

# The Maori Response to a Seismic ‘Swan’

Regan Potangaroa and Maire Kipa

**Abstract** This chapter looks at this Maori Black Swan Event (BSE) and examines its nature against current definitions and specifically against the New Orleans’s Lower 9th Ward response. It then considers how Maori managed with a study of the Maori community at Rapaki just outside Christchurch following the 2011 earthquake. The existence and the current management of this BSE in New Zealand and how Maori manage should be recognised in disaster plans. That is not happening. Moreover, the sense by both authors is that this work will resonant with other ethnic responses in New Zealand such as Pacific Islanders, SE Asians and Chinese.

**Keywords** Black swan • Maori • Christchurch

## 1 Introduction

The apparent treatment of Maori following the 4 September 2010 Darfield Earthquake presented something that New Zealanders didn’t want to see or acknowledge. The notion of inequality or ethnic discrimination was un-New Zealand and therefore deeply unacceptable. It would subsequently result in the setting up of a Maori Response Network (MRN) in the Christchurch Earthquake in 2011 and also in the Kaikoura Earthquake in 2016. The success of both of these MRN’s and also the occurrence of the Black Swan Event (BSE) that generated it has yet to be recognised by the broader New Zealand community. This was however witnessed by both authors as they were on the ‘front line’ in all of the contexts covered and those experiences they bring to this writing.

This chapter looks at this Maori BSE and examines its nature against current definitions and specifically against the New Orleans’s Lower 9th Ward response. It

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then considers how Maori managed with a study of the Maori community at Rapaki just outside Christchurch following the 2011 earthquake. The existence and the current management of this BSE in New Zealand and how Maori manage should be recognised in disaster plans. That is not happening. Moreover, the sense by both authors is that this work will resonant with other ethnic responses in New Zealand such as Pacific Islanders, SE Asians and Chinese.

The phrase “Black Swan” is an expression of something that does not or is presumed not to exist. It underlines how something completely unexpected can unravel systems of thought, value propositions and processes. In this case, “the observation of a single black swan would be the undoing of the logic of any system of thought, as well as any reasoning that followed from that underlying logic” (Wikipedia 2017).

A BSE has three principal characteristics (Taleb 2007):

1. It is unpredictable in that it is beyond the modelling, the experience of the planners and the history of the discipline involved. The event is a ‘surprise’ to the observer.
2. It carries a massive and/or significant impact.
3. After the first event, the [psychological](#) biases which blind people, both individually and collectively attempts to rationalise the experience in hind sight to make it appear less random and more predictable, than it actually was.

According to Taleb we concentrate on the things we already know and fail to allow for what we don’t. While concentrating on what we do know is reasonable within itself; the requirement to know what we don’t seems quizzical. For example, could we know about the role of the internet and companies such as GOOGLE or the possibilities of people contributing freely to an encyclopaedia such as Wikipedia.....or on the other hand the Syrian Crisis, climate change and the 2008 economic crisis. The suggestion that any of these were ‘knowable’ and thereby ‘manageable’ seems unreason. Taleb disagrees.

He further questions why is it that we seem to over-estimate our ability to predict the future and thereby determine our destiny? (Taleb 2007). And while the emphasis for BSEs have been identified in Insurance (Munich Re 2015), Finance (Stuart 2011) (Foresight NZ 2016), Security (Broad 2016) and possibly the Military; there is the sense that other areas could also benefit from its application. The main barrier appears to be one of perspective. For instance, the relationship between cause and effect in these events is built upon knowing both the causes and the effects. Not knowing one or other results in an inability to act; but act one must do nevertheless (Cholewa, Mamula-Seadon 2012). We then become immediately tangled in what is our role/job/task and what is the responsibility of others. We start questioning ourselves about ‘what if I get it wrong’, ‘am I responsible’ and how would that ‘look’ and affect me, my position or my status. Consequently, we appear to be ill equipped to know or manage a BSE. New Zealand research has instead concentrated on resilience after-the-disaster and in particular organisational/community resilience rather than any preparedness before it (Kachali et al. 2012; Kenney et al. 2015).

In this chapter the terms 'Black Swan' and 'Blind Spot' are used interchangeably because the sense in the field was more of a 'blind spot' that came upon you rather than the 'surreal' appearance of a black swan on a quiet pond.

## 2 New Orleans Lower 9th Ward August 2005

'What is happening here isn't a Black thing, it's not a White thing, and it's not a political thing. This is something that affects everyone, no matter who you are. It's just that the poor are the ones hit hardest, and a lot of the poor are Black.' (Perrin et al. 2008). What happened in the Lower 9th Ward was a BSE that occurred seemingly 'under-the-nose' of city authorities.

Cutter gives more details about what happened in New Orleans with her comments (Cutter 2006) '...race and class are certainly factors that help explain the social vulnerability in the South, while ethnicity plays an additional role in many cities. When the middle classes (both White and Black) abandon a city, the disparities between the very rich and the very poor expand. Add to this an increasing elderly population, the homeless, transients (including tourists), and other special needs populations, and the prospects for evacuating a city during times of emergencies becomes a daunting challenge for most American cities. What is a major challenge for other cities became a virtual impossibility for New Orleans. Those that could muster the personal resources evacuated the city. With no welfare check (the hurricane struck near the end of the month), little food, and no help from the city, state, or federal officials, the poor were forced to ride out the storm in their homes or move to the shelters of last resort. This is the enduring face of Hurricane Katrina—poor, black, single mothers, young, and old—struggling just to survive; options limited by the ineffectiveness of preparedness and the inadequacy of response'. It was missed despite the warnings (Homeland Security 2006) and the city's hurricane history going back to 1722. It even had its own name, 'The New Orleans Scenario' and was treated by FEMA as one of the three most critical disasters facing the US (Moynihan 2009)...Yet it was missed nonetheless.....and Cutter seems somewhat generous with her comment that ...what is a major challenge for other cities became a virtual impossibility for New Orleans...' given that the year before the city had an evacuation due to Hurricane Ivan.

However, she goes on to comment that '...socially created vulnerabilities are largely ignored in the hazards and disaster literature because they are so hard to measure and quantify. Social vulnerability is partially a product of social inequalities—those social factors and forces that create the susceptibility of various groups to harm, and in turn affect their ability to respond, and bounce back (resilience) after the disaster. But it is much more than that. Social vulnerability involves the basic provision of health care, the liveability of places, overall indicators of quality of life, and accessibility to lifelines (goods, services, and emergency response personnel), capital, and political representation.' Perhaps this was why it was missed.....

Thus, it seems that BSE's can and do exist in the post disaster context. This one was unpredicted (despite the apparent warning signs), certainly had a large impact on a nation that seemingly could not help its own that was played out on national and international media and as ostensibly suggested by Cutter was explainable.

### **3 The New Zealand Blind Spot**

Nonetheless, it was unthinkable that something similar could happen in comparative 'small town' New Zealand; but it did.

Maori are the indigenous people of New Zealand. They migrated via canoes from Polynesia sometime between 1250 and 1300 CE (Te Ara 2017a). A unique culture and language developed that is evident today with whakapapa or ancestry being connected back to these canoes. Maori appear to be more urban based with 84% living in metropolitan areas and especially for Auckland where 25% of that number reside (Te Ara 2017b). New Zealanders pride themselves on the racial harmony they enjoy and so what happened ran deep. What occurred in New Orleans Lower 9th Ward could not occur there..... but that was not the case.

### **4 Darfield Earthquake, 4 September 2010**

A magnitude 7.1 earthquake occurred in Darfield which is approximately 40 kilometres west of the city of Christchurch in the South Island of New Zealand. The seismic event damaged buildings and caused soil liquefaction in the rural town of Kaiapoi and the Christchurch suburbs of Bexley, Aranui and generally throughout Christchurch's Eastern suburbs. The liquefaction caused problems with buried water and sewer pipes, flooding and building foundations. Liquefaction occurs when seismic shaking forces water in the soil to move upwards that consequently turns what was stable ground temporary into quicksand. The Eastern Suburbs which includes Bexley and Aranui is also where the city's sewerage treatment ponds are located and hence where lower Christchurch land values could be found; and in many socio-economic ways mirrored the Lower 9th Ward of New Orleans.

An apparent lack of communication (The Press 2010) had Maori Party MP Rahui Katene calling for a public apology over the treatment of one 30-strong Christchurch Martin whanau (an extended Maori family unit) who were evicted from an Earthquake Welfare Centre. The family were publically labelled as "repulsive" by Christchurch City Mayor Bob Parker based on Police reports that family members were intimidating others and that they had falsely claimed their houses as being uninhabitable. However, Lala Martin showed The Press [the main daily newspaper in Christchurch] through her quake-hit Gayhurst Rd [located in Aranui in Christchurch] home yesterday and pointed out what appeared to be sewage coming out of a drain and into her mud-pit, flooded front yard. She was trying to keep her

six children, two of whom were bottle-fed, out of the muck, but one of her babies appeared to have developed a gastric illness. She showed The Press the Green inspection notices [posted by Civil Defence Authorities] that bore Thursday’s date [they only found about the Green notices basically saying the houses were “habitable” on the day they were evicted from the centre] but said it was the sanitation aspect that made her flee her home. “We’ve gone from being victims of the earthquake to victims of the people who were helping us out. I wouldn’t use the facilities again, I would just stay home.” Grandmother Manawai Martin wept as she said she was more traumatised by being labelled “bludgers” (and publicly castigated by the Mayor) than by any earthquake. “Maori will be too scared, too embarrassed, to come use [relief services],” she said. Grandfather Noel Martin said he left his Mongrel Mob [Maori based gang] patch in the car when they arrived at the centre. “Yes I’m in the gang. What’s that got to do with the state of emergency?” (TV3 2010).

Martin said Parker had “done the damage” to their family and he would be voting for Jim Anderton. Parker said he would meet the family if they wanted but it was “not a high priority”. Manawai said the first the family knew of being evicted was when police approached them. At 1.20 pm [on Friday] they were issued a trespass order saying they had until 2 pm to move all 30 out, she said. Manawai started crying immediately. Her family had helped out at the centre and one of her 14-year-old granddaughters had been given a Civil Defence vest in recognition of all the work she did. The family only discovered their houses had green placards on Friday and she wanted one more night in the shelter as getting 30 people mobilised was difficult. There was no definition of who were allowed in the shelter, she said. Most of those they met had no damage to their homes and were there because they needed support or they were scared. Noel Martin said he was one of the workers cleaning up Christchurch and straight after the quake he went to his daughter’s house and then checked on her neighbours. “[Parker] has turned this from a positive into a negative,” he said. Parker “absolutely refuted” that race played any part in the disaster relief effort. He said his comments about the family were in response to reports from police that the family was making things “significantly harder” in the centre. Though he did not believe he was wrong, he would happily admit it if he was, he said.

Therefore, what happened with the Martin whanau was unexpected, had deep implications and moreover at least for the Mayor could be readily explained. It was a BSE. And it would have probably ended there had it not been for a subsequent and more damaging earthquake 5 months later.

## **5 Christchurch Earthquake, 22 February 2011**

An even more devastating earthquake happened on the 22 February 2011 at a location 10 kilometres south-east of the centre of Christchurch near the port town of Lyttelton. Though smaller in magnitude at 6.1 than the earlier 7.1 Darfield

Earthquake it caused extensive building damage and the loss of 185 lives. With earlier experiences of the Martin family still fresh, it seemed that a separate Maori Response Network (MRN) should be established to avoid a repeat of that earlier incident and the potential for conflict at Earthquake Welfare Centres.

The MRN was set up at Rehua Marae in central Christchurch and was established ostensibly to facilitate communication and to identify the appropriate service providers over the short to medium term. This is discussed in more detail in the next section, but there was deep resentment amongst Maori leaders and elders which was revealed on New Zealand National Television.

‘Well...I can say that...because we are on the ...I suppose the poor side of town.... in terms of how bureaucratic people look at it ...we’re last in line.... we see the Mayor alot on TV...but it’s always about the inner city or the other suburbs you know... we’ve never see him..... in fact he came around once... on this street only because the Minister of Maori Affairs turned up.....why do we always have to miss out.... why are we always last...’ Peter Mason a resident of the Eastern Suburbs of Christchurch and then Chair of Nga Hau e Wha National Marae (located in the Eastern Suburbs) being interviewed about the seemingly ‘forgotten’ earthquake affected Eastern Suburbs of Christchurch April 2011 (Maori Television 2011) (Fig. 1).

On that same program, Bob Parker the then Mayor of Christchurch in response stated that ...‘no body’s going around here [the Christchurch Earthquake Response Centre]saying we won’t go to that area, that’s a lower socio-economic area...let’s go and look after the people who have got more money...is that even reasonable. I mean if someone’s suggesting that of me I would resign from my job right now...I just feel so strongly about that ...that is a pathetic criticism ...sorry if I am being offensive but I find that deeply, deeply offensive ..you know of anything...what we have done in this organisation is to say look at the areas that have been hit for a second time [the first being an earlier earthquake in September 2010] and devastated by the impact of this [February 2011 Earthquake] and let’s do everything we can to get into those areas and to ensure that we can support them as best as we can’. The program was aired on prime time National Television on 10 April 2011, 47 days after the 22 February 2011 earthquake.

It is interesting to note the similarities to New Orleans in terms of Civic management and its apparent rejection. Furthermore, it is also interesting in that this Black Swan was well known to Maori but a shock to non-Maori; and hence the significance of these two interviews.

## 6 The Christchurch MRN Timeline

A timeline based on the MRN operations from when the Earthquake happened on the 22/2/2011 till when it was scaled down a month later on 21/3/2011 has been compiled and is in Appendix A. The approach of constructing the MRN timeline allows the nature of the BSE both in Christchurch and later in Kaikoura to emerge.



**Fig. 1** The Eastern Suburbs of Christchurch, before and after the 2011 Earthquake. The *circled area* is the same house for reference (Source Google Earth and Authors)

This is regardless of the ethnic trigger occurring earlier in the 2010 seismic event. The timeline was formed from key discussions and information summarized from minutes of meetings, emails, reports and journals kept by volunteers working with the Kaitahu (Strategic) Steering Group (KSG).

The timeline (perhaps surprisingly) shows that the MRN worked well and had potentially better communication and information flow with the Government Departments through Te Puni Kokiri (TPK, the Government Department dealing with all Maori Affairs) than those outside the network. It also had good communications with Te Runanga o Ngai Tahu (the local Maori Iwi or recognised tribal authority) and acted as an effective information exchange centre, a contact point for other Maori Iwi coming in from outside Christchurch, the Maori Wardens Association (both local and national) and coordinated donations coming in and distribution going out. In addition, it was able to pick up and direct reports of particular cases like the Martin’s that would have otherwise “fallen off the radar. Almost by default it became a focal point for visiting dignitaries such as Kevin Rudd who at that time was the Australian Minister for Foreign Affairs.” And finally it became something of a touch point for the emotion of the disaster for which there was no other facility given that the CBD was cordoned off and many churches and other suitable buildings were damaged and hence closed.

However, the timeline also highlights a lack of access in specific areas such as health, provision of port-a-loos and entry into Welfare Centres. The health issue was particularly unfortunate as a team of trained nurses arrived from the Arawa (Iwi) from New Zealand’s North Island. They brought their own medical supplies and were deployed on the 28 February to the Aranui and Wainoni area of the Eastern Suburbs of Christchurch and were so successful that they used all their medical supplies by the 1 March. They requested supplies from Christchurch Hospital but were rejected and the team told that people in the Eastern Suburbs should come into the hospital. Travelling to the main hospital was problematic given the state of the roads, the lack of transport and the pressing issues of family and home. Moreover, the move to a community based approach (Ratima 2010) for areas such as the Eastern Suburbs was a recognised method of health care delivery and the reasons for its earlier adoption made even more sense in the post disaster context (Boulton et al. 2009). This gap is summed up by one interview that “[It’s] about advocating

for the weakest, for the poorest, for the ugliest, for the least likely to earn some bread. And sometimes when you're working with that...you're working from the bottom of the barrel". People don't want to work with these people because they've tried to and [it's] too hard. For us, that's our bread and butter...it's about "we know you, we probably know your uncles and aunties, and we're interested in how they are and you and we're interested in how the rest of your whanau is working and how we can get in there and help support that". Other supplies were found and the nurses were still active through till the 7 March 2011. But the experience of the (community based) health workers/nurses perhaps underlines that there will be sections of the community that disaster professionals seek to assist but may not be able to because of "a gap" or maybe "the gap".

## 7 The Nature of BSE's

It is evident from this timeline analysis that a BSE depends on the observer and that it emerges when the gap between what we know and what we think we know becomes untenable (Taleb 2007). Maori seem to have known about the black swan in the Eastern Suburbs and moreover had over time seemingly become accustomed to it. While for others, its existence would mean resignation from their public role as was stated by the Mayor. This strong contradiction seems to be the signature for this BSE.

In a similar way, it would appear that the mind can be prone to such blind spots or bias; and that can be quite public especially as connectivity increases through mobile phones and the internet. Moreover, it would have been a simple act to go out to the Eastern Suburbs and visit the area and 'see' what was actually happening rather than relying on reports and feedback. This would have been a simple 10–15 min car drive.

In addition, driving out may have also underlined that some of the data being used by the Planners and the CDEM may not have been accurate; as was shown with the port-a-loos (Potangaroa et al. 2011). But what eventuated in this instance was the demolition of houses and eviction the families that occupied them. The associated pay out for land did seem equitable if you had assets; but not for those renting. The overall effect was the clearing of much of the Eastern Suburbs after a protracted insurance process that did not provide the intended alternatives for those that were displaced.

On the other hand the gap between a resilient and a Black Swan response one may not be as different as proposed.

But overall the sense within the MRN, like the Martin family earlier, was that Maori were on their own; a theme that was certainly coming through the Press, Maori/National television (National Television 2011) and the radio media (TV NZ 2011) and parallel what happened in the Lower 9th Ward of New Orleans (Rotary NZ 2011). In particular the comments from Perrin et al. seem to make sense in the eastern Suburbs.... "Many of us alternated between emotional numbness, intense



anger, sadness, and guilt. Trying to make sense of the destruction and our reactions to it often brought surreal confusion. At times, we felt detached from reality, and memories of our own homes seemed distant. Following the advice of a faculty member, we had brought pictures of our families to provide a sense of normalcy. The pictures seemed out of place among our surroundings; even phone calls home felt odd because loved ones could not fully understand what we were experiencing. On a small scale, we began to appreciate how residents may have felt amid their devastated lives” (Perrin et al. 2008). This was poignant for the Eastern Suburbs given that the Western Suburbs of the city was in comparison unaffected and life went on as usual.

## **8 Kaikoura Earthquake, 14 November 2016**

At 12.02 am on the 14 November 2016, a 7.8 earthquake struck near the coastal town of Kaikoura; which is 150 kilometres north east of Christchurch. Road access is cut off by numerous and significant landslides and the collapse of several bridges. In a similar manner the railway is also cut off and hence the only access is via helicopter. There is confusion within Civil Defence Emergency management CDEM (Stuff 2016). The harbour had been rendered almost useless due to the seismic upheaval of the harbour sea bed. The 111 phone line fails and by 12.57 am there is confusion amongst CDEM as to whether a tsunami warning should be given as a 2 metre tsunami had already hit the town. This particularly impacts on the many tourists that are now stranded in Kaikoura and they head up to the local Takahanga Marae which is adjacent to where an informal camping ground is set up. There are approximately 700 people that spend the remainder of the night at the Marae as aftershocks continue and there is no power available (Fig. 2).

## **9 THE Kaikoura MRN**

A timeline was again constructed for the Kaikoura MRN based on situational reports, field/diary notes, meetings/hui, reports and data and observations from being at Takahanga Marae from 19th to 23rd November 2016. It is from the perspective of Maori and particularly for the Takahanga Marae in Kaikoura and is in Appendix B.

This timeline shows that the MRN worked well. Moreover, it is not clear how the CDEM would have managed the tourists that were stranded in Kaikoura if it had not been for the Marae serving 10,000 meals in 6 days. Local Maori stayed away because they appreciated the pressure and the associated work that those on the Marae would be under. The Ngai Tahu Iwi were able to set up supply lines and support for the Marae. But again its contribution, as it was earlier in Christchurch with



**Fig. 2** The Kaikoura Context (Source authors)

Rehua Marae, was essentially ignored by this Earthquake Response run out of the Emergency Operations Centre EOC located in the Kaikoura Council Building.

The Marae lacked access to water, toilets, power and food; with the water being the most important one. However they were able to work around it using firstly ‘borrowed’ water tanks and then a New Zealand Red Cross water bladder elevated on the back of a truck tray so that water could flow down when the taps were turned on. Initially, it was manually carried into the kitchens and then a pump was used once power was restored. There was frustration on the Marae that it was presented with the issue of stranded tourists: that CDEM did not have any plan and then when it did step up, it felt ignored. There were disputes over food that was being helicoptered in and the Police had to be called; there were assaults over access to petrol chits and there was an ongoing struggle to maintain water access. Moreover, the Marae had to put aside helping local Maori and hence the last community meal was served on Sunday 20 November 2016. It seemed to be the right time. The focus then switched over to assessments and needs of local Maori both in Kaikoura and in the district. Some families were sorting out their needs but a percentage between 20% and 30% needed assistance. One example was a whanau group (an extended family) of 32 living in one 3 bedroom house because their respective houses were earthquake affected and moreover they felt safer together. The sense that others were ‘worse off’ than what they were seemed to sum up the local Maori perspective; but it was obvious that a solution needed to be actioned so that the family could plan their return to ‘normal’ living conditions.

The Marae was crucially involved in the paua relocation when there was disputes between the volunteer’s relocating paua and the Ministry of Prime Industries (MPI) that were seeking to ‘protect’ the paua.

The Runanga (local Maori tribal authority) based at Takahanga Marae have the legal right and the cultural imperative to issue permits for customary gathering of kaimoana (sea food) in the Kaikoura district. They were approached by a volunteer group that were trying to relocate the paua (a large sea snail) that were marooned when the sea bed at the inter-tidal zone was lifted by the earthquake. The MPI stepped in and stopped the operation saying that their scientific evidence was that

paua would find their way back to the sea. This did not make sense to those on the ground as even cray fish and fish could not find their way back to the sea and were dying. It was shown that the scientific evidence that MPI were referencing did not account for large ground uplifts and grudgingly allowed the volunteers to proceed. The logic of leaving paua to ultimately die on the rocks rather than risk their relocation was seemingly resolved. However, MPI may have had other concerns such as poaching and the relocation areas for paua. But what is clear is that the Runanga based at Takahanga Marae were able to assist in unblocking what would have been a disaster for Maori and also for the paua industry.

There were several other roles that the MRN based at Takahanga Marae took on but these two were crucial.

## 10 What Were the Lessons Learnt?

The following lessons were taken from the experiences in Christchurch and Kaikoura:

- BSE in the field seem difficult to nail down to one issue. They appear to come in ‘flocks’. While the central BSE was the ethnic discrimination and its resulting division within what was considered a harmonious New Zealand society; there were others.
- The core of the BSE triggers were well known to Maori but were seemingly unknown to non-Maori. Lambert is blunt and refers to it as “something that indigenous peoples have already mapped into their lifeworld’s through colonisation” (Lambert 2014). Nonetheless, this has emerged as a central issue especially when moving forward and determining the next planning/operational steps.
- The core of the BSE appear to be ‘historic’ and existed prior to the disaster (as was probably the case in New Orleans)
- They are hard to accept or even acknowledge; and hence the ‘history repeating itself’ in this sequence of events from 2010 to 2016. It would seem to have been doing that for some generations.
- In both situations there was the sense of a ‘Blind Spot’ and that Maori were unfortunately on their own.
- Maori connection and their much longer historic perspective of the land was not understood nor included in the plans and post disaster response. Maori are tied to the land by this history and effectively cannot move; and much like Cutter observed in New Orleans, the ‘enduring face of the Maori response to seismic swans’ is the desire to remain.
- It is perhaps academically interesting that these BSE were triggered by earthquakes and whether flooding or storms would have generated similar occurrences? The sudden-ness of earthquakes and the inability to prepare do make them prone to creating BSE’s. The post disaster scenario of ongoing earthquakes

and access to buildings and services at least for the New Zealand context suggests that BSE could be linked to earthquake disasters more than other disaster types.

- The ability of larger Maori organisations to respond should be recognised and CDEM probably needs to include them around the planning table as members of the planning group rather than solely for consultation. They represent significant assets and networks in areas where CDEM have been shown to be lacking. Examples of such organisations include the Ngai Tahu Iwi, Government Departments such as Te Puni Kokiri and Whanau Ora, te Putahitanga, the Maori Wardens and Marae such as Nga Hau e Wha National Marae, Takahanga and Rehua. Such engagement is currently not happening.
- Finally, the role of Marae in the confusion of a BSE cannot be underlined enough.

## 11 BSE's and Resilience

Intuitively, there would seem to be a connection between BSE and resilience (Hughes and Healy 2014). The identification of risks and vulnerabilities that has been the usual disaster management approach works but only where all the risks and their associated vulnerabilities are identified. This is proving problematic to the point of not being operational; and what responders are increasingly seeing are post disaster contexts that could not have been anticipated (NZ Govt 2016). The Asian Tsunami in 2004 was seen as the ultimate disaster, which was exceeded by the Pakistan earthquake in 2005. That was again exceeded by the earthquake in Sichuan in 2008 and then by the earthquake in Haiti in 2010. That was exceeded again when there were two major disasters in 1 year with the Pakistan Floods. Thus the idea of resilience would appear to be at least one operational response to these increasingly complex and unpredictable situations. Would resilience be something that could or should be applied in a BSE and moreover are they connected? Initial research suggests “No” and what is being heard spans between ‘we have done all that could reasonably be expected of us’ to ‘an attack is inevitable and will be overwhelming, so there’s not much point worrying about resilience’ (Sullivan-Taylor and Wilson 2007).

Hence a small study was completed following the Christchurch Earthquake to address this issue which has perhaps gained importance given the Kaikoura event. The study focussed on the Maori community of Rapaki which is by the sea and just two bays from the Christchurch port of Lyttelton.

## 12 The Rapaki Historical Background

The Lyttelton Harbour area has been occupied by Maori for over 700 years with the first Europeans arriving in 1770. It was known as Port Cooper and around 1850 renamed to Lyttelton. The Rapaki Native Reserve of 850 acres, was part of the Port Cooper Block which had a Deed of Sale dated August 10th 1849; though Rapaki



**Fig. 3** The Rapaki Boulders with Tamatea in the background (Source authors)

had been occupied well before then. It is a Maori Reserve that stretches from the sea to the hill tops to the South with the prominent peak being Te Poho Tamatea (“the Breast of Tamatea”). It is apparently named after Tamatea Pōkai Whenua who climbed the peak to recited a karakia (or ritual chant) asking a tohunga (a priest or expert practitioner) to send fire to warm his people. It is one of many such landscape sites in the area named after the historical events, stories and battles of the Maori Ngāi Tahu tribe and their Ngāti Māmoē ancestors. On the other end of the site, the sea has provided a source of food and in 1998 Rāpaki became one of the first sites for a Mātaitai reserve. This is where the Rapaki community control and enforce customary fishing resources and access. Thus the historical ties at Rapaki run deep.

### 13 Field Work

The study was completed as part of a larger city wide one conducted by the Institute of Environmental Research (ESR) and was in partnership with Canterbury University and the Seaview Resilience Centre. The Rapaki study consisted of 13 semi structured, in-depth interviews with key people that lived in Rapaki about how the community responded to the Christchurch Earthquake. Rapaki was hit by bouncing boulders from Tamatea and were featured in worldwide media coverage (Fig. 3).

The CDEM red tagged several of the houses because of the possibility of boulders risk but people ignored these risks and quietly moved back into their homes. Carbon dating of boulders suggested that there was a 7000 year cycle of boulders coming down from Tamatea with their being an active period of around 100 years. The decision was to move people out of the tagged houses but because of the ancestral connection that residents felt with the land they decided to nonetheless stay.

The interviews suggest that Maori have a substantial social resilience which is based around the Marae but more so in the ‘Place’ as a historical or cultural ‘anchor’. For Rapaki that stretched out over 700 years as outlined earlier which at times seem to give it almost ‘mythological’ connections. However, from a BSE perspective, the interviews suggested the following methodology:

1. Accept the new situation that is presented to.
2. Find meaning in it.
3. Try to improvise to find final resolution of this new context.

For example, the community kept the boulder in the above photographs and actual made it into a kind of memorial. One commented that the earthquake disaster was ‘an opportunity to change things’. Thus, they accepted the new context. They then found comfort in remembering comments from their parents that had now found a scientific basis or meaning. And finally they also found ways to work around being barred from returning to their homes such as temporary accommodation and exit routes. The approach does have similarities to an Adaptive Leadership Style suggested by Heifetz and Linsky (Heifetz 2011).

Could this be a Maori approach to BSE’s?

The interviews also suggested that:

- Rapaki is a place that can heal socially with one particular poignant story of how one child affected by the earthquake was able to find resolution on returning to Rapaki. Thus the land had the capacity to ‘spiritually’ heal because it was the ‘residence’ for those that had gone before.
- And moreover, Rapaki seemed to be “a person” to those interviewed, regardless of their age or the time they had lived there. It was like there was another person somewhere in the background.

Could this personalisation also be part of that Maori response to BSE’s?

## 14 Conclusion

Black Swans are messy; and the move to their rationalisation may not be as automatic as Taleb suggests; New Zealand is still trying to understand what happened... much like New Orleans. On the other hand, the MRN seems to be accepted as the standard response mode by Maori and may have to be folded into the CDEM procedures. The key should be that ‘No one is left behind’.

## Appendices

### *Appendix A: Christchurch Earthquake 2011 Maori Recovery Network MRN Timeline*

The MRN was based at Rehua Marae in Springfield Road just outside the Red Zoned CBD area of Christchurch.

Terms

Iwi = Regional tribal representation	TRONT = Governing body for Ngai Tahu.
TPK = Te Puni Kokiri Govt Dept. for Maori Affairs	Ngai Tahu = The Maori Iwi or confederation of local tribes
KSG = Kaitahu (Strategic) Steering Group	MP = Member of the NZ Parliament.
Kaumatua = Maori elder	Hui = meeting
Whanau = (extended) Maori family	Marae = Maori meeting house or community centre
CDHB = Canterbury District Health Board	MSD = Govt Ministry of Social Development
Te Arawa & Tainui are two other Maori tribes/Iwi from outside Christchurch	Rapaki and Tuahiwi are important Maori settlements just outside Christchurch.
Kohanga Reo = Maori preschool or “Language Nest”	Rehua Marae = Marae located in Christchurch central
WINZ = Govt Dept for Work and Income/ Benefits.	Hapu =tribal sub group
MCDEM = Govt Ministry of Civil Defence and Emergency Management	Nga Hau e Wha Marae National Marae in the Eastern suburbs unfortunately damaged by the earthquake
WHAKAMOEMITI = pray meeting	MOE = Govt Ministry of Education
WAG = Welfare Advisory Group	CCC = Christchurch City Council
Kai = food	Mihi whakatau = formal greeting and introduction

**Day 1: Tues 22nd Feb 2011:** 12.51pm 6.3 magnitude earthquake. Christchurch. TPK Regional Manager David Ormsby visits Rehua Marae and Kaumatua to assess whanau safety, buildings, property and utilities.

**Day 2: Thurs 24th Feb 2011:** AFTERNOON, Ngai Tahu whanau & staff of TRONT call Emergency Hui at Rehua Marae for Fri 25th Feb. TPK staff arrive from around the country & stationed at Rehua, Rapaki & Tuahiwi Maraes undertaking rapid assessments across Christchurch suburbs

**Day 3: Fri 25th Feb 2011:** 10AM – 20+ Iwi, Taurahere and TPK officials present: Aim-to provide a short to medium term plan to identify the appropriate service providers and facilitate communication lines.

HEREWINI TE KOHA (TPK Wellington) update from Civil Defence and asked everyone to ask the question “What can we start doing now to mobilise a response for Otautahi?” TPK and other services to get the general understanding of all areas ranging from where to send kai to assisting whanau leave the region.

The KSG is set up as a wider government response group to run parallel to the WAG. TPK to be the link to feed back to the hub. Pipeline of requests and referrals with TPK prioritising Marae needs. The importance of mobilising and getting out to streets to make contact with households via the wardens noted, provide support & information for whanau to register needs

MARK SOLOMON – TE RUNANGA O NGAI TAHU (Ngai Tahu Chairperson/Leader)

Discussed how the MRN would work regarding delivery/distribution and storage of food. Tainui and Te Arawa offering doctors and support. Many non-Maori groups offering help and needs to be well coordinated.

ROGER PIKIA - TE ARAWA CEO/spokesperson for Te Arawa & Tainui: confirmed Te Arawa & Tainui Iwi medical teams, kapahaka groups for manpower and admin staff flying out of Rotorua. KSG to resolve food and accommodation.

(continued)

RAHUI KATENE (MP FOR SOUTHERN MAORI ELECTORATE). Acting for the Minister of Maori Affairs and advised she would set up access to Govt ministers based on needs assessment from the MRN.

Red Cross emergency grants processed by TPK staff. Maori Coordinator for 0800 777 846 Emergency Helpline. Ngai Tahu begins establishing office admin needs.

**Day 4: Sat 26th Feb 2011:** MRN/HQ to be led by Ngai Tahu & Ngai Tuahuriri with the aim of gets assistance to those in need in the community. Communication channels between TPK, MCDEM, WAG & local Iwi/Hapu. Govt response and Maori action framework tabled. TPK channelling CDEM information into the MRN and deployment of assistance. Informal monitoring of what, where and who? Whanau engagement seen as critical. Te Runanga o Nga Maatawaka for 0800 emergency helpline

TPK & Civil Defence coordinate emergency relief to worst affected Marae, suburbs and whanau. TPK process Red Cross emergency grants, missing persons register & liaison with welfare centres. He Oranga Pounamu coordinate information and support from the Maori NGO's and officials from MSD, CDHB. Kohanga Reo Whanau Networks & Maori Health workers on standby. Maori Wardens on standby (national and local) they are also working with Police but will attend KSG briefings. Te Arawa Rotorua: on standby with mobile team of nurses, drivers and support crew.

Te Wananga o Aotearoa / Open Wananga, Ora Hauora staff/whanau on standby. Red Badge Security 24 hr support stationed to coordinate entrance and exit from Rehua marae. All visitors checked in and checked out. Over 250 visitors, volunteers and officials visiting each day.

**Day 5: Sun 27th Feb 2011:** 11.00HRS WHAKAMOEMITI or CHURCH SERVICE

53 Maori wardens on standby and deployed from New Brighton Police Station. Wardens comment on how a lot of people are not at home, appear to have left/abandoned properties. Concern about hygiene, health hazards due to sewerage, liquefaction, dust. Delivered non-perishable foods, fruit, vegetables, nappies, 400 1 litre cartons of milk, 400 small cartons of flavoured milk, 110 packets of assorted meat parcels.

**Day 6: Mon 28th Feb 2011:** HQ fully operational with daily briefings of the KSG 08.30hrs - 09.30hrs. Civil Defence & Police Update (from New Brighton), Maori Wardens Update. Lack of toilets is a problem. Port-a-loos urgently need to be cleaned. Need for medical/nurses staff. Need for water containers. Concerned that no one is visiting and checking on people's well-being in their homes. Reports that security staff at some Welfare centres are "unfriendly" to Maori Wardens. Meetings organized with Welfare centre managers. Marae Updates – all activated; Call Centre Update – pamphlets being organized; Emergency Relief – water, food, toilets needed; Logistics and Supply – not enough assistance; Te Arawa Nurses / team deployed to Aranui, Wainoni & New Brighton: Public Briefings at 10.00am & 7pm: Welfare centres report Pioneer 700pax, Burnside 800 pax, Rangiora 360 pax, Windsor?, Rolleston on Standby, Cowles Stadium operating as a info centre/referral centre only. KAITAHU as a helpline & call centre facility 6000 leaflet drop of Earthquake Emergency Helplines, Marae phone numbers and addresses to be delivered by wardens and volunteers. MOE – no schools open till 7th March, 27 seriously damaged, 50 moderate damage, remainder minor damage. WINZ mobile services deployed to East side, 14,500 emergency payments made, 20,000 super annuitants called – 19495 checked, 8 referred to emergency and 90 site visits conducted. Operation Suburb 14 day target to visit 50,000 homes "red" (people must leave), "yellow" (restricted access, can take personal belongings), "green" (safe). 600-1000 Wed, 7000 – 40,000 over the next 2 weeks. Pacific Recovery Network visiting HQ daily and stationed out in the suburbs and Hampshire St Hub. Liaison with Public Health officials re hygiene, water quality checks and establishing hygiene protocols, boiling water and food preparation. Meals at HQ for 120 – 200 volunteers. Hygiene Stations: with water, face masks, hand sanitizing solutions set up. Reports of issues of at least 20-25 families located in Council flats in Shirley, elderly and disabled people have been registered with Red Cross but need medical attention, swollen ankles, diabetes....

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**Day 7: Tues 1st March 2011:** Updates from Police, Fire, CDEM & Kohanga Reo, Rotorua Maori nurses run out of their own medical supplies and produce an itemised list of emergency supplies to be topped up

**Day 8: Wed 2nd March 2011:** Updates from Marae, Police, Fire, CDEM, Kohanga Reo, Maori Nurses Visits & needs assessments with Whanau of Maori mental health & disability services underway. Te Arawa Nurses request for basic medical supplies denied by CDHB. Working on a strategy to remove barriers for this request. Ngai Tahu asks for meeting with CDHB officials to work through this issue.

**Day 9: Thurs 3rd March 2011:** Operation Suburb and first field reports completed with main concerns being: Isolation and lack of services; Sanitation and sewerage discharge flowing into streets; Lack of access to water; Complaints about no portal-loos in Avonside; Noted there is about 50% occupancy in Avonside. MARAE Status: Nga Hau e Wha Marae still not cleared for use; Tuahiwi 200 meals prepared per day and taken to whanau in need; Rapaki – GP on standby, no internet access, 8 houses “red”, Counsellor on site, in process of drafting evacuation plan; Kaikoura – preparing for 50 new arrivals, food is sufficient; Otautahi Runaka met with Diplomatic Corps to discuss rubble from the sites of the tragedies being given to families & Blessing of the Burwood landfill for more rubble to be temporarily stored. NZ Police: Mihi whakatau for Japanese Diplomats and families (Blessing ceremony) at Burnham Military camp, Cultural guidance and support for Coronial Unit established. Blessing for site. Blessing of the CTV site for all rescue workers and the rubble that is to be taken to designated landfill sites: Blessing of the memorial stones that will be given to families of victims – ceremony conducted at Burnside High School. Evening meal at Rehua for Israeli DVI contingent

**Day 10: Fri 4th March 2011:** MP Rahui Katene: Tuahiwi Marae cooking 200 meals a day, Kaumatua are refusing to accept money for this, food is being sent into city by whanau members using their own transport: Tuahiwi advises they expect to be on stand-by for 6 weeks: Rahui requests funds from TPK to provide Tuahiwi with funds so Marae can continue providing food and TPK actions request and deploys personnel to Rapaki and Tuahiwi. Otautahi Runaka prepares paper to define difference between regular rubble and kokakoka tapu (sacred rubble). Nobody has access to any of this rubble except through Ngai Tahu, Police & NZ Fire service.

**Day 11: Sat 5th March 2011:** 400 houses visited in Eastern suburbs: 480 calls to 0800 kaitahu line, 21 calls from 0800 quake; 124 referrals made to Maori health and social services, The flying squad, builders, labourers, transport providers: Key issues – homelessness, many whanau do not have water containers, relocation assistance, lack of access to water, whanau unable to go to welfare centres

**Day 13: Mon 7th March 2011:** Nga Hau e Wha Marae to be given clearance and will be an EQ Recovery Assistance Centre supported by CDEM, CCC, MSD. OPERATION SUBURB – Maori Wardens visited 160 houses in New Brighton, 42 calls to 0800 kaitahu, 2 referrals to 0800 quake, 39 referrals to health and social services, builders, labourers. It is noted that after almost 2 wks of no water, power or sewerage, people do not appear to be coping well. Nga Hau e Wha Marae to be opened as an EQ Recovery Centre – hundreds are visiting. Most pressing issue – access to toilets and unattended health issues. Te Arawa Nurses continue to work in the areas. Concern regarding people with disabilities including deaf and blind not being visited in the same way Maori are being visited. Need more people on the ground to help with these visits.

**Day 14: Tues 8th March 2011:** 49 houses visited 27 calls to 0800 quake requests for info and financial assistance, 2 calls to 0800 Quake. 33 referrals made to Maori health and social service; Ceremonies/Blessing for Chinese families to visit morgue at Burnham Military camp; Farewell arranged for Israeli DVI team and contingent from Japan supporting families of victims killed in earthquakes: Nga Hau e Wha Marae is cleared by engineers and supported by CDEM as an EQ Recovery Assistance Centre (RAC). Maori trauma/therapeutic team, Positive Directions Trust, ORA Network, Ngai Tahu staff, EQ Recovery Coordinators, Community Law Centre, CCC Maori Liaison, IRD liaison,

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**Day 15-22: Wed 9th -Wed 16th March 2011:** EOC Updates; Maori Community Hui 16/3/2011 “Where to next” after the national emergency is over?

Consultation Paper to be developed from 16/3/11 hui and feedback from Maori community to 21/3/2011 hui

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**Day 23-27: Thurs 17th- Mon 21st March 2011:** 21/3/11 Consultation Paper on Maori Recovery Plan tabled by S McMeeking for feedback.

21/3/11 Ngai Tuahuriri (Manawhenua representatives) feedback to Hui is that the Maori Recovery plan is not needed and planning and decisions will be through TRONT Te Awheawhe Ruwhenua Working Group.

21/3/11 Report on the activities of the KSG is tabled by Jane Huria. Except for Nga Hau e Wha all Marae have stopped EQ emergency and relief. Nga Hau e Wha Marae will remain open. Govt and community social service agencies are on standby. Over 100 Earthquake recovery coordinators are still operating to assist with relocations, financial hardship, insurance and repairs. Community Showers still available at Cowles Stadium, Avonside, Kaiapoi.

The way forward is identified clearly by Ngai Tuahuriri representatives at the Hui:

- Iwi and Manawhenua as statutory partners to CERA;
- Ngai Tahu will comment on CERA’s Recovery Plan and Council’s Plans CBD Rebuild
- He Oranga Pounamu will liaise with CERA on Maori health and social wellbeing
- Mahaanui Kurataio Ltd will liaise with Councils on city planning

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**Maori Response Network Shut Down**

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## ***Appendix B: Kaikoura Earthquake 2016 Maori Recovery Network MRN Timeline***

The Kaikoura Time Line as reported in situational reports (the accuracy of these are difficult to confirm), field/diary notes, meetings/hui, reports and data gathered at Takahanga Marae in Kaikoura from 19th to 23rd November 2016. This timeline is from the perspective of Maori and the Takahanga Marae in Kaikoura.

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Earthquake Occurs: 12.02am on the 14 November 2016 a 7.8 earthquake strikes NZ near the coastal town of Kaikoura. Access to Kaikoura is cut off by landslides. All roads and rail connections are out indefinitely with bridges down. The only access is via helicopter. There is confusion within Civil Defence Emergency management CDEM (<http://www.stuff.co.nz/national/nz-earthquake/86654229/timeline-of-the-7-8-quake-and-response-reveals-plenty-of-room-for-improvement>.)

The boat harbour had been rendered almost useless due to the seismic upheaval of the coast line and there are many stranded tourists. The 111 phone line fails and by 12.57am there is confusion amongst CDEM as to whether a tsunami warning should be given as a 2 metre tsunami had already hit the town.

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**14 November 2017 Monday Day 1**

“Slow shaking and then the power went off and I got thrown across the room. I lost my glasses and was completely in the dark.” One survivor’s experience of the earthquake.

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Two deaths have been linked to the quake, and more than 20 people were injured. Transport was disrupted including state highway 1 between Blenheim and Picton, State Highway 6 between Blenheim and Nelson and State Highway 7 between Springs Junction and the Waipara are all closed. Several bridges on the state highway network were reported as damaged and closed. Hanmer Springs is cut off. Rail networks in the lower North Island, and between Christchurch and Picton, are closed. All InterIslander ferries had been cancelled. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

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Kaikoura was effectively and the only access was by helicopter.

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By midday, about 40 tourists had been airlifted. The NZ Defence Force (NZDF) expects to make 16 flights in total today, each one taking about 12 people with priority for those with medical conditions, pregnant women, families with children and the elderly. The Chinese Embassy charts a helicopter and starts to evacuate Chinese nationals; this causes confusion amongst non-Chinese about how they should be evacuated. This is confused further by responsibilities for camper vans and cars as hire companies insist that it remains the responsibility of those that hire the vans to get them back.

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Ngai Tahu (Iwi) Fishing empty any supplies they have in Kaikoura for the response and Iwi Representatives arrive with satellite phones. They have been able to divert their own helicopters to assist and set up the Marae response at Takahanga Marae. They start to bring food in bound and take children and grandmothers/aunties out bound to Cheviot and then onto Christchurch by road.

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Nonetheless, there are estimated to be about 600 to 700 tourists wanting to leave Kaikoura. The Marae opens doors for those affected by the earthquake despite not having power, water, toilets or food. The big issue is no water. (<https://diplopundit.net/2016/11/page/3/>).

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On Monday night, between 70 and 100 people remained at Takahanga Marae with nowhere to go. That was a significant drop on the 700 people who had stayed at the marae following the earthquake in the early hours of Monday morning. (<https://diplopundit.net/2016/11/page/3/>).

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This is reported on National Television and local Maori stay away from the Marae and thus the Maori Response to the 225 families on the Marae database is immediately hampered.

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### **15 November 2017 Tuesday Day 2**

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Radio New Zealand RNZ reporter Tim Graham in Kaikoura said basic supplies in the town appeared to be running low. A queue of about 200 was outside the local New World supermarket and bread was being rationed to about two loaves per customer. The local petrol station was backed up with vehicles.

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The Red Cross was also sending helicopters to take tourists to a welfare centre north of Christchurch and St John paramedics were to be flown in to relieve crews and deliver supplies. Two navy ships are sailing to Kaikoura overnight from Auckland, picking up supplies on the way, and are expected to arrive by tomorrow.

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The Takahanga Marae deputy chairperson, Major Timms, says the town’s concrete water tank has split in two. The Marae yesterday fed about 700 people in the aftermath of the quake and is expecting large numbers again today.

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Mass evacuations are due to begin this morning. The estimates are that 1,200 tourists are believed to be stranded in Kaikoura: 50 helicopters will also help evacuate them.

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The first wave of responders from Christchurch arrive including a Controller, Emergency Operation Centre (EOC) staff including an operations manager, engineering support, planning and intelligence, welfare manager and staff, building and structural engineers. (<http://ipwea2017.co.nz/wp-content/uploads/2016/06/Innovation-n-Resilience-abstracts-as-at16-Dec.pdf>).

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CDEM acting national controller Shane Bayley said anyone who wanted to get out would be able to do so on helicopter flights throughout Tuesday, weather permitting. (<http://www.cowraguardian.com.au/story/4293029/quake-leaves-communities-stranded/?cs=12>).

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Those staying in Kaikoura are battered by thunder storms and aftershocks.

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Power and communications were still “intermittent” and there was a big effort going on to get the inland roads into Kaikoura up and running but it will take a couple of days.

Interestingly, the US Embassy’s updated message directs anyone with friends or family in Kaikoura to make their way to the Takahanga Marae Welfare Centre to register with the Red Cross to be on the evacuation list. It is not clear to the Marae how or where this has come from and moreover, the Red Cross was never established at the Marae.

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### **16 November 2017 Wednesday Day 3**

6,500 meals supplied by the Marae at this point.

The amphibious sealift vessel HMNZS Canterbury evacuated around 450 people out of Kaikoura to Christchurch. The Royal New Zealand Air Force’s 3 Squadron evacuated another 60 people and delivered two tonnes of aid to Kaikoura, bringing to about 660 the total number of people evacuated from the quake-damaged town. Surveillance aircraft from the United States Navy and the Japan Maritime Self-Defense Force also conducted surveys of quake-damaged areas, focusing particular attention on inland and railway routes.

Canterbury fishing crews are frantically relocating exposed paua (or abalone) back underwater. Parts of the coast seabed have been raised by 2- 5 metres. This would later become a major issue for the Marae. Paua Industry Council chairman Storm Stanley said the patches of raised seabed stretched from the Kaikoura coast through to Cape Campbell in Marlborough. Thus, affecting many of the region’s most important paua grounds and reefs, he estimated tens, if not hundreds, of tonnes of the edible sea snails had been left high and dry. With paua able to survive for only few days out of water, he said Kaikoura and Marlborough crews were racing to save the animals. ([http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11749080](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11749080)).

Between 700 and 1,000 people still require evacuation. HMNZS Wellington starts to survey the Kaikoura harbour to find a suitable area for the HMNZS Canterbury to begin evacuating people. HMNZS Te Kaha and USS Sampson are also en-route to provide support.

50% of Kaikoura has access to the town’s water supply. Door to door welfare checks are continuing. People are being asked not to donate goods to the affected regions at this stage. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

It is noted that it would be useful if the National News did not keep saying how resilient it was in Kaikoura as people that perhaps should be seeking assistance were holding back and being resilient when perhaps they really are the ones seeking assistance. One example of a 3 bedroom house with 32 extended family members staying in it...plus their 4 dogs outside. They felt OK but it was evident that they should receive assistance. Other examples of those not coming forward was for food parcels...these were more common later as the response continued. In addition, it was noted that news about the situation in Kaikoura was faster from overseas sources than locally.... And moreover that the National news reports did not seemingly tie up with the reality on the ground.

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### **17 November 2017 Thursday Day 4**

“At 1.00am the HMNZS Canterbury docks at Lyttleton Harbour back in Christchurch successfully evacuating 449 people out of the quake affected community of Kaikoura. Many were tourists taken to the safety and comfort of welfare centres in Christchurch” reported CDEM.

“Yesterday also marked the first successful vehicle passage through the Inland Road (Route 70). The NZDF will be conducting further assessments of the road today. The road is still high risk and is not yet open to private vehicles. We are doing everything possible to get the road open, but we’re asking people not to attempt to use the route for access in or out of Kaikoura until we’ve finished the urgent work needed to open it safely”. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

This would be short lived.

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“We have completed the successful evacuation of everyone who wanted to leave Kaikoura yesterday on the HMNZS Canterbury. Only tourists who did not express their wish to be evacuated are remaining in Kaikoura”.

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“More than 800 people have been evacuated from Kaikoura by NZDF and they are being supported by Canterbury CDEM Group”.

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Many evacuees are foreign visitors and embassies from their countries were there to greet and comfort them. Embassies include Australia, Korea, UK, Germany, France, USA and Japan. Wrap around support is being provided to make them feel safe, provide translation services, and assist them with either returning home, or continuing with their planned travel.

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Some of the ships from the International Naval Review have arrived in Kaikoura, ready to support the delivery of relief supplies.

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HMNZS CANTERBURY is being loaded with relief supplies at Lyttelton and will soon sail to Kaikoura.

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The Prime Minister announced earlier today a \$7.5 million wage subsidy package for affected businesses. A hotline is set up which many cannot access due to re-charging phone issues. This is welcomed on the Marae. (<http://www.maoritelevision.com/news/regional/Kaikoura-businesses-grateful-government-national-response>).

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#### **18 November 2017 Friday Day 5**

“Responders are working hard to assess damage, restore lifelines, utilities, complete the infrastructure repairs needed and restore access. We will be focusing on those rural isolated and vulnerable households and continue to work with communities through the transition from response to recovery” say CDEM.

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“Despite reports, the Inland Road is NOT open to the public and will not be open to the public by Saturday. There is concern that cracks may open and slips may occur due to the current deteriorating weather. Teams working to open the Inland road were pulled out on Thursday due to unsafe conditions....It is not known how long it will take for this route to be clear and safe. Members of the public must not attempt to access the road.” Reports CDEM. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

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The Marae/Maori continue to have issues engaging with Govt departments in Kaikoura. The Ministry for Social Development MSD express concerns about their safety and are apparently swapped over for a Christchurch based team. Stories are emerging of one lady that walked from one isolated bay with a 3, 5, 7 and 13 year old girls. It is clear that there are un-identified needs in the rural areas and while some communities are coping well others are not.

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#### **19 November 2017 Saturday Day 6**

Government officials and volunteers hoping to rescue paua clashed near Kaikoura. Volunteers were told by officials from the Ministry of Primary Industries MPI that they were breaking the law and could be arrested. About 300 volunteers were preparing to move the stranded paua to the sea when MPI officials arrived and told them to stop. Volunteer Ben Kepes said the MPI action was “bizarre”. “There was quite a bit of disquiet. Some people just wanted to go ahead and do it anyway, but the organiser said we had to comply,” he said. The MPI has denied reports that it sent a letter to volunteers today stating they can continue moving paua along Kaikoura’s coastline. MPI insisted that the paua should be left where they are above water, as “it’s a normal habitat” where they can survive. Volunteers were frustrated. MPI staff were originally helping the 300 strong team but that changed yesterday when new advice from the department said people should leave them alone. Volunteer Ben Kepes called the move an example of bureaucracy getting in the way of common sense and pragmatism. ([http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11751344](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11751344)).

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Marae folk now attending the EOC meetings but having serious issues in getting petrol chits to visit and assess rural Maori families. The food bank is rationalised and categorised for field teams and locals seeking assistance through the Marae.

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**20 November 2017 Sunday Day 7**


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Reported food in the supermarkets and money in the Eftpos machines but this was minimal and did not cover basic items or pricing. “All the cheap stuff has gone and no meat” was the comment at the Marae.

Volunteers say they will defy a ban and continue rescuing paua along Kaikoura’s coastline at the first low tide tomorrow after being granted a permit from the Runanga (local Maori Authority). The Runanga based at Takahanga Marae strongly supported the volunteers and Mike Vincent states that the volunteers are “back in business” and that “We are going to be saving paua.” ([http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11751841](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11751841)).

Tonnes of paua along the coastline have died but many are still clinging to rocks protected by kelp. At a hui at the Takahanga Marae in Kaikoura the Runanga representatives said they wanted the rescue efforts to continue. Paua had an important place in the Runanga’s culture as was reflected in the marae’s meeting house carvings.

“A particular focus is reaching isolated rural communities and families to ensure that their needs are being met,” says Sarah Stuart-Black the Director of CDEM.

“Services to affected towns continue to be restored and additional services such as port-a-loos, shower units, fuel and groceries are being supplied. Another NZDF convoy delivered additional food and water to Kaikoura today which was good news.” The inland road (Kaikoura Emergency Access Route) remains closed. “We know that the closure of the road is causing frustration for some people and we are doing everything we can to move people and goods to where they need to be. It’s a case of balancing the provision of essential supplies to those who need them and ensuring that people stay as safe as possible” she said.

The Canterbury CDEM Group are working with the New Zealand Transport Agency to manage control of the road using a permit system combined with closures when necessary as the risk changes. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

After a week of looking after visitors and earthquake response workers, Takahanga Marae served its last community meal, making it 10,000 meals in 6 days. This is despite NOT being a Civil Defence Post, a designated Welfare centre or having or water supply and according to the Marae. The meals came about because the Council/EOC just started sending people up from 8am on Monday. There is frustration on the Marae. In addition, local Maori have stayed away from the Marae because of the crowds that they are seeing on National Television. The role of food distribution would be presumably taken up by food parcels through the NZ Red Cross but it is not clear.

Marae social workers and locals continue to have issues getting petrol chits that hampers distribution and assessment operations (2 Maori women were allegedly assaulted). The Mayor makes his first visit to the Marae. There are apparently conflicting messages from the EOC and CDEM. EOC were saying there is no timeline for the road access due to overhanging rocks while on the other hand CDEM seem to provide confirmed dates (see Friday 18 November). Noted that check points are not manned at night and this seems to be allowing people through to poach paua; EOC don’t seem concerned. The Marae is also fielding comments that Maori have stock piled food.

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**21 November 2017 Monday Day 8**


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As of Monday 21st, there were also 47 aftershocks in the M5.0-5.9 range, and 3 aftershocks in the magnitude M6.0-6.9 range.

Brett Cowan representing the Runanga said he had visited Goose Bay to see the paua rescue effort for himself and believed they were doing a professional job and had good processes.

Drone checks made of Peketa for burials remains that may have been exposed by slips. EOC are very helpful and sympathetic which was greatly appreciated by the Marae leadership. On the other hand the Marae has a freezer full of dip to use up. Door to door knocking is well under way with the te Putahitanga Navigators that were flown up from Christchurch.

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A few Kaikoura Councillors meet on the Marae with local Maori leaders. This is the first time.

**22 November 2017 Tuesday Day 8**

A MPI spokesman said a ministry scientist had gone back to inspect relocated paua on Tuesday. The scientist would consult with other scientists before a decision could be made about whether to sanction the rescue efforts. Science had to prevail. (<http://www.stuff.co.nz/national/nz-earthquake/86759696/paua-rescuers-wait-for-officials-blessing>).

Those based at the Marae and the te Putahitanga Navigator staff having issues getting petrol to be able to do surveys. Sense on the Marae is that Maori do not seem to have a place at the table. For example, Maori burial sites are being seen as archeologically sites rather than sacred cultural sites. There is confusion over who will be looking after the food distribution and exactly where that will happen. It seems that it will be at least 2 weeks before the local supermarket will open and any items are the expensive brands and people from the Marae have been living on sweets such as “jelly babies, jet planes and fruit bursts”.

The Harbour will need 40,000m<sup>3</sup> to be excavated which will take at least a year to complete. Until then only smaller craft than usual will be able to use it. Thus, there will be staff down turns to come.

Issues with the original Declaration of Emergency between different Territorial Authorities are now being aired as people reflect back on the disaster and consequent issues with the response.

**23 November 2017 Wednesday Day 10**

By noon on Wednesday 23 November there had been 4,879 aftershocks detected.

EOC have developed an earthquake support factsheet with partner agencies, with information for anyone affected by the earthquake. This includes advice on:

- Stress, counselling and support
- Accommodation and housing
- support for rural communities
- Iwi, hapū and whānau Māori support
- Financial support for individuals and businesses
- Insurance and EQC claims
- Schools and Early Childhood Centres
- Children and young people
- Health and hygiene
- Animal welfare
- Tourism and international visitors

**24 November 2017 Thursday Day 11**

“Work is continuing on the Kaikoura Emergency Access Route (Inland Road), with Mt Lyford residents granted conditional access last night” reported by EOC.

“I understand residents are feeling frustrated that there is no public access along this road, but the people on the ground are doing everything they can to ensure the road is safe before it is open to the public. Today’s decision to provide conditional access to residents up to Mt Lyford is a positive step.” (<http://www.scoop.co.nz/stories/AK1611/S00757/kaikoura-earthquake-media-release-19-24-november-2016.htm>).

Because aftershocks are expected to continue, access to the Kaikoura Emergency Access Route (Inland Road) and other roads can change at any time.

Last night the local CDEM Controller decided to evacuate residents from Goose Bay as a precautionary measure, after a dam created by a landslide was discovered. Geotechnical engineers advised that the size of the dam and the forecasted bad weather meant it could breach anytime. (<http://www.scoop.co.nz/stories/AK1611/S00757/kaikoura-earthquake-media-release-19-24-november-2016.htm>).

(continued)

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### 25 November 2017 Friday Day 12

“The Kaikoura Emergency Access Route (Inland Road) is in a much better condition than it was 10 days ago and work is continuing to get the road open so businesses can start operating again.” Plans are proceeding to provide a safe and coordinated road evacuation from Kaikoura for some residents and visitors from 1p to 3pm today. This is for one-way travel from Kaikoura in a southward direction only. (<http://www.civildefence.govt.nz/resources/Kaikoura-earthquake/#tpk>).

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### 27 November 2017 Sunday Day 14

Volunteers and organised groups continue to relocate affected paua. Mike Vincent, founder of the paua rescue group, estimated they had relocated between 20 and 50 tonnes of paua. He said MPI and commercial divers who had inspected the relocated molluscs were “pretty impressed” with the results.

“They couldn’t find any dead stuff. Everything that’s been positioned was still there and looking good.” Vincent said the volunteers had not been able to save all the paua. The smell of dead sea life was mostly “a weedy smell”, because seagulls had cleaned up most of the dead paua, he said. “Nature’s doing its thing, mate.”

The volunteers would continue their work in coming weeks, as the New Zealand Transport Agency allowed access to more areas of the coast. Vincent said they had left areas with a lot of bull kelp until last, because the paua would be able to survive in the damp environment out of the sun. “We just want to get on with it so we can save as much as possible,” he said. “It’s been a massive effort and I would like to thank Te Runanga-o-Kaikoura, MPI and the Kaikoura Paua Relocation and Relief effort for their combined support for the continued relocation of our precious taonga”. (<http://www.stuff.co.nz/national/nz-earthquake/86954957/kaikouras-relocated-paua-doing-well>) (<http://www.maoritelevision.com/news/regional/efforts-relocate-kaikoura-paua-continue>).

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