Ministerial Review - Better Responses to Natural Disasters and Other Emergencies in New Zealand

Submission by the Engineering Leadership Forum

7 July 2017

Introduction

1. Thank you for the opportunity to provide comment to the Civil Defence Emergency Management Review (the Review).

2. This submission is from the Engineering Leadership Forum (the Forum). The Forum comprises the CEOs of New Zealand's professional engineering associations, including the Institution of Professional Engineers New Zealand, the Association of Consulting Engineers New Zealand, Water New Zealand, Civil Contractors New Zealand, the Institute of Public Works Engineering Australasia (New Zealand Division), the Electricity Engineers' Association and the Cement and Concrete Association of New Zealand. These organisations represent well over 30,000 professional engineers.

3. The Forum supports the need to ensure that emergency responses operate with clear authority and chains of command, good information and communications, and the right capability. Engineering professionals are central to the reduction, response to, and recovery from natural disasters and other emergencies. The professional engineering and associated communities always rally in response to natural disasters and have made significant contributions. In our view, it is therefore critical that the skills of experienced engineering professionals are utilised at key stages of any emergency management process, and that their voice is heard with regards to any proposed changes.

4. This submission is informed by discussions with professional engineers experienced in dealing with civil emergencies, and from the collective experiences of the Engineering Leadership Forum member organisations. We encourage the Review Panel to engage with engineers over the course of its review, and to give consideration to the importance of the engineering role and contribution to effective emergency response management, from reduction to recovery. We would be happy to connect the Review Panel with engineers with specific expertise in this area if that would assist with the Review.

5. Overall, our view is that notwithstanding the wide range of potential emergencies and hazards facing New Zealand communities, the Act provides a good framework for the CDEM system, and that the problems that are emerging as evident in recent events can be quickly resolved by a more consistent implementation of the Act, improvements in governance and training, and a greater focus on risk reduction. These are discussed further below.

6. We note the Review seeks to improve the civil defence and emergency management (CDEM) system and is especially focused on securing 'better responses'. In our view, getting 'better responses' is inextricably linked to improving emergency preparedness and increased focus on risk reduction investments. Risk reduction may be outside of the scope of the Terms of Reference (ToR) and the ToR commentary, but it is, in our view, a critically important component of the CDEM system. We include commentary on this.

Surge Capability

7. The Civil Defence Emergency Management Act 2002 (the Act) requires central Government agencies, TAs, emergency management groups and utilities to 'ensure … they can continue to function, albeit at a reduced level, during and after an emergency … and to plan for this'.

8. In our view, effective response to a civil emergency is a consequence of deliberate and prior preparation over extended periods.

9. Natural disasters are fortunately infrequent. The main participants in the CDEM system, the Ministry of Civil Defence Emergency Management (the MCDEM), the territorial authorities (the TAs), and the regional emergency management groups, may spend long periods in a 'business as usual' mode before a disaster occurs that they perhaps have not anticipated and are not well prepared for. Recent experience indicates that in a disaster, particularly major disasters, even our largest cities and lifeline utilities quickly become overwhelmed. The challenge for the CDEM system is to maintain the necessary professional expertise during periods of low activity and to ensure the ongoing preparations required for coping with a disaster.

10. In our view, one solution is to organise the CDEM system to ensure that emergency controllers, TAs and utilities impacted are immediately supported by experienced professional engineers and civil defence specialists in a pre-organised and formal response process.

11. CDEM practitioners call this 'surge capability', which is the rapid deployment into an afflicted area of pre-formed and trained specialist groups. These groups could include a wide range of skills and capabilities depending on the type of emergency. In most significant situations, TAs need experienced professional engineering support, utilities need support at senior executive level and in operations management, and the regional controller needs to be supported (and possibly replaced by) an experienced CD practitioner. The deployment of surge capability recognises that senior engineering staff employed by the TA will be mobilising the resources of the council and local contractors in repairing critical council infrastructure – including roading and water services.

12. There are many examples of surge capability support processes in current operation. In the utilities sector there is already widespread outsourcing of operations to national companies. Examples include North Power, who operates widely across the electricity lines companies, and City Care who work with the three water utilities. These organisations have a track record of mobilising out of region support quickly and efficiently in emergencies. In the Manawatu floods, for example, there was extensive overnight deployment of civil engineering and construction support from the private sector. However, there appears to be much less pre-planning around senior executive capability backup in TAs, utilities and in the CDEM system. It is relevant to this discussion that in the Kaikoura earthquake, an experienced controller was brought in immediately.

13. Surge capability supports, but does not replace, local leadership and capability, especially in the TAs. Each situation has its own dynamic, and there may be exceptions to this in extreme cases, but it is very clear to those who have experienced management of a declared emergency that prior local contacts and local knowledge is essential to an optimal response – engineers and CD practitioners need local knowledge and local contacts to operate effectively. How people connect before events, and the extent to which they share a common sense of duty, and an operating awareness, will set the scene for any response.

CDEM Training

14. A feature of the current CDEM system is the lack of a centralised national training system. This is in contrast to the training undertaken by the Police or the Fire Service, for example. Training, and retraining, is a central part of these organisations culture and operation. We advocate the development, under the MCDEM, of a comprehensive and nationally consistent training system for both the CDEM professionals and volunteers. This is not a criticism of the current university programmes, but a reflection that training needs to be seen as a core MCDEM activity and under its direct control.

15. In particular, the advice we have received is that surge capacity needs leadership training for dealing with situations which are overwhelming. The courses that were provided by the MCDEM Civil Defence School in the past have been referred to as practical and applicable, but we understand that, since its disestablishment, MCDEM courses have been more theoretical. In our view, there needs to be a training programme for controllers and senior emergency office personnel that focuses on judgement and decision making in disaster, on learning from the good and bad from prior emergencies and on learning from experienced CD practitioners and controllers.

16. A new national CDEM training programme would require significant new investments in learning and development. The programme could be delivered in part through an education provider, but it would need MCDEM oversight and active involvement of its senior managers. The objective would be to develop a centralised national CDEM force, trained, qualified and accredited through a national system (with national standards and competency frameworks for standard operations), funded by MCDEM, with careers managed by the Director. The new CDEM capability developed would be deployed on a regional basis and monitored and supported by the TAs.

17. A national training system would provide the basis for the creation of the teams of specialists envisaged in providing surge capability (as discussed above), and the building of networks among CDEM professionals and regional controllers, to allow a seamless transition from business as usual to disaster response.

18. The CDEM system is dependent on the mobilisation of significant numbers of preferably trained volunteers. The current variable training of volunteers should also be replaced with a national system, designed and funded by MCDEM, and delivered and supported on a day to day basis by the regional emergency offices.

Governance and Organisation Design

19. While policy is important, for the CDEM system to be truly effective, its leaders (most specifically the MCDEM) need to be operationally focused – active, engaged, and enabling. An example of this would be MCDEM becoming involved in national training programmes, as discussed above. Effective communication between CDEM organisations and practitioners is also key – for example, closer day to day relationships between MCDEM and the Regional Emergency Management office managers.

20. TA professional engineers have commented that in an emergency it is not always easy for the TA's Chief Engineer to carry out the TA controller function given the other demands on them. An alternative approach is to shape the controller's role so it can be undertaken by a specialist, such as another TA staff member who is a trained and experienced manager, with sound

organisational and interpersonal skills, and potentially risk and crisis management skills. Further, there is an emerging view within the engineering community that regional emergency controllers should report to the declaring TA, which invariably bears the brunt of the cost of the response. Clarity around reporting should not affect the ability of MCDEM to assign command and control powers to the controller.

21. In regard to the regional emergency management offices, there is also an emerging view in the engineering community that they would best be managed by experienced business managers rather than a person with regional controller skills. The basis for this view is that the skill set for establishing emergency preparedness and to assist in risk identification activities may best lie with experienced programme and business managers. In this model, in disaster, the regional controller position would be quickly taken over by an experienced practitioner from the surge capability group, but supported by staff with local knowledge.

22. The Act is silent on audit, but it was debated during its drafting. We consider that experience shows that audit is now needed. The audit of emergency preparedness is well established in the defence forces and in many organisations, particularly in industry, and could be extended into the lifeline utility sector as an extension of current health and safety audit processes. The lack of audit and consistent implementation of the Act is probably at heart the main reason for this review. MCDEM could be funded and resourced to undertake this, though they may contract these to an existing organisation such as the forces' Inspector General Unit or Audit New Zealand.

23. An alternative, less intrusive (though arguably less effective) approach to audit would be to require disclosure of compliance in annual reporting processes. For example, a disclosure obligation for a lifeline utility (in their Annual Report) on the utility's plan for functioning during and after an emergency would be a very strong incentive to encourage compliance with Section 60 of the Act.

Risk Reduction

24. The CDEM system is wholly focused on the improvement of emergency preparedness and response. In our view, risk reduction initiatives can substantially reduce the impact of natural events on communities and should be an important and mandated part of CDEM processes.

25. The Act implies a responsibility on MCDEM in some aspects of risk reduction, for example the implementation and operation of a proper warning system for locally sourced tsunamis, and an earthquake warning system that gives communities warning of the arrival of strong earthquake shaking.[1] However, some important risk reduction strategies fall outside the activities of the CDEM system as it currently operates. Consistent interpretation and application of the RMA by TAs and a coherent nationwide approach to hazard risk reduction is crucial. For example, more focus on land use planning and community resilience is needed – we should be restricting building on flood plains, beaches and fore-dunes. A further example is the lack of incentives for the construction of buildings with energy absorbing systems which reduces damage in earthquake to the minimum and allows buildings to be immediately repopulated.

26. The Act requires utilities to be resilient, but there is no systematic assessment of utility resilience nor of the resilience of utility systems (this is where audit might come into play, as discussed above). Furthermore, one of the most serious deficiencies in the current CDEM system is the

[1] Both of these can be implemented through the push broadcasting capability currently being implemented, and modelled on similar schemes elsewhere especially the Japanese systems.

lack of incentives and process to enable lifeline utilities to be more resilient and to improve the resilience of their networks. Utilities should be encouraged to deal with these issues as building resilient systems can involve quite different programmes than building more capacity or the replacement of aging assets, and interdependency issues between utilities can significantly threaten emergency responses. The establishment of agreed service targets after disaster would provide a basis for planning the improvements required.

Other Issues Mentioned in the ToR

27. It appears from the ToR that consideration is being given to the effective timing of declarations. The view of the experts we have interviewed is that the TAs remain well aware of the consequences of declarations of emergency and are best placed to call them.

28. Although the ToR asserts that we have learnt the lessons from the Canterbury earthquakes, we note there has never been a public and independent review of, for example, the operation of the state of emergency declared, the impact of the lengthy red zoning, how CERA operated and the process adopted for the rebuild. The objective of the audit is to learn and not to blame.

29. Industry undertakes exhaustive reviews of incidents and near misses as a matter of course to comply with the Health and Safety at Work Act, and this culture needs to be embedded into the CDEM process through MCDEM.

Summary

To conclude our overall comments are summarised under the ToR Outcomes as follows:

30. *Outcome 1: Is the emergency response system fit for purpose and aligns with stakeholder expectations, taking account of the need to prioritise preventing death, injury, and property damage, and the fast-moving nature and uncertainty of emergencies?*

    As noted above, notwithstanding the wide range of potential emergencies and hazards facing New Zealand communities, we assess that the Act provides a good framework for the CDEM system, and that the problems that are emerging as evident in recent events can be quickly resolved by a more consistent implementation of the Act, improvements in governance and training and a greater focus on risk reduction.

31. *Outcome 2: Does New Zealand have the appropriate response capability and capacity for civil defence emergency management responses?*

    See our recommendations for surge capability and training.

32. *Outcome 3: Is a clearer definition needed of who determines the need for and declares a state of emergency and at what point the Director Civil Defence Emergency Management can step in to declare a state of emergency?*

    The Act is quite clear that the intention is to place this responsibility on TAs. If TAs are well supported then there is no need to give the Director power in this regard.

33. *Outcome 4: Is the chain of command and control, coordination and decision making during an emergency effective and appropriate?*

We recommend that, in a regionally declared emergency, controllers be accountable to the declaring authority. MCDEM is better placed to be focused on organisational capability building and system training.

34. *Outcome 5: Are information flows into, across, and out of the emergency response system effective, allowing timely and accurate communication to Ministers; agencies; officials; stakeholders with particular interests; and to the public during emergencies?*

    The deployment of nationally trained surge capability, as we recommend, would improve the oversight of emergencies and communications. There needs to be a focus on providing proactive and accurate information to the public (and media) during emergencies.

Conclusion

35. The Act provides a good framework for the CDEM system, but there are areas where the system, as it currently operates, could be strengthened. We think it is important that the Review consider how to ensure the Act is more consistently implemented, personnel involved in CDEM receive appropriate training and support, governance is strengthened, and risk reduction is prioritised.

36. In these areas, our key points are as follows:

    a. In disaster, TAs need support that integrates into existing business processes, operational frameworks and organisation culture without causing disruption and dysfunctionality. We recommend the creation of properly trained teams of experts to be deployed by MCDEM to assist TAs, lifeline utilities, and to take over regional controller roles in significant emergency.

    b. The MCDEM should be tasked and funded to deliver a national CDEM training programme for both CDEM professionals and prospective volunteers.

    c. CDEM leaders, specifically MCDEM, need to be operationally focused, and engaged in training and capability building, establishing minimal requirements on TAs and utilities for compliance with the Act, and implementing compliance audits.

    d. The engineering profession would like to see a rational and measured approach to the defence of communities from natural disaster and other emergencies and detailed consideration of a wider range of risk reduction programmes.

37. Thank you for the opportunity to comment. Please do not hesitate to contact me if you have any questions about this submission.

John Pfahlert
Chief Executive
Water New Zealand
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For and on behalf of the Engineering Leadership Forum.