Editorial

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This issue draws together papers that consider ways of managing and responding to disasters. Thankfully, disasters happen infrequently; however, and sad to say, they may strike in the same geographical place on more than one occasion. Testament to this are papers in this issue concerning the 2011 earthquake in Nepal (Merrilees, 2016) and flooding in 2009 and 2013 in the UK (Affleck and Gibbon, 2016; Rowley *et al.*, 2016), which are not the most recent occurrences of such events. The purpose of sharing experience in technical papers such as these is, of course, that we learn from past events to help manage the consequences of future events.

Merrilees (2016) makes the point that the antecedent state of structures and infrastructure and the lack of accessibility to some geographical areas exacerbates the impact of earthquakes, as it did for the 2011 Nepal earthquake, which measured 6.9 on the Richter scale. Merrilees reports that significant progress was being made prior to the 2015 earthquake by engineers to engender greater resilience prior to an event, and to mitigate and recover from an event. Engineers received unprecedented attention after the 2015 earthquake.

Staying with the theme of earthquakes, the focus then shifts south to Christchurch in New Zealand, and the series of quakes in 2010–2011. Liu *et al.* (2016) discusses sewerage system performance loss during the immediate response, and subsequently during the recovery and then long-term restoration periods after an earthquake. They present performance indicators concerning the engineering-related consequences to structures and hydraulics, and the consequential issues for the environment, society and the economy. They propose a framework for supporting decisions that deals with both physical damage and functional impacts, as well as the restoration of serviceability.

Returning north to Pakistan, Malik and Cruickshank (2016) note that Karachi has inadequate seismic resilience owing to inappropriate construction techniques, and this results from inadequate awareness and political will. It is also based on little historical seismic data as a reference point for design. They develop a strategy that will handle the current lack of preparedness in the form of an early warning system using cell broadcast technology. They argue that this is a pragmatic

approach to help move towards a paradigm of prevention, mitigation and preparedness.

We now leave earthquakes and turn to rainfall. Chhorn *et al.* (2016) concern themselves with the prediction of landslides as a consequence of rainfall in Korea, in particular the identification of the most important periods of time of rainfall prior to a landslide. Multiple cases are considered and they find that there are durations of rainfall that are critical and assist in predicting landslides.

The UK has experienced a good deal of flooding in recent years. Affleck and Gibbon (2016) use the flooding in Workington, UK in 2009 as a case study for evaluating the approach taken to coordination and communication. A bridge collapsed, which severed the town into two parts with significant social impacts. Their qualitative investigation of the three-year process of restoration suggests that the adopted communication strategy assisted in community understanding and acceptance of the situation.

Rowley *et al.* (2016) discuss the impact of flowing on the highway network in Worcester as a consequence of rainfall in 2013. They discuss action taken to minimise impacts for the travelling public.

To round off this issue, Patel (2016) reviews the 2014 book by Lopez Carresi *et al.* (2014) on disaster management.

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