a long term drought (13 years) and a severe heatwave period. No public body seemed to want to contemplate the possibility of the extreme disaster that did occur (a fire storm). Just about all the phenomena that Turner developed in his framework influenced the occurrence of this disaster.

In this disaster, the increasingly narrow focus of risk management over time was what Turner referred to as the

Table 1
Turner stage model ([4], p. 381).

Stages	The sequence of events associated with a failure of foresight
I	Nationally normal starting point: initial culturally accepted beliefs about the world and its hazards; associated precautionary norms set out in laws, codes of practice, mores, and folkways.
II	Incubation period: the accumulation of an unnoticed set of events which are at odds with the accepted beliefs about hazards and the norms for their avoidance.
III	Precipitating event: forces itself to the attention and transforms general perceptions of stage II.
IV	Onset: the immediate consequences of the collapse of cultural precautions become apparent.
V	Rescue and salvage — first stage adjustment: post collapse situation is recognized in ad hoc adjustments which permit the work of rescue and salvage to be started.
VI	Full cultural readjustment: an inquiry or assessment is carried out, and beliefs and precautionary norms are adjusted to fit the newly gained understanding of the world.