Improving a nation's preparedness

Ian Portelli and **Lina Kolesnikova** discuss the Large Scale Emergency Readiness Project in the US, which aims to improve the nation's readiness for the outcome of a large-scale urban emergency

THE LARGE SCALE EMERGENCY Readiness Project (LaSER), funded by the US Department of Homeland Security in 2004, is an ongoing effort within New York University's (NYU) Centre for Catastrophe, Preparedness and Response. It aims to improve the nation's preparedness for the public health and medical consequences of a large-scale emergency in an urban setting.

The complexities that accompany catastrophes are so vast that a panacea is virtually impossible: casualties, economic losses and psychological distress are best mitigated through a multidisciplinary approach. The LaSER team spans six NYU schools, addressing the multidimensional issues of emergency preparedness and response from many different perspectives.

NYU has been designated as the project's test-bed for five LaSER sub-projects – Modelling and Simulation, Organisation-Based Incident Management, Organisational Safety Net, Risk Communication and Legal Issues.

The cornerstone of LaSER is PLAN C (Planning with Large Agent-Networks against Catastrophes), which utilises a powerful, large-scale, computational, multi-agent based disaster simulation framework involving thousands of agents. PLAN C simulates the complex dynamics of emergency responses in different urban catastrophe scenarios and devises plans that optimise multiple objective functions, such as number of casualties, economic impact, time to recovery, and so on.

The Organisation Based Incident Management project (OBIM) aims to develop a preliminary plan for community response, including internal structure and process, as well as external relationships, utilising NYU and its surrounding communities as the 'laboratory' model. OBIM shows that volunteers play a critical role in disaster response.

The US terrorist attacks of September 11, and Hurricanes Katrina and Rita demonstrated the limits of immediate government response and the need for citizens to 'fend for themselves' during times of crisis. The OBIM team assessed the willingness of faculty, students and staff to volunteer during catastrophes. Findings and research have proven that promoting and developing an organisation of skilled volunteers through private institutions, would prepare a strong workforce willing to step forward and help in the event of a disaster.

COMMUNICATION

Crisis situations not only call for a volunteer base, but also call for a supportive and safe work environment within organisations that considers the practical, social and psychological needs of employees, reducing absenteeism. The 'Organisational Safety Net' project aims to develop a model toolkit that helps large organisations create an environment that will allow them to continue functioning during a large-scale emergency. In a disaster, employees may be unable or unwilling to come to work, or may be concerned with their families' needs and safety. Through surveys, interviews and focus groups, it was determined that, among others, attributes like communication within the organisation and with family and loved ones are essential to maintaining a strong workforce.

Proper risk communication is critical for successful leadership in times of crisis and reduces the consequences of terrorism and other disasters. Effective communication should be planned, based upon consideration of message content, characteristics of message senders and recipients and technology used to deliver messages in order to minimise delay. These factors vary during pre-disaster, disaster and post-disaster conditions.

The Risk Communication project uses these factors, along with an interdisciplinary approach, to develop and test communication strategies and plans for community public health preparedness, response, and mitigation during man-made and epidemic disasters. This project has been successful in developing a typology for organising risk communication indicators; developing and identifying an extensive set of indicators, supported by a literature and case review on risk communication and behaviour in disasters; developing a framework portraying parties involved in disaster communication, their roles and modes of interaction; and designing preliminary message sets for specific crisis situations; training graduate students in risk communication methods and techniques.

Through its multidisciplinary team, LaSER has been successful in identifying a large array of legal issues pertinent to large scale emergency readiness, and has developed proposals to remove barriers to efficient and effective response. **CRJ**

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