



A Brisbane street after the January 2011 floods.

Recovering from disasters

International disaster recovery projects can provide lessons for New Zealand in the wake of the Canterbury earthquake.

by TIM KIRBY CA, JOHN LEAKE and KEN GRANGER

NZICA members in New Zealand and abroad have looked on in horror at the effects of the earthquakes that have been rocking Christchurch since September 2010. The city's community is now undertaking a recovery project that will take years.

This article provides an outsiders view¹ of how NZICA members might play a part, based on experiences with other international disaster recovery projects.

On the 2 and 3 May 2008, Tropical Cyclone Nargis made landfall in Myanmar, formerly Burma. With winds up to 200kph and a 3.6-metre storm "surge" hitting the Ayeyarwady Delta, Nargis travelled north east passing just north of Yangon, formerly Rangoon. The official death toll was 84,537 with 53,836 people missing, believed dead, and 19,359 injured. The recovery was officially declared complete in 2010, but work on disaster risk management continues.

On 11 January 2011, the Brisbane River broke its banks, leading to evacuations in the Brisbane CBD and inner suburbs. Residents were evacuated over the course of the next two days until floodwaters peaked on 14 January. While wider flooding disrupted large parts of Queensland, more than 22,000 Brisbane homes were reported

inundated, and recovery and aid support came from across Australia and New Zealand. A Commission of Inquiry into the Queensland floods has made recommendations regarding flood preparedness, but has not yet completed its work.

The recoveries observed in these two disasters have enough similarities with the Christchurch experience that it is possible to flag some critical factors for the years ahead in Christchurch. We have also seen some key roles for accountants and auditors, and the finance community more broadly, that might be of interest to members intent on playing a part.

TROPICAL CYCLONE NARGIS

The authors were engaged to review various reports and assessments of the recovery and reconstruction efforts undertaken jointly by the government of the Union of Myanmar, the UN and ASEAN.

As part of that review, we considered four key stages of recovery; the immediate post-cyclone situation, the initial post-cyclone recovery, the recovery and reconstruction effort and post-recovery efforts to build disaster risk management capacity.

Looking across the reporting of various parties, we found some explanations for what seemed to be less recovery than planned, and some suggestions for continued capacity building. A summary of the findings is presented below.

Recovery from tropical cyclone Nargis

- Recovery and redevelopment was short-funded – while recovery plans were costed at US\$1,000m, and funding of US\$690m agreed to by international donors and governments, we were only able to identify receipt of around US\$178m.
- Priorities shifted as funds became limited – use of funds received was prioritised away from planned environmental protection and disaster risk management programs, to health services and rebuilding.
- Reporting encouraged a level of adaptive management – public reporting was focussed to encourage improvement in this particular recovery program, rather than to track performance over time.

CANTERBURY 2011

- Effort was focussed on priority townships and regions – the most affected areas in the Delta have achieved the most recovery but, even in these areas, the resilience to disasters is still below pre-Nargis levels. Welfare of the communities is expected to remain at a new lower equilibrium for a long time.
- Community capital remains low – physical capital has not been sufficiently restored, and productive capacity remains diminished. Human capital has not been sufficiently restored. Sufficient financial capital has not been made available. Natural capital has not been rehabilitated and is not yet being managed sustainably. Social capital is strong, and has remained so despite dislocation caused by Nargis.
- Sustainable livelihoods based on the natural resources of the Delta were not being created – recovery and reconstruction efforts were not integrating sustainable environmental management and disaster risk management into operational decisions.
- Vulnerability to future disasters is now higher – plans to restore mangroves, which provide many disaster mitigation benefits, have not been achieved. Disaster planning and awareness programs have not achieved the planned reach. Personal security, including documentation of rights and ownership, had not yet been restored.
- Future efforts should focus on disaster preparedness – early warning systems and impact modelling for the region would help communities to prepare for disasters. Safe haven construction should continue. The principle of “build back better” should continue to be applied and also applied to the natural systems of the Delta.
- Specific areas of need – analysis of the social data collected by reporting teams allowed identification of specific “townships and regions of need” across a range of issues, which could be used to prioritise future programs.
- An approach to disaster risk reduction in wider areas of Myanmar was proposed.

QUEENSLAND 2011 FLOODS

Disaster risk management plans were in place for a number of Queensland areas prior to the 2010 floods, and there is evidence to suggest that these were effective at mitigating the impacts of flooding.



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Since the recovery from the floods, planning for disaster risk management has begun again. This time, though, in addition to regional scale management plans, individual key institutions such as the Queensland Cultural Centre (QCC) have begun preparing their own disaster risk management plans. It is in this site-specific planning that Institute members may play a part, given their understanding of their businesses and business risks. Business continuity planning is, after all, one component of an effective disaster management process.

Our work for the QCC sought to identify strategies for improving disaster risk management. We concluded that:

- Flood risk exists. The QCC precinct, its precious collections and the valuable services it provides to the community, are at risk from a major flood in the Brisbane River.
- There is a good risk management culture. A healthy risk management culture exists across the QCC precinct, and the commitment to risk management was undoubtedly reinforced by the experiences of January 2011.
- The fragility of reputation was hard to assess. Risk assessments had trouble quantifying the potential threat to the national and international reputation of the QCC facilities as a safe venue for hosting world-class exhibitions and theatrical performances.
- There are things that can be improved further. A range of prioritised implementation strategies were identified, including building better recognition of cultural assets into risk planning, better management of information regarding hazard, exposure and vulnerability, and more formalised coordination of risk management between facilities in the precinct.

THE METHODOLOGY OF DISASTER RISK MANAGEMENT

Our work in both reviews followed a risk-based approach that sees risk as being the interaction between the hazard phenomenon (in this case a severe cyclone and a flood), the elements of the community exposed to the impact of that phenomenon (people, buildings, economy, etc) and the degree to

which those elements are vulnerable to that impact. Members may find this more suitable for business continuity planning than the more general ISO 31000 methodology.

This relationship was illustrated in Figure 1 below.

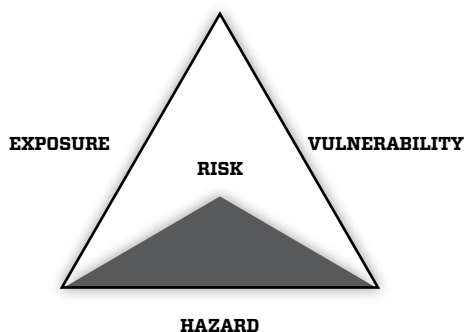


Figure 1. The hazard-exposure-vulnerability relationship (after Crichton, 1999)

This diagram illustrates the cost effective nature strategy of disaster risk reduction. It is usually impossible to remove the hazard but the risk to the community can be, in theory, be reduced to zero, if one can eliminate either the exposure, or the vulnerability. In practice DRR aims to reduce both to as low as reasonably practicable.

So what roles have we seen for accountants and auditors in these projects? As the Christchurch community now has the handling of post-quake response down pat, it is more worthwhile to consider roles in recovery and reconstruction, and building the disaster risk management capacity.

As accountants, we are used to consolidating reported financial information, and identifying trends that need attention. There will be a role for independent commentary to keep funders “honest” to their promises of resources to assist in Christchurch. We found that the trend of under-delivering committed funds to the Tropical Cyclone Nargis recovery seriously hampered recovery in Myanmar.

Coordination of information regarding impacts and progress is critical to allow for sophisticated research and decision making in recovery and reconstruction, and for ongoing disaster risk management. We found that such coordination was hampered by multiple data and reporting formats, differing views on transparency and competing demands for limited funding. These issues



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are not new for accountants, and neither are many of the solutions for management. In particular, accountants could be well placed to remind funding bodies of the importance of information for good decision-making, and to encourage CERA to resist the temptation to divert resources from long-term information management in favour of short-term efforts and good news stories.

As business experts, chartered accountants are often responsible for risk management and business continuity in their businesses. CAs can play a part in reminding clients to have basic off-site backups and recovery plans in place. Communities in the Delta had not recovered a sense of security to pre-cyclone levels. This was continuing to weaken capacity for recovery and reconstruction in quite simple ways. For example, the key documents for whole communities were destroyed, making it hard for people to prove identity and claim relief. In the same sense, Christchurch individuals and businesses, including member firms, lost records that were critical to access bank accounts, establish title to assets and rights to insurance.

Accountants may be uniquely positioned to help quantify reputation risks, through techniques used for valuing intangible assets. Disaster risk plans for QCC resulted in a different order of priorities when the risk of loss-of-reputation was considered. The loss of lucrative World Cup games for Christchurch unfortunately provides a real-world example.

Finally, we found that the evaluation tasks of these reviews required the kind of structured logical thinking that accountants often do very well. We all find such evaluations very rewarding, and recommend others get involved, in particular as Christchurch will need help for many years to come. 📌

1 While Tim Kirby grew up, studied and worked for a period in Christchurch, the authors are not Christchurch-based.

Tim Kirby CA, John Leake and Ken Granger work together as members of Environmental Risk Science and Audit (ERSA) Pty Ltd, and also provide individual consulting services based in Australia. Kirby is currently the Chair of the Institute's Sydney Branch/Local Leadership Team.