Chapter 5

United Arab Emirates: Disaster Management with Regard to Rapid Onset Natural Disasters

Hamdan Al Ghasyah Dhanhani
University of Bedfordshire, UK

Angus Duncan
University of Bedfordshire, UK

David Chester
University of Liverpool, UK

ABSTRACT

The United Arab Emirates (UAE) has more exposure to natural hazards than has been previously recognized. In the last 20 years the UAE has been subject to earthquakes, landslides, floods and tropical storms. This chapter examines the structure and procedures for management of natural disasters in the UAE, in particular issues of governance, accountability and communication within states that are part of a federal system. The study involved interviews with officials at both federal and emirate levels and case studies are presented of the impact of recent natural hazard events. Two emirates were selected for more detailed examination, Fujairah the most hazard prone and a rural emirate and Dubai which is a highly urbanized emirate which has undergone rapid development. There is now increasing awareness of natural hazards in the UAR and progress is being made at regional and federal levels. There needs to be a clear delineation between regional and federal roles and an understanding of the need for effective channels of information to relevant agencies.

INTRODUCTION

Natural disasters are defined as sudden events that are triggered by natural factors (such as storms, earthquakes, floods, and landslides) that lead to significant loss of life and/or damage to infrastructure and economic activity. The magnitude and frequency of natural disasters both show an increasing trend over the last 50 years (Degg, 1992). Over the past two decades, more than 3 million people have been killed and 1 billion affected by natural disasters (UNESCO, 1993a; Chester et al, 2001). In 1991 alone, the economic cost of disasters was estimated at £17 billion and...
the management of disasters is one of the great challenges of the 21st century (UNESCO, 1993b). There is a necessity for a systematic approach to the management of disasters. The principal reasons for the continuing increase in natural disasters are related to the growth of population, the increase in building density and the growing concentration of people in urban areas that are more highly exposed to natural disasters (Chester et al, 2001). Thus, natural disasters exert an enormous toll on society and on development (Sørensen et al, 2006). The 1990s were designated by the United Nations then, International Decade for Natural Disaster Reduction (IDNDR) and during second half of the IDNDR a new approach to the study of hazards emerged, focusing on the interactions between extreme events and features of human vulnerability to be found in places where disasters are experienced. During the opening years of the twenty-first century, the IDNDR has been superseded by the International Strategy for Disaster Reduction (ISDR) (United Nations, 1999, 2002), which has continued to emphasise a more ‘inculcured’ approach to hazard assessment and post-disaster recovery. More recently this perspective has been enshrined in the Hyogo Framework for Action 2005-2015 (United Nations, 2005), that forms the context under which hazard research is carried out.

Urban areas are growing at a rapid rate all over the world, particularly in developing countries. In most cities, there is influx of population from the surrounding area, mainly in search of employment and better living conditions, so that new arrivals often have no alternative other than to occupy unsafe land, construct unsafe dwellings and this contributes to an increase in vulnerability. The growing urban population in economically less developed countries is concerning since it is taking place in the absence of effective civic services and of proper planning and regulation. This unplanned growth, with a proliferation of poorly engineered buildings, leads to disaster-prone areas becoming more vulnerable (Wisner et al, 1994).

The Middle East has a long record of historical seismicity. Despite advances in understanding the physical threat, however, the Arabic and Islamic societies of the region remain vulnerable to earthquakes and other disasters (Degg and Homan, 2005). Recent earthquakes in Turkey, Iran, Pakistan and the Asian tsunami of 2004 have brought to the fore the impact of natural disasters in Islamic countries.

The United Arab Emirates (UAE) is an Islamic and Arabic country in the Middle East. Located near the edge of the Arabian Plate adjacent to the Iranian plateau and close to the Zagros Fault zone, which is characterized by high seismic activity, the UAE is not as safe from natural hazards as has often been assumed (Wyss and Al-Homoud, 2004). The rapid growth of population and its increased concentration in urban centres, with a lack of a clear hazard planning policy and engineering regulations for seismic resistance contributes to making this area more vulnerable.

For example, in Fujairah the following rapid onset natural hazard events have occurred in the period 1995-2009: Masafi earthquake 2002, Al Qurayah flood 1995, Al Tawaian landslide 2005, Tropical Gonu storm 2007 and Sharm flash flood 2009 (Fujairah Municipality personal communication 2009). The purpose of this chapter is to explore the following issues which are raised by the development plans to manage possible future natural disasters in the Emirates. Specifically these include:

a. Issues of governance, particularly those involved with operating within states that are part of a federal structure.

b. The particular management issues involved in innovating plans within highly urbanised communities with extremely heterogeneous expatriate groupings, which exist alongside more traditional rural populations.

c. Dealing with disasters within a society that has - and continues to develop - at a rapid
Related Content

The Use of Social Media in Disaster Situations: Framework and Cases
[www.irma-international.org/article/use-social-media-disaster-situations/39070/](www.irma-international.org/article/use-social-media-disaster-situations/39070/)

Serious Gaming for User Centered Innovation and Adoption of Disaster Response Information Systems
[www.irma-international.org/article/serious-gaming-for-user-centered-innovation-and-adoption-of-disaster-response-information-systems/120602/](www.irma-international.org/article/serious-gaming-for-user-centered-innovation-and-adoption-of-disaster-response-information-systems/120602/)

Using Systems Analysis and Dynamics to Evaluate Public Private Partnerships with Data and Best Practices from SAFER Santa Rosa

Exercise24: Using Social Media for Crisis Response
[www.irma-international.org/chapter/exercise24-using-social-media-crisis/74869/](www.irma-international.org/chapter/exercise24-using-social-media-crisis/74869/)

Disaster Is in the Eye of the Beholder
[www.irma-international.org/chapter/disaster-is-in-the-eye-of-the-beholder/207630/](www.irma-international.org/chapter/disaster-is-in-the-eye-of-the-beholder/207630/)