

materials science and environmental studies to become a concept used enthusiastically by policy makers, practitioners and academics. The concept is attractive as it suggests an ability of something or someone to cope in the face of adversity – to recover and return to normality after confronting an abnormal, alarming and often unexpected threat. It is used alongside security to understand how governments, local authorities, the emergency services and health agencies can best address the threats from natural disasters, health pandemics, malicious attacks on a country's critical infrastructure, and other major disruptive events. The paper discusses the meaning and utility of the concept of resilience. It traces the origins of the term through to its current use in addressing contemporary threats facing individuals, communities, organisations and nations. It identifies and describes a number of characteristics which are common to the concept of resilience in its many contexts and manifestations. In conclusion, the paper supports a review of the language and thinking of emergency and disaster management, and promotes the emerging concept of disaster resilience.

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#### (A36) What is there to Show for the Last 5 Years?

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A disaster creates disruption and threats to life and society, mental anguish, and leads to feelings of instability around such areas as security and safety. It causes suffering and requires assistance from experts within a structured and tested response framework. After 11 September 2001, the demarcation between disasters caused by natural hazards and terrorism virtually disappeared. The two now get treated concurrently, but there is a danger that anti-terrorism might hijack the agenda, overshadowing important work that must be done in the field of disasters caused by natural hazards. With this in mind, the Health Emergency Management Unit in South Australia was born. The unit was established for preparedness planning around the growing concerns of the potential for an impending pandemic caused by avian influenza. From those shaky beginnings, South Australia now has a dedicated and trained team. The unit provides a 24/7 health responses to planned events and unexpected incidents caused by natural or deliberate forces that may occur in the region. It also participates as part of the National Disaster Deployment Program. Currently, the unit is focused on risk reduction and increasing resilience by implementing a sound, comprehensive approach including all elements of prevention, as well as preparedness, response, and recovery strategies. The unit also provides an extensive education, training, and exercise program to health facilities across South Australia. This paper will describe the ongoing journey of the unit, how it works and interacts with all levels of health service staff and other emergency services, and some of the recent events and incidents in which it has been involved in within Australia and overseas.

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#### (A37) Characteristics and Evaluation of China's Earthquake Disaster Management Systems

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**Background:** This presentation summarizes our ongoing hybrid sociological-geological research into China's earthquake disaster management systems. Our methodology is a grounded research approach, based firstly on field observations related to the Wenchuan earthquake, including interviews with survivors and professionals responsible for disaster management; secondly on an extensive review of the English-language disaster management literature. China's earth scientists, frequently in collaboration with international scientists, have created a substantial English-language literature, but the social literature on disasters in China is scant. China's geographic variation is complex, with significant fault lines crisscrossing the nation.

**Discussion:** Approximately half of the population lives in areas with a high risk of earthquakes. The two most-devastating of these since 1949 were the 1976 point-source Tangshan earthquake with mortality of 242,419, and the 2008 huge-area Wenchuan earthquake with mortality of 69,226. Our research has found that China's earthquake disaster management systems at the local, provincial, and national levels respond rapidly to earthquakes. National mobilization for rescue-relief after the Tangshan earthquake began within six hours, and within two hours for the Wenchuan earthquake. These systems are also characterized by reconstruction planning that functions in parallel to, and melds into, the relief effort streams. China's major infrastructure projects, such as hydro-electric power dams, are designed to resist extreme earthquake; however, rural mountain populations and the historic built-environment have low earthquake resistance, conditions which will endure for a long time.

**Conclusions:** As a result of the Wenchuan earthquake, China has undertaken ambitious three-dimensional monitoring and response programs. We recommend studies and action to reconnoiter, investigate, and prevent population exposure to geo-hazards, particularly in the Qinghai-Tibet Plateau. In summary, China excels at disaster response but has not yet entered a development era of preventing the population's exposure to earthquake hazards.

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#### (A39) Civil-Military Collaboration in Trauma Training

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In the present Swedish military medical organisation all medical personnel, including surgeons, have to be recruited from civilian hospitals. Even if there are many civilian surgeons well qualified to perform trauma surgery, the injury patterns seen in e.g. Afghanistan are quite different compared to what is generally seen in trauma patients arriving to the ED at a civilian hospital. In order to upgrade the major trauma skills of the civilian