K. Spee, Tauranga, New Zealand

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ABSTRACT

Matata is a small coastal community in the Bay of Plenty with a population of 759. The socioeconomic status of the population is very low, with a deprivation index (NZDep2006) of 9. On 18 May 2005, a band of extremely heavy rain passed over Matata. During a 90-minute period, 124 mm rainfall was recorded, and a total of 300mm rainfall was recorded over the 24-hour period. Severe flooding in the catchments behind Matata caused a major debris avalanche to flow through the township. Impacts of the flooding and debris flow included closures of the main road and railway; the destruction of 27 houses in Matata and damage to a further 87 properties; the evacuation of 538 people; disruption to water and electricity supplies, stormwater and septic tank systems;and the deposition of some 750,000 m^3 of debris throughout Matata township and lagoon.

This report describes the community disaster recovery process undertaken within the Matata community two years after the disaster event in 2005. The aims of the study were to:

- Provide detailed information on the community recovery process utilised to assist the Matata community towards a positive recovery;
- Present the findings from 16 case studies discussing the wellbeing of individuals, families and community of Matata;
- Evaluate how well the disaster recovery response worked, and identify factors promoting and hindering success; and
- Propose best practice guidelines for working with communities affected by disasters.

The disaster recovery approach incorporated principles of community psychology and constructive narrative theory. The process was two-pronged and involved both (1) collecting personal stories from Matata residents who experienced the disaster event and ongoing impacts, and (2) using community consultation and collaboration techniques of community meetings, survey collection and establishment of a community reference group. A key lesson learned was that the success of any disaster recovery approach is contingent on building relationships with the impacted community and fostering positive psychological and social ways forward. Within Matata this was achieved through development of a community plan which encouraged Matata residents to develop a future picture of Matata, based on a shared vision and their unique community attributes. Key conclusions and recommendations for post-disaster community recovery and ongoing work in the area of disaster recovery have also been provided.

KEYWORDS

1.0   INTRODUCTION

Matata is a small coastal community in the Bay of Plenty with a population of just 759. The population is made up of approximately a third each of retirees, young people and working age people. Like many other small rural communities in New Zealand, Matata is some distance from a major centre, and access to services is limited. The socioeconomic status of the community is very low, with a deprivation index (NZDep2006) of 9[1].

On 18 May 2005, a band of extremely heavy rain passed over the catchments behind Matata. During a 90-minute period, 124 mm rainfall was recorded, while a total of 300mm rainfall was recorded over the 24-hour period. This created a flood event estimated to occur on average about once every 100-1000 years (Davies, 2005).

There was major damage to the township and flooding in nearby towns. State Highway 2 was closed in and around Matata, while the railway line was completely severed and neighbouring rural land in Edgecumbe was flooded. Other impacts included:

- The evacuation of 538 people;
- The destruction of 27 houses and damage to a further 87 properties;
- Disruption and damage to water and electricity supplies;
- Damage to storm water and septic tank sewerage disposal systems; and
- Almost 750,000 cubic metres of debris, ranging from silt to large boulders and   trees, deposited in and around Matata and in the Matata lagoon.

Prior to this 2005 flood event, Matata was becoming an attractive coastal residential location. This trend was reflected in increasing government valuations on properties, and rises in residential property prices, and was typical of coastal areas throughout New Zealand (Whakatane District Council, 2003). Potential for further development existed at both the western (to a limited extent) and eastern end of Matata. However, given the impacts of the 2005 event, there is little likelihood of future residential development in these areas.

The aims of this report are to:

(1) Provide detailed information on the community recovery process utilised to assist the Matata community towards a positive recovery;
(2) Present the findings from 16 case studies discussing the wellbeing of individuals, families and community of Matata;
(3) Evaluate how well the disaster recovery response worked, and identify factors promoting and hindering success; and
(4) Propose best practice guidelines for working with communities affected by disasters.

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[1] The New Zealand Deprivation Index ranks areas from 1-10 with 10 being the highest level of deprivation.

1.1   Overview of report

Section Two provides the context for the work programme, briefly describing the 2005 flood event and the disaster response approach. Section Three looks closely at the work programme methodology and why the two processes of collecting personal stories and development of a community plan was employed. Section Four presents the reflections, feelings and experiences from Matata residents from the night of the disaster. From the stories it is also possible to paint an overall wellbeing picture, gain a measure of how well the community are doing two years after the event. Section Five evaluates factors promoting and inhibiting the success of the disaster response/ recovery approach utilised in Matata and goes on to discuss the implications of these findings for a best practice approach. The final section outlines effective community disaster recovery approaches and recommendations for ongoing disaster recovery practices, which in turn will assist towards enhancing the psychological wellbeing of people after a disaster.

2.0   THE 2005 MATATA DISASTER AND THE RESPONSE

2.1   The 2005 Matata disaster

On 18 May 2005, a debris landslide, extreme flooding and heavy rain hit Matata. Rain had begun to cause problems early in the day with local fire brigade receiving their first call around 7am that morning. Along the Pikowai straights (the main road into Matata from the South), heavy rainfall was causing washouts and slips. During the day leading up to the disaster, local fire brigade were receiving phone calls from Matata residents, experiencing minor flooding through their properties.

At 16:46 the Communication Centre (Comcen) for 111 calls received their first call from a Matata resident reporting flooding from Waitepuru Stream, at the west end of Matata township. Within minutes a second call was received at 16:49 from the east end of the township to report flooding of the Awatarariki Stream. Comcen was then inundated with phone calls from Matata residents and in just over an hour more than 32 calls were taken.

Over the next five hours major damage and disruption occurred in Matata. There was extensive damage to roading and to the railway line at a number of points. Throughout the night 538 people were evacuated from their homes. This is approximately two-thirds of the population of Matata. Twenty-seven homes were destroyed and a further 87 properties damaged, 31 percent of the total number of dwellings in Matata.

People were frightened, shaken and taken completely by surprise as debris from the catchment behind Matata began to flow down into the township. Boulders, uprooted trees and water pummelled into people's homes, lifting houses off foundations and moving them to new locations. One house was moved approximately 20 metres and came to rest on the railway lines.

Reports of a two-metre-high wave rushing through the town flattening everything in its path were commonplace. Eyewitnesses stood by as the debris-laden floodwaters swept into homes, garages and stationary vehicles.

Several households remained trapped in their homes for up to five hours as water ripped away decking and entered homes. In these situations people took cover in attics or the second storey of their homes.

Although there was major damage to homes and infrastructure, there were no serious injuries or loss of life.

2.2   Disaster response

The recovery response commenced on the night of the event with a number of agencies becoming involved: Civil Defence Emergency, the police, the Fire Brigade, Work and Income (WINZ), Child, Youth and Family (CYF), Housing Corporation of New Zealand, Victim Support, and the Salvation Army. An evacuation site was established at the Whakatane War Memorial.

A recovery structure was developed and fully operational within a week of the event.   This was based on the experiences of the 2004 Eastern Bay of Plenty floods and recovery process and the Ministry of Civil Defence and Emergency Management (MCDEM) guidelines. The components of the recovery structure were largely based on the understandings and knowledge that the Whakatane District Council[2] had at the time, regarding the nature of the event and the likely recovery requirements and needs of the community.

Following the disaster, the Government requested that the Council (as the coordinating agency for disaster recovery) put together an integrated regeneration package. The aim of the package was to achieve the following:

- To address any outstanding issues for the regeneration of the social, emotional, economic and physical wellbeing of individuals and the community;
- To take any opportunities to adapt to meet the community's and the environment's future needs; and
- To reduce future exposure to hazards and their associated risks.

Specialist contractors were engaged to fulfil key recovery roles. Personnel from MCDEM also supported the process and provided resources during the recovery process.

A 'one-stop shop' welfare centre operated from the Matata Community Resource Centre for approximately one month and included representatives from MSD, Whakatane District Council and Victim Support. Other specialist services could also be accessed directly if required (e.g. Community Mental Health and the Inland Revenue Department). Various services also operated on a casual basis at the marae, where a number of evacuees lived for a considerable time.

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[2] Throughout the report, 'Council' will be used to refer to the Whakatane District Council.

Although the response to the disaster was efficient and expedient, the process was primarily focused on the physical recovery of the town and reducing future exposure to hazards and their associated risks. The emotional needs of the Matata community were not being addressed, and a perception developed amongst the Matata residents and people in outlying areas (such as Awakaponga) that their needs were being ignored.

2.3   Responding to the community

In September 2006, Council approached the WINZ Social Development Regional Manager for support. Despite ongoing community consultation, tensions between Council and Matata residents had increased, due to ongoing mitigation issues. Although mitigation strategies had been developed for Matata (such as a debris dam), the community did not support the proposed mitigation works. Mitigation costs were estimated to be in the millions which meant a considerable rate increase for all residents. Many residents had identified that they would be unable to sustain estimated increases in the range of $3000-$7000, and considered that they would be forced to leave the area.

In response to ongoing stress in the community, the WINZ Social Development Regional Manager organised a community planning day in October 2006. Matata residents were invited to view and then discuss the proposed mitigation strategies with personnel from the Council, contracted engineers and Department of Conversation. During the day, WINZ staff and the author of this report (a community psychologist) collected information from residents, regarding how they were feeling about the presentations of the proposed mitigations and whether they considered they had received enough information. Residents were also asked about the ongoing impacts from the disaster, and their social, community and psychological needs.

Fifty-five people responded to the questionnaire, although not all respondents chose to answer every question. The most significant findings were that people reported feeling isolated and forgotten, had increased levels of stress and anxiety as a result of the disaster and felt less safe in their community. People were asked to describe any ongoing (recurrent) impacts from the disaster, either for themselves or family/whanau. Responses were then coded into categories and are shown in Figure 1.
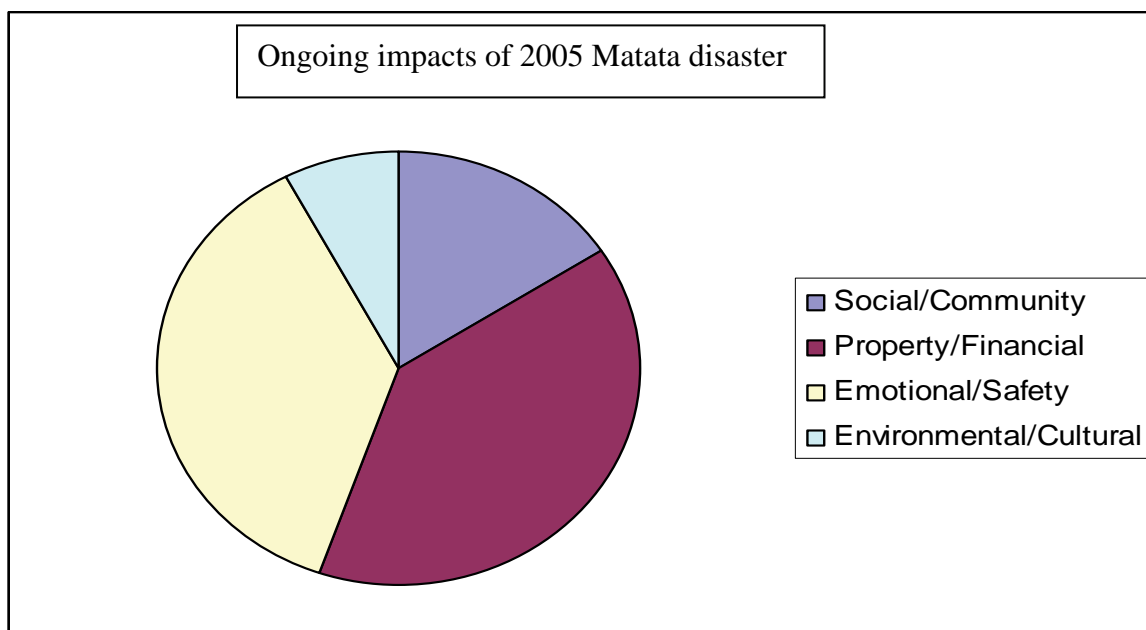
Figure 1   Ongoing impacts of 2005 Matata disaster on residents

In addition, the willingness of residents to become involved in community-based planning activities, specifically focused on the future of Matata, was assessed. Of the 45 people who responded to this question, 42 expressed an interest in increasing social activity and rebuilding a sense of community spirit. Many people mentioned positive social activities (such as craft markets) that used to operate in the community. Although a number of these activities did not stop as a result of the disaster, residents identified that there would be some benefit in reinstating such activities. Respondents were also highly supportive of developing a community plan, which was seen as a way to provide a positive pathway for social and community activities.

Based on the feedback from the October community planning day and the obvious community needs identified, the author of this report was contracted to work with the Matata community to assist in their disaster recovery. A work programme was developed which considered individual needs and wider community healing and development. Details of the work programme are discussed below in the following sections of this report.

3.0 THE MATATA COMMUNITY DISASTER RECOVERY WORK PROGRAMME

3.1 The work programme

A number of key processes informed the community disaster recovery work in Matata. Firstly, the community psychologist looking specifically at disaster recovery and the long-term psychological and social impacts from disasters undertook a literature review. There was a noticeable lack of information relating to New Zealand communities and their psychological and social recovery post disaster. However, there was some key information particularly relevant to Matata and the community's experiences:

- The disaster impacts are likely to be most severe in small towns and rural or semi-rural communities because they generally have reduced access to support services in comparison to larger centres (Rubin et al. 1985, Few and Matthies 2005, Laube and Murphy 1985).

- The recovery process is likely to be much slower where communities are without any obvious plans for future development (Peterson, 1997).

- The development of community plans which involve the community, highlight a shared vision, and refocus and regenerate, give the community something positive to focus on and can assist in successful disaster recovery (Coghlan, 2004).

Secondly, theories and models of community psychology were applied to disaster psychology and recovery to develop an effective approach for the community. Disaster events, whether they are manmade or natural, have huge impacts on people. Settings completely change and people's responses in disasters influence the setting again. This cycle of disruption and change can be ongoing, particularly in complex situations like Matata where proposed mitigation works are highly contentious.

3.2 Key concepts in community psychology

The values and principles of community psychology provided a strong foundation for the work carried out in Matata. Key components included:

Community context and dynamics
When working with communities, particularly communities that are disenfranchised due to a lack of resources and/or affected by events beyond their control such as disasters, it is essential to work *with and in* the community, building relationships and trust. A complete understanding of the community helps to focus interventions and optimises the wellbeing of communities and individuals with innovative and alternative interventions designed in collaboration with affected community members.

Strengths-based
The use of community resources and strengths are key components of rebuilding

communities. By creating ties among people who share a problem and identifying points of strength it is possible to obtain changes that benefit many. Often following disasters, dissent can appear in a community and people are drawn to negative representations of each other and themselves (McEntire, 2007, Paton & Bishop, 1996). In Matata the feeling of being out of control on the night was still prevalent months later and there was real apathy and a lack of self-belief in the community's own ability to produce positive change.

Respect for diversity
Any work with communities attempts to create shared visions and goals. However, it is also important to allow space for those who have different views and ideas to express themselves. For example, a community plan will provide a majority point of view but individuals may not necessarily agree with every activity, event or focus of the plan.

Ecology
Embracing an ecological perspective is central to working within a community. A key component of an ecological approach is recognising the relationship between environment/settings and people and how they influence each other. The Matata community were hugely influenced by the disruption and damage inflicted on their small hometown. However due to the tunnelled focus of mitigation and external involvement in the community, particularly by local council, residents were unable to see the personal role that they could play in the setting or environment. Instead they felt powerless to elicit any change.

Empowerment
Enhancing the possibility that people can more actively control their own lives is an essential component of community psychology and it was an extremely important focus in Matata where the majority of people felt 'out of control'. Community psychology approaches attempt to convey a sense of personal control or influence and encourages an individual's determination over his/her own life (Nelson and Prilleltensky, 2005).

Creating a sense of community
For people to have a sense of community, four key elements need to be present:

(1) Community *membership* where people experience feelings of belonging in their community;
(2) People in the community have *influence* and feel that they can make a positive difference in their community;
(3) The belief by community members that *resources are available in the community* to meet their needs;
(4) A *shared positive vision* which community members can connect with emotionally, sharing history, time, places and experiences (Duffy & Wong, 2003).

Over the past decade there has also been many disaster research approaches to facilitating community and individual recovery. Looking closely at these, the approach of 'constructive narrative perspective' was considered a good fit with the needs of the Matata community, because it advocates intense community participation and acknowledgment of the experiences of people within the community.

Constructive narrative perspective

Constructive narrative perspective supports the principle of sharing stories of traumatic events in an effort to assist people to move beyond the trauma of the event. Key beliefs are that:

People develop accounts or stories of significant life events that entail changes and losses in their lives, in an effort to infuse these occurrences with some coherence and meaning;

People need to find meaning in traumatic events and to move beyond trauma, victims of disaster must assimilate traumatic experiences and restore positive meanings;

People need to be able to tell their own stories, in unique ways and that these personalised accounts can become the final pathways to change;

By integrating traumatic experiences into their meaning systems, people do not live in the past.

In essence, being able to tell 'your' story assists in the healing and recovery from disaster impacts because it:

- Facilitates expression and labelling of feelings
- Organises thoughts and feelings
- Influences accessibility of thoughts and feelings
- Fosters new perspectives and reframes thoughts
- Fosters a sense of control and hope.

Proponents of constructive narrative perspective maintain that, not describing or confronting traumatic events can have negative psychological and physiological consequences and people should be encouraged to write and talk about the event (Meichenbaum, 1995).

Therefore, based on the benefits of constructive narrative theory, community psychology principles and feedback from the community, it was decided that two processes would be utilised. These included:

- The collection of personal stories from residents in Matata. This would give people the opportunity to discuss and present their personal stories about the night of the disaster and what followed. These stories would then be published as a collection providing a historical account of the Matata disaster and an ongoing recognition of people's experiences.

- Development of a community plan that would provide a clear positive pathway forward. This plan would be developed with the community through focus groups, community planning days, survey questionnaires as well as establishing a community reference group to guide the process.

The work programme acknowledged that:

- The key to any successful disaster recovery approach would intrinsically involve the community and the importance of addressing community disaster recovery problems with a multi-faceted view.
- Traditional disaster recovery responses have primarily focused on infrastructure rather than people, and although the disaster recovery approach in Matata had attempted to focus on people, it was falling short at dealing effectively with the emotional and social

needs of the community.
- Small communities with no development plans in place will take longer to recover.
- There is a need for more holistic responses to disaster recovery.
- Facilitating social representations of disaster and its consequences will provide recognition of people's experiences.

3.3　Community approach methodology

3.3.1　Collection of personal stories

In total, 16 stories were collected and written narratives developed. Consent forms were signed by all participants, as well as final approval forms to allow publication of the stories. Interviews took place in people's homes or workplaces and a koha was given to participants. A total of 32 people were interviewed including Maori, Pacific Island and Pakeha, family/whanau units, people living alone, couples, elderly, retired people, children, single parents and emergency workers. The participants involved in the story-telling process were an excellent cross-section of the community representing most of the main groups in Matata.

Based on the Matata Community Resource Centres (MCRC) database on the homes that were affected and residents still living in the community, a letter explaining the purposes of the story-telling process was sent out to 75 affected homes. Participation in the story-telling process was voluntary.

A questionnaire was developed and used as a guide during the interview. The focus of the interview was collecting detailed information about the night of the disaster and how people *felt* during and after the event. All interviews were tape-recorded and transcribed.

Story drafts were presented to the participants and necessary changes made until each person was happy with their final account of the disaster. A number of people decided to take more of a lead in writing the story and in that situation the community psychologist role was more as editor. On average two drafts for each participant were worked through with each person.

3.3.2　Community consultation and development process

Key representatives from 21 groups existing in Matata were invited to an initial meeting. For a small community, Matata has many groups and organisations including iwi and marae roopu, a residents' group, sports clubs, health and education organisations. A benefit of the community development approach was getting all the groups to work on something positive and develop a shared common ground. At the meeting, the following questions were posed:

- Do you want to be involved in a community consultation process?
- Do you want to move forward in a positive way helping others in the community to do the same?
- Are you interested in being involved in developing a Matata Community Plan?

It was important to set the scene and get buy-in at this early stage. As discussed above, effective community development approaches encourage participation, a sense of

community and empowerment of community members. This implies that community members must take an active role in their own recovery and create a sense of community - a sense of 'we-ness'.

Following the first meeting, a community working group was established and meetings occurred on a weekly/fortnightly basis as needed with the contracted community psychologist. This group was essentially a reference group for the wider community and provided expert advice on the dynamics of the community, historical information and feedback on consultation processes and the community development steps utilised.

3.3.3   Community surveys

Two surveys were utilised within the community consultation and development process.

Community Skills and Strengths Survey
The first was a Community Skills and Strengths Survey, based on the Asset Audit Survey (Asset Based Community Development, (ABCD), Paul McKnight). The purpose of this survey was to map the personal resources in the community and then to match people's learning needs to available knowledge and experience in the community. It was also a means of showing the community the huge amount of skill and expertise that existed in their community. Participants were asked to describe their experience, skills, knowledge, interests and hobbies, and there was also a section where participants could indicate things that they would like to learn or teach others. 600 Community Skills and Strengths survey's were distributed during the months of April and May 2007 mainly through delivery by the rural postman. Copies of the surveys were also available in three local shops as well as through Matata's state school and St Josephs school. One hundred completed surveys were returned.

Community Planning Survey
The Community Planning Survey was developed by the community working group on the basis of findings of the Community Skills and Strengths Survey, and also from informal conversations with community members. This survey included both open-ended and closed questions. An example of an open-ended question was to ask people to describe their vision of Matata in the future. The closed questions asked people to choose options from lists of possibilities, such as 'Which of these activities would you be interested in being involved in?'.

The survey was widely distributed in June and July of 2007. Copies were: (1) sent home with school children from both the local schools, (2) placed in the MCRC and two of the local shops; (3) delivered by the rural postal service; (4) presented at individual community group meetings such as the Tennis Club and Matata Residents Association; and (5) an online survey was placed on the MCRC website www.matata.net.nz. In total, 400 surveys were physically distributed, of which 97 were completed and returned (24% return rate).

Both the Community Skills and Strengths survey and the Community Planning survey were widely advertised through local school and community newsletters, radio station 1XX, community meetings of various groups such as Matata Rugby Club and Fire Brigade. In addition to the surveys, a community-planning day was held on the 24th July 2007. Over

seventy people attended and participated in focus group discussions looking at the future of Matata and what events and activities people would like to see operating in Matata.

From all the information collected, a draft community plan was written up and presented to the community for feedback. At the time of writing this report, feedback from the draft community plan is being collated and then necessary changes to the plan will be completed. The draft plan will then be presented to the community during another community planning day.

3.3.4 Participants' evaluation of the disaster recovery process

Although the personal stories were primarily centred on the night of the disaster, people were enthusiastic about sharing their views and opinions on the disaster recovery processes utilised by the council and various agencies. Taking an action research approach and realising the value of this information, particularly in informing ongoing disaster recovery practices, participants were free to discuss these issues.

A content analysis was undertaken across all the interview transcripts, looking for success factors, barriers and gaps identified by people in the Matata community. In addition, extra interviews were carried out with personnel from a number of the agencies who were involved both during the disaster itself and during the recovery process.

A total of 40 people representing both Matata residents and agency staff involved in the disaster recovery process who have experienced the disaster recovery approach provided information on the following key areas of inquiry:
- What worked well in the disaster recovery approach?
- What did not work well in the disaster recovery approach?
- In an ideal world what would disaster recovery look like?

By integrating the responses of all participants it has been possible to build a picture of disaster recovery in Matata since 2005, and to build on these findings to make recommendations for best practice guidelines for disaster recovery.

4.0　　VOICES FROM MATATA

4.1　　On the night

People saw houses ripped from foundations and walls of water wash down from the hills and destroy everything in their path. People had no choice but to sit by as boulders and water hit neighbours' houses, and cars were lifted by the torrent. At some stage, power went down and torches flashed between houses became the main form of communication.

As people witnessed water, boulders and massive logs taking over the town they were overwhelmed with feelings of disbelief. Even as they saw houses being ripped from foundations and float away, there was a part of their own survival instinct that didn't allow them to fully register what was occurring.

A common view was that if the disaster had struck earlier and people had been able to actually see what was happening, they would have panicked. However darkness fell early due to the terrible weather and after seeing the beginnings of the destruction, people couldn't make out what was happening.

Many people equate the night to being 'like watching a movie'. People couldn't believe what they were seeing and the whole experience was surreal, like something happening outside of their own lives. The feeling of being outside of your body during a disaster is described as psychological shock and a necessary part of survival (Saari, 2005). It is a way of people's minds taking time out as they try to come to some level of understanding about what is happening.

> *Narelle found these experiences of being tearful and anxious in direct opposition to her experience of the night. Although she didn't necessarily enjoy the night, it was exciting, like being in a movie, where it just didn't feel real.*

> *For Mrs Hooper it had been much like watching an action- packed movie from the comfort of her couch.*

During the night, there were many times that all the people interviewed reported that they felt afraid for their own lives or for others. For many people the realisation of how close they came did not hit until the noise and rain had subsided and they were being carried from their homes to safety.

> *As they got closer to one of the houses they realised it was half-buried and smashed to pieces from the force of the flooding. Fears grew for the survivors. Fortunately one of the fire crew picked out a small light coming from another house, fifty metres away. Although this house was in bad shape as well, the rescue unit made their way towards it and while one of the firemen entered the house, the anxiety grew outside. The air was filled with such relief when the fireman walked out of the house minutes later with the missing family. However the job*

was not over and a line rescue had to be carried out to get the family to safer ground. The current was swift and the response unit was positioned at various points along the rope to support the evacuees as they made their way across the flowing water, clinging to the rope.

Heather then watched with relief and horror as the car was swept away. Right then she knew how close she and Rhys had come to losing their son. Fences were starting to collapse and she could also see that their house was beginning to shift. It was such a frightening, terrifying situation. During the night Heather's main concern were her children and their wellbeing. Although she had packed food, medication and other essentials for both Liam and Loren, she forgot to take her purse with her. Heather felt she was in a controlled kind of panic, where she was doing her best to respond in a very stressful and new situation. Experiences over the night felt much like riding a rollercoaster. Just as you came out of one adrenalin-pumping corkscrew and gained some semblance of calm, you would be swept into the next terrifying turn.

Those with young children specifically remember 'putting on a brave face' and 'trying to make it into a bit of an adventure' for their children so they would not be scared.

Narelle was slowly becoming more and more emotional as the adrenalin of the night began to wear off. As she entered the Whakatane War Memorial and saw more familiar faces, she burst into tears. It had been an overwhelming night and now that she and her children were safe, Narelle felt she could finally relax. Much of the night had been taken up with telling the girls it was going to be okay, that everything was fine. Having had to be strong throughout the night, Narelle didn't really get to assess her own thoughts and feelings about what was happening.

During the night, individual experiences were quite different. Some people waited and watched in the safety of their own homes as houses next door to them were demolished and swept away. Others escaped from their homes minutes before they began to break away and their belongings went floating out, joining the mess and rubble.

Some people were trapped in their homes as the houses lifted from their foundations and they were swept away in the torrent. People living in two-storey homes attempted to keep the water and mud at bay by securing doors downstairs, until having to abandon the efforts and take refuge in the upper storey.

No matter what the individual experiences were for people on the night, during the interviews it was obvious that everybody had been influenced in some way by the disaster.

The disaster was still fresh in people's minds and accounts of that night are given with keen attention to detail. No one interviewed had trouble relaying his or her experiences, everybody remembered like it was yesterday.

4.2   Evacuation

A number of participants (9) did not want to evacuate their homes. Reasons for this included:
- The need to stay in control, often described as "it was their house and nobody would tell them to get out";

- A belief that the worst of the event was over and their homes had not been damaged, so it was safe for them to stay. At this stage their decision was based entirely on their own circumstances and they were unaware of the extent of damage to the wider community;
- The urgency of the emergency services and people's inability to gather belongings. Only one person I interviewed was prepared to leave their home with a bag of clothes that had already been packed. Others were unable to grab clothing or, more importantly, vital medication.

The Civil Defence Team arrived and Chris was forbidden to go back into his house. For most of the time while Chris had been trapped, Avril had been on the stairs down by the washhouse, standing at flood level, waiting. Chris could now see her on the ramp outside which leads to the front door of their home. Civil Defence also saw Avril and then both Chris and Avril were apprehended, and taken into custody, given no chance to get anything out of the house.

Although no one was hysterical there was a certain amount of resistance from residents to leave their homes. Whether this was human instinct and a need to stay with their homes and protect what they owned, Brian was unsure but it did make the fire crew's job more difficult. On a number of occasions police escorts had to remove residents from their homes. In one instance after rescuing a resident, the firemen had to move back in and rescue him again, as he had ventured back to his home to retrieve some belongings.

Amongst all people evacuated, there appeared to be a subconscious fear or concern that if they left their homes, they would not know what would be there to come back to, if indeed anything at all.

Once people arrived at the fire station where evacuees were initially taken, they were shocked and amazed at the number of people there. For a number of people, it was the beginning of a realisation of the seriousness of the situation, as they saw other residents sitting there covered in mud, crying and obviously in state of distress. They also looked at themselves for the first time during that night and got a sense of reality, a sense of *"God, this is happening to me too".*

4.3 The days after the disaster

Most people ventured back to Matata one to three days after the disaster, and saw the community and their homes for the first time. The overall feeling was of absolute bewilderment and shock.

On Friday morning [two days after the disaster], the council had buses available to take our people home to Matata. If it were possible, we would be taken past our homes to view the damage. I doubted at first that this was a sensible move, and later when I saw the horror and greif on the faces of our older generation my doubts were confirmed. They were devastated and I felt powerless to console them. Most of them had lived here all their lives – sixty, seventy or even eighty years - never dreaming they would be witnessing such utter devastation.

Nobody from the Ibbetson family slept well that night. When the first rays of light hit the town, people came out of their homes and walked the streets in their gumboots, some still in pyjamas. To Nicki it felt like the whole town had been waiting all night for daybreak, to see what had happened.

Although there were people everywhere it was incredibly quiet. If people were talking it was in hushed tones and without the constant rumble of the trains and vehicles it felt almost eerie. People were obviously shocked and distraught.

People had a real sense of feeling lucky to have survived, and as they played the night's events over and over in their heads, they realised the extent of the disaster. No one was prepared for what they saw: the boulders, logs, houses that had smashed into other houses and the personal belongings that were strewn around the lagoon.

For the people whose houses were still standing and had received minimal damage there was a strong sense of relief and then guilt as they looked at the neighbouring homes.

A number of people were unable to get to their homes due to the debris surrounding the area and this was extremely hard for them as all they wanted was to go in and survey what had been lost and reclaim a sense of who they were and what was important to them.

Interestingly, people were already beginning to use coping mechanisms inherent in individuals who have undergone traumatic experiences by comparing themselves with those less fortunate, focusing on the fact that they were alive and how lucky they were through imagining a worse situation (Paton & Bishop, 1996, Gordon, 2004).

4.4   Overall wellbeing of the community

Although the disaster had occurred two years before the interviews, people's emotions around the night and events since the disaster were still very raw. Much like an open wound that keeps festering, people seemed stuck in a place of continual hurt and anger. This was due to the tensions between Council and community particularly around the proposed mitigation strategies, and the decision by Council not to issue building consents. For a number of residents this meant renting outside of the Matata area. In one case, a mother and her children rented a house located next to their vacant section.

The proposed mitigation strategies were expected to impact on the residents financially through expected rate increases in the range $3000-$7000. Matata residents were very aware that this would mean that some families could no longer afford to live in the area. However, the fact that mitigation had not occurred to ensure that another debris flow would not affect the community meant that residents felt largely unsafe. Indeed most people indicated a high level of anxiety when it rains and are still unable to sleep. Amongst the people interviewed over half of them still check creeks regularly on wet nights and a number of people have supplies packed and ready to get out at short notice. Although being prepared is responsible and a positive step towards coping with disasters, a small number of the residents were living in constant state of increased anxiety.

Within the disaster research literature, particularly in New Zealand, there is debate about whether communities and individuals suffer from any long-term impacts following disasters. Reasons behind this debate involve the following:

- There is limited literature and research focusing on community and individual long-term psychological and social recovery post-disaster, particularly in New Zealand; and
- The traditional responses to disaster have focused on physical and environmental consequences, rather than the psychosocial aspects of recovery and the emotional, mental or social needs of people.

However, from listening to the residents of Matata and seeing the frustration, emotions and pain still surrounding the disaster, it is clear that two years after a disaster it is likely that people will be experiencing ongoing impacts.

> *I felt totally unsupported. My world was turned upside down but meanwhile everything just carried on. I know I'm not the same since that night. It was so surreal; it was like living in a bad movie. It's really hard. We lost so much that we had been working towards our whole lives. We had a beachfront section and were thinking that one day it would be worth something.*

> *Since the disaster I've lost my get up and go. Things don't seem worth it anymore. I think 'oh I should be renovating the house we're in now but what's the point.' Another flood will come and it will all be meaningless, again! It's certainly changed the way I look at hills; they'll never look the same again. I look at them now and think 'AHHH!'*

4.5 Ongoing trauma

Saari (2005) has described the following components of trauma: (1) unpredictability of events; (2) uncontrollability of events; (3) changes in people's values and perspectives (for instance, an increased sense of vulnerability, changes to worldview and outlook, changes to values and priorities; and (4) everything changes in the person's life (place of residence, employment).

All people interviewed in Matata had experienced and were still experiencing these four components of trauma. During the night many people were in life-threatening situations and thought that they were going to die. Absolutely nobody was prepared for what was going to happen and once the disaster was underway some people had no control over what would happen to them and their families.

> *As the house jolted forward, it creaked and groaned, like an old wooden ship. The noise was loud and Michele was terrified. Jasmine began screaming and Michele started to breastfeed her, hoping this would calm her. As Jasmine quietened down Michele tried to take stock of what was happening. However with each lunge of the house as it was swept along in the current, Michele grew more and more disturbed. An eddy was keeping the house going around in a circle; round and round and round.*

The continuous thundering, roaring, smashing and crashing was horrendous. Mentally she was unable to process what was happening and for the first time in her life she knew whatever happened was completely out of her control. Unable to even remember the positive affirmations that she had used in the past, she sat holding her children in a state of shock. In the attic Michele was struggling to maintain a semblance of normality in her approach and responses to the children. Even though she could see and hear what was happening, her mind was saying "NO! This can't be real!"

Two years after the disaster, many people who shared their stories had no future perspective and so were continually either living in the moment and the past, unable to visualise a positive tomorrow. As time went on, mitigation tensions (as discussed on page 18) placed further stress and trauma on people, impeding their personal recovery and healing as a community.

The people interviewed were reflective of a community that felt overwhelmingly powerless and had loss the willingness to plan for the future. Much of the community and people who participated in the story-sharing were stuck in a cycle of agitation, tension and sadness.

Three to six weeks after the disaster when people had started to look forward and were ready to move home to begin the cleanup and renovation work, they were stopped because of the continuing level of hazard. People were out of their homes for periods of nine to 18 months, which further hindered their recovery.

For the next 18 months Heather and Rhys would be living in a state of limbo. Always believing that they would eventually move back to their property in Matata, they lived out of suitcases, never fully unpacking. What was going to be a short-term accommodation option turned into 14 months of renting, waiting and wondering what the future held. The ambiguity and uncertainty of the situation took its toll on both Heather and Rhys. Heather needed to have her own home, have the ability to put pictures on the wall and work in the garden. Heather was at the stage where she needed security and wanted to create some normality for her family.

Much to their dismay, Heather and Rhys found out just before Christmas 2006 that there was absolutely no chance that they would be returning to their property. Rumours had proved to be true - council required their property and a number of other neighbouring sections to carry out proposed mitigation works. After 18 months of holding on to the hope that they would be returning home they were devastated. This was the final blow for Rhys who, due to the continuing stress since the disaster, had had to leave his job. Since early 2007 he has been receiving counselling for post-traumatic stress disorder.

The above narrative captures a number of circumstances following the disaster that caused ongoing stress for people.

4.6   The demands of the disaster

A distinction can be made between *agent-generated demands* and *response-generated demands* of disaster situations. Agent-generated demands are those needs directly

associated with the disaster and may include, sandbags to fight flooding and finding shelter for those who have been made homeless (McEntire 2007; Laube and Murphy 1985). Response-generated demands following a disaster are needs that become evident as communities try to deal with the disaster and the destruction (McEntire 2007).

All interviewees reported that the longer-term events following the night of the disaster had caused more stress, frustration and upset than the night itself or the first two to three weeks after the disaster.

Stressors included:
- The inability to return to homes until months later, fifteen months in one case;
- Two years after the event people were still waiting to receive resource consent to rebuild on their sections;
- Moving four times in one year;
- Constantly making plans which needed to be adjusted due to resource consent timeframes being moved;
- A state of limbo as people waited to learn of their property's fate (i.e. whether it was considered safe to rebuild on);
- Having to live in another community permanently while still considering Matata home;
- Physical health issues (hip operations, heart attacks) for the elderly;
- The fact that no mitigation works had started.

Although the Hoopers still had no indication from local officials about being able to move back, they knew that returning to their house was the only option they were willing to consider. They had built the house together and it was a real labour of love. Their home was built exactly as they wanted it and it symbolised who they were and what was important to them both. Determined and resourceful, they decided they would work towards ensuring their right to return.

The Hoopers set a course to gather and collect the technical and expert information that they needed to elicit permission from local government officials to return to their home. Finding information, contacting lawyers, talking with building inspectors, Earthquake commission staff and many other people was exhausting. After three months of continuous effort with no result the Hoopers were despondent and fatigued.
Around this time Mr Hooper had to go to hospital for a throat operation and it was decided that once he was out of hospital they would move to Tairua to live in their youngest daughter's beach house.

Mrs Hooper knew that this was the best decision for both her and her husband. They needed to get away as the drain on their mental and emotional resources was reaching harmful levels. Sleep deprivation due to stress made some days almost unbearable to cope with.

4.7 Accessing support

A few people have received professional help while others are still dealing with the situation as best they can. This generally means that people are trying to move through their everyday

lives and feel in their own way that they have come to terms with the disaster and its impact on their lives. Most people talk about still experiencing 'bad days' when they will be very emotional and for a period of time are incapable of responding to what is going on around them.

Case study research illustrates that people are extremely resilient and the number of people who will actually utilise mental health services post-disaster is relatively low (Meichenbaum, 1995). However it is important to make a distinction between resilience and recovery. If people are resilient they will get through. However, there may be lingering anxieties, fears and hurt due to the situation. Recovery is a healthier picture of closure, confidence and successful integration of feelings and experiences from the disaster into personal blueprints.

Often people will not access counselling or other professional psychological services because they may (1) feel uncomfortable seeing a psychologist or counsellor; (2) have negative perceptions of mental health services, (3) have feelings of inadequacy at not being able to cope; or (4) believe that they are doing okay compared to others (Saari, 2005). However, disasters can be extremely traumatic events in people's lives and often the individual is unaware of how to respond appropriately. People may not even realise when they are in need of assistance from either counsellors or psychologists, and battle on with their own limited resources. Again this will slow the psychological recovery process. Past research and case studies certainly advocate that disaster recovery for people in communities should begin at the starting point of the disaster, rather than when people start to exhibit psychological or physical symptoms in the longer term (Eyre, 2004, Phillips, 2004).

Amongst the Matata community and the story-sharing participants, people noted that there was a lack of information around 'normal' responses and reactions following a disaster. As well a number of participants and community members were suffering from ongoing psychological impacts (including children) approximately two years following the disaster, including:
- Sleeplessness
- Leaving employment due to stress
- Withdrawing from family
- Anger
- Anxiety, particularly when it rains
- Increased sense of vulnerability (for instance, during the earthquake swarms experienced in Matata)
- Sadness
- Feelings of isolation and 'being all alone'
- Inability to cope with everyday demands
- Depression

Those people in Matata who had received counselling following the disaster and/or who accessed information regarding reactions and emotions that could be experienced, were able to report personal benefits. However it is worth noting that counselling or information came after the individuals had already been suffering from extreme stress and psychological trauma.

In July, Trish shut down. Although she had felt reasonably okay following the disaster in May, by July the ongoing stress was too much. While at work she fell apart. Sitting at her desk one day she started to cry and was unable to stop. A friend who works at Victim Support arrived, and over a cup of tea she suggested that firstly Trish went home and secondly she receive some counselling. So that is what Trish did. The counselling was really helpful - Trish was able to gain some perspective around her experiences and it was just fantastic being able to offload on someone else. Much of Trish's pain and suffering had been caused from a sense of being abandoned and the lack of acknowledgement that there were residents in Awakaponga who had been significantly affected. As well, since the disaster in May, Geoff and Trish had been living in extreme conditions. For seven months they had no plumbing in their home and for two months they could only use tank water for showering and cooking. All drinking water they had to buy in ten litre containers. A Portaloo was situated near the front of their property, which was a dead giveaway, when either Geoff or Trish needed to go! As well, their home remained uncarpeted for 13 months, and for six months there were no internal walls.

4.8   Positive impacts

Everyone interviewed was able to identify at least two to three positive impacts from the disaster. These included:

- A new approach to how people are living their lives - by living in the 'now' and attempting to make the most of everyday.
- Appreciating the good in their lives and not getting stressed out about little things or worrying about what may happen.
- An improvement in relationships or a new appreciation of close relationships in their lives.
- A more communicative relationship with partners (however, this normally followed a period of extreme distress and withdrawal from one partner).
- Changing lifestyles (work commitments) to enable more time with family.
- Making decisions not entirely based on financial responsibilities or concerns like deciding to go on holiday or buy a new car.
- Developing new relationships between neighbours and others in the community.

For Toa the disaster was the big wakeup call he needed. Toa now embraces his life here and his family. He spends more time with Rosie, shopping, fishing or simply stopping for a cup of tea and chat. He phones his children more often and takes advantage of all the opportunities to see them.

Nearly two years after the disaster Narelle's life does not resemble anything close to her life pre-disaster. However, in the true spirit of resilience and hopefulness, Narelle is able to identify some positive changes, particularly in her outlook on life. Narelle also appreciates the vulnerability of life and has decided to make the most of every day. She realises that it was nothing short of a miracle that everybody walked away from the night of the disaster in one piece. With an attitude of celebrating life she has planned a trip to Europe for her and her girls. Due to the disaster she is able to allow herself to have fun; life does not always have to be about paying the mortgage off.

These positive thoughts and feelings were interspersed between 'bad days'. A common occurrence as time went by was that feelings of gratefulness and joy at the lack of death or injury or death in the disaster turned to feelings of bitterness and frustration as recovery/mitigation processes slowed. People would then feel guilty knowing that things could have been invariably worse.

4.9   Ladder of life

During the interviews participants were asked to place themselves on a ladder which was simply drawn on a piece of paper. The ladder represented their life. The top of the ladder symbolised feeling extremely satisfied with their lives while the bottom of the ladder symbolised extreme dissatisfaction with one's life. Firstly participants were asked to indicate their place on the ladder before the disaster struck. All participants indicated they were feeling pleased, satisfied, and happy with their lives before the disaster event, by placing themselves near or at the top of the ladder.

Participants were then asked to indicate where they sat immediately following the disaster. Most interviewees' marks were close to the bottom of the ladder. Finally participants were asked to indicate their position after one year following the disaster. Interestingly, people indicated that their perception on their lives and situations had become increasingly worse. People were even more dissatisfied, angry and upset a year after the disaster and they indicated this by placing themselves below the last rung on the ladder. This reinforced again the impacts of the stressors that followed the disaster and the difficulties that people had reorientating to a completely new environment and set of circumstances.

Finally, people were asked to place themselves on the ladder for the last time indicating where they now saw themselves, nearly two years after the disaster. Interviewees typically placed themselves midway between the points representing 'before the disaster' and 'immediately after the disaster'. A typical supporting comment was that 'there is still a long way to go'. However, this exercise did enable a number of the participants to see how far they had come at rebuilding their lives under extremely stressful and traumatic conditions.

Now Kay believes even more in the motto 'Live for the day'! Also she does not seem to worry as much as she use to and remains positive. She is pleased with all the work that she and Keith have accomplished around the property since their return, and has even managed to embrace new interests like gardening.

As they near the completion of restoring and redeveloping their property, Keith and Kay are hoping to get a few games of golf in and have some much-deserved fun and enjoyment.

For Earl and Lee, the disaster and ensuing events over the past two years have been like riding a very steep learning curve. They have had to deal with new things including large insurance claims and resource consent submissions. With no experience or prior knowledge about some issues and experiences that arose after the disaster, Earl and Lee's approach was simple and effective: roll your sleeves up and get on with it.

Two years on from the disaster, their property is looking great. Earl and Lee are committed to staying in Matata and in their home. One of the lessons they have learnt over the past two years is that sometimes you just have to act, to make a decision and start moving towards the end result. You can't wait month after month, year after year for somebody else to take action or for something to happen.

5.0   EVALUATION OF FINDINGS

5.1   Identifying success factors

An evaluation of both formal and information discussions that were held with approximately 40 people from the Matata community, and also with several agencies involved with the response to the May 18 2005 Matata disaster suggests a number of 'success factors', or 'things that worked well' in facilitating recovery from the disaster. However, it is important to note that that not all these factors actually occurred in Matata, but may have been identified by interview participants as being desirable for successful recovery.

The success factors highlighted within this study have assisted in the identification of the challenges and implications of best practice responses to disaster affected communities. This section draws on the lessons from the Matata disaster recovery response and provides a preliminary discussion on best practice guidelines and recommendations.

Success factors for disaster recovery	Community experiences and implications for best practice
1. Initiatives that are supported by the community and which they take a lead role in implementing	A 'cup of tea and chat' facility was set up in a community venue. Residents were able to drop in and simply spend time together, sharing their experiences. Community members, on a roster system, ran this. *Implications for best practice:* 1. Providing an informal community-run space whereby people can share experiences and gain comfort through feeling that they are 'not in this alone' is important to assisting in people's psychological recovery. 2. Ensuring that community are encouraged and supported to respond in a way that reflects community dynamics will give communities a sense of control and competence.
2. Utilisation of established community services and social structures	The One Stop disaster welfare centre operated in Matata, and provided a safe and accessible place for people to come and receive necessary services such as WINZ and Victim Support. Marae were used to accommodate evacuees and provide access to food and household goods, and also emotional support. Schools were used to provide emotional and mental support to families with children at school. They were also important in being a central place within the community to distribute important information about access to resources and support services. Matata Community Resource Centre took a lead role in long-term recovery by contracting a community psychologist to undertake recovery work. *Best practice:* 1. Post-disaster recovery needs to be delivered utilising as many community resources, venues, and services as possible. This will make people feel comfortable, safe and supported in an environment they are familiar with. 2. It is important that services and resources be accessible. 3. When external agencies move into a community, it is important not to take over from the natural leadership or organising structures in a community. Instead support should be provided for the communities to become involved in their own recovery by encouraging and promoting the skills and expertise that exist in the community.
3. Proactive treatment of problem at earliest possible moment	People reported that they benefited from receiving counselling, or receiving information about 'normal' reactions to a disaster. *Best practice*: 1. Comprehensive mapping of the disaster affected community (people who have lost homes, people who have had to relocate, vulnerable community members such as children, the elderly and single parents), will enable disaster recovery initiatives to match needs with services. Psychological services will also be able to provide appropriate support, like regular follow-up. 2. Provision of information to households about probable responses, feelings, emotions, thoughts and actions that may

	affect people after a disaster.
	3. Assume that people will not contact services for help and then maintain a strong profile and commitment to delivering counselling or psychological services in the community. In New Zealand there is a strong culture of 'she'll be right mate'. However, Matata is a good example of how people would have benefited from specialised psychological services. Hold seminars, workshops, and information days with counsellors, psychologists or mental health workers. Run programmes where people can come along and receive information and support, without necessarily having to discuss their own feelings (such as 'parenting through disaster', 'helping others through disaster').
4. Provide emotional/mental follow-up six to nine months after the disaster to the community	People appreciated the services offered by Victim Support but generally did not take any offers up to access counselling. This appeared to be mainly because people were busy and preoccupied with practical matters such as cleaning up properties, trying to find accommodation and dealing with insurance companies. As they were still in the initial phase of reacting to the disaster, they were yet to think about their long-term recovery in terms of psychological wellbeing. Many people commented that if they had been offered the counselling services six to nine months after the disaster they would have probably taken them up.
	Best practice:
	1. Have several points (immediately, 3 weeks after, 8 weeks after, 5 months after and so forth) during disaster recovery where individuals and family/whanau are approached about the level of support they may need. Do not assume that time heals.
	2. During the follow-up it could be useful to provide information to people on disaster impacts, common responses so they have a measure of what *is* okay. This might also increase people's insight into their own wellbeing and their emotional/mental needs and their progress towards recovery.
5. Provide occasions for recognition of disaster and what people have suffered	Visits from dignitaries and celebrities to Matata were appreciated by residents in the community and provided the support and recognition they needed immediately after the disaster.
	Having the occasion to share their stories and contribute to a community account of the disaster has been considered instrumental to people's recovery.
	A regeneration festival on the first anniversary of the disaster provided a brief respite from the concerns and issues around mitigation. It was also an opportunity for people to have some fun and celebrate the positive aspects of the community.
	Best practice:
	1. Disasters affect whole communities regardless of whether individuals, family/whanau have suffered directly through loss of belongings, damage to homes or experiencing evacuation. Based on that premise, opportunities for recognition of disaster experiences could be planned as part of any disaster recovery approach. Ideas could include collecting personal stories, celebrating anniversaries and profiling successful recovery stories.

6. Community rallying together immediately after disaster	Residents in this study commented on the emotional and mental support and assistance that they received when the community pulled together after the disaster. While the community worked together cleaning up, attending to community members and openly discussing the disaster, people felt a sense of 'we-ness'.
	Best practice:
	1. There is the potential to capitalise on this natural tendency of communities to come together in response to a disaster. During this phase it often becomes possible to identify those community members whom others rally around.
	2. Identification and nurturing of potential leaders and drivers of the recovery can then extend this feeling of "we-ness" into long-term recovery.
7. Community reference/working group	People provided positive feedback regarding the community working group that was established 18 months after the disaster. People are appreciative of the positive opportunities presented to participate in the community and the ability to actively move forward.
	Best practice:
	1. Realise that the people who reside in a disaster-affected community hold the key to their own psychological and social recovery. They are the experts on their community and will know intricacies that often remain unseen by outsiders. As efforts to rebuild communities should involve members of the community, a community reference group is an effective way to not only receive information about the community but also to distribute information through. This group has the ability to work closely with all agencies including professional psychological services for the wellbeing of individuals, families and whanau in the community, particularly in a small close-knit community like Matata.
8. Support from family/whanau and friends	The support of family and friends was a real lifeline following the disaster. Many family members took on the roles of researcher, negotiator and counsellor.
	Best practice:
	1. Disaster recovery plans need to acknowledge the role that family/whanau and friends play in assisting with their family members' recovery. Information regarding disaster information should also be readily available to family/whanau. Seminars, workshops on how to best support others during post-disaster recovery should be widely promoted to capture family who live in outlying areas. It is important to work proactively to ensure that people are aware of the services available.

9. Formal disaster recovery plan	Eighteen months after the disaster a formal disaster recovery plan was established to aid in the psychological and social recovery of the Matata community. People have commented on the process positively influencing the community. People have been able to focus on the disaster in a constructive way and use experiences to move forward and create a new vision for the community based on formalised and planned support.
	Formal disaster recovery plans may include ways of recognising disaster event and victims, and activities/events to focus the community towards psychological recovery.
	Best practice:
	1. A formal disaster recovery plan which identifies the possible and probable psychological and social impacts on a community and the initiatives and activities that can help people reorientate to the changes in their lives could lead to successful disaster recovery. If people are able to act in a way that allows them to be useful, positively focused and competent in post-disaster situations it fulfils a natural desire to contribute.
	2. Disaster recovery plans should be developed as a collaboration between the community and a professional knowledgeable about community consultation/development processes and/or disaster psychology and recovery.

5.2   Barriers and obstacles

Because of past experience in reacting to disasters, there was a good immediate response to the 2005 Matata disaster from the welfare agencies. However, as time continued and disaster recovery processes became more complex, the psychological and social recovery of the community was impeded. The most common reason given by Matata residents for this was the lack of understanding and concern shown to people suffering post-disaster trauma.

There is a major difference between knowing information about recovery and how people may react and then being able to apply approaches or solutions to assist in recovery. For example agencies working with disaster affected communities may well know that people don't comprehend things due to trauma and emotional/mental disruption but how will they compensate for this and ensure that people receive much needed information and have the chance to make informed choices?

Barriers	Community experiences and implications for successful disaster recovery and best practice
1. Limited knowledge and understanding of disasters and their likely impacts	Disaster recovery is a complex equation which raises unique and diverse issues depending on community and type of disaster. However there are common reactions that people typically experience after a disaster (or other traumatic event). If people are unaware of these 'normal' reactions, this can hinder their psychological recovery if they attempt to 'dampen' their reactions through denial, or exert too much pressure on themselves to respond in a certain way (Coghlan 2004).
	Organisations commonly lack an understanding of trauma and 'normal reactions' to it. Even if organisations do have a level of understanding of trauma and its consequences, they may lack the tools to deal with disasters. If people are dealing with new hurts like mitigation processes they are not dealing with feelings from the night and the fears and anxiety from the night will linger, reducing the likelihood of successful or fast psychological recovery.
	Best practice:
	1. Responses to disaster-affected communities need to take into account the psychological impact on individuals and families. Responses need to be targeted at community members who have suffered the most severe losses (i.e. loss of home). By mapping the families and individuals who are potentially at greater risk for ongoing psychological trauma, following the disaster, support services can be built around them.
	2. Post-disaster information should be widely available with the same content and messages relayed to avoid any miscommunication.
2. High levels of trauma in the community	People had life-threatening experiences during the disaster, and much of the community suffered from extreme sadness and hurt because of the damage in the small township. People were obviously traumatised and unable to process much information. Levels of trauma made it difficult for people to understand and process communications from disaster response agencies like Whakatane District Council. Memories of conversations and

	meetings may not have been that clear, which may have led to a 'Chinese whispers' effect in the transmission of information.
	Best practice:
	1. Any disaster recovery approach needs to ensure that communications are clear, concise and as uncomplicated as possible.
	2. Many different approaches need to be utilised when communicating with people including written word, public meetings and focus groups. Using interactive techniques within meetings can also help people retain information.
	3. Expectations and boundaries of the lead response disaster agency, in this case the Council, should be clearly established at the beginning of the disaster recovery phase. This could include providing realistic estimates of the time required for recovery.
	4. Ideally, a community reference group will act as a conduit to any communications between agencies and residents. Having one central point to communicate any information to may not avoid rumours, but it will give community members a familiar place and faces to receive the correct information from.
	5. Disaster recovery approaches need to first acknowledge trauma of disasters and provide adequate psychological support for people. A proactive approach should also be adopted, in which it is assumed that people will generally not present themselves for assistance.
3. Inappropriate responses to disaster-affected communities	Disasters have unique characteristics and circumstances, and mistakes or errors of judgments may occur. If this happens it is not sufficient to 'plaster over' the errors; wounds will continue to fester underneath. It is important to acknowledge the hurt that may have been caused, and to confront the issues that have arisen, and to work with the victims to heal this.
	Disaster recovery plans - whether they incorporate physical, psychological or social aspects - need to involve community. For instance, a decision to rebuild the town bigger and better than before will only work if community want that to happen. Also, costs of recovery and rebuilding communities need to be kept relative to the socio-economic characteristics of the community, especially where residents will be required to pay for mitigation works through rate demands.
	Best practice:
	1. Approaches to recovery need to seek community advice and be based on the community demographics, socio-economic status, needs and strengths.
	2. Until the extent of damage after a disaster has been comprehensively mapped, it is better to provide conservative estimates of recovery times.
	3. Although disaster recovery models now advocate for not just putting communities back together to their pre-disaster state, but revamping and upgrading (e.g. the 'build back better' model), these decisions need to be in conjunction with communities, especially if upgrades will incur a financial cost for residents.
4. Lack of skilled and trained	While staff in response organisations appear to have a reasonable

people within the organisations that are responsible for responding to disasters	understanding of how trauma may affect people, they are less likely to have practical knowledge of how to respond effectively.

Best practice:

1. Responses to disasters will always be inadequate if key staff in response organisations are unable to respond to the needs of disaster victims. Training for disaster response organisations is required, and could include a 'toolbox' containing practical examples of activities, approaches and methods of working with communities after a disaster. |
| 5. Restricted leadership in community | Matata was devastated by the disaster and everybody was affected in some way. While the small size of a community can be a positive factor in disaster recovery, the fact was that in Matata most people were victims and unable to step forward as they were dealing with their own personal situation.

In a couple of situations where people presented themselves on behalf of the community, they were emotionally unfit to represent their community or had not been accepted by the wider community as being an appropriate representative.

Best practice:

1. Comprehensive mapping of a community after a disaster can enhance the chances of a successful recovery.
2. Comprehensive mapping prior to a disaster will identify the skills and experience in the community, including potential leaders. These people can be called on if needed post-disaster.
3. Setting up a community reference group to 'spread the load' may also be a good alternative to restricted leadership in communities. A number of people can work effectively together and support each other. This approach would work even better if an external practitioner/s providing support and facilitation of the group until their service was no longer needed and the group could stand on their own. |
| 6. Limited involvement of mental health services and/or professional psychological organisations | There was a lack of proactive mental health (including counselling, psychological) services involved in post-disaster recovery. People only accessed these services after a certain amount of time had passed, generally a year after the disaster, and they had suffered large amounts of stress.

Best practice:

1. It is impossible for people to recover psychologically and socially in the best time possible if they do not receive the support and help required as soon as possible. Given that mental health services already operate, with expertise in trauma and crisis situations, throughout most communities it would be expedient to utilise pre-existing organisational resources and structures. |
| 7. Incomplete holistic response | Although the Matata recovery response was guided by recommendations from MCDEM's holistic recovery policy (in CDEM Act 2002) with every intention to respond in a way that would assist people's social and psychological recovery, the focus of disaster recovery was mainly on hazard reduction and physical infrastructure. |

	Although people were not permitted to return to their own homes, there were no support structures wrapped around individuals or families/whanau who could not return home in the near future or ever again. People who were unable to resume some form of normality for periods of months after the disaster experienced increased stress and trauma. *Best practice:* 1. A holistic response is the most successful approach to assisting community recovery from disaster. However a holistic approach needs to provide practical, relevant support to people. A disaster recovery plan needs to factor in the expected psychological and social impacts and the populations most likely to harbour ongoing trauma and stress or the most disruption to their lives. With a complete understanding of how people may be feeling, it is possible to align appropriate services and care to disaster victims.
8. No allocated funding base and a lack of clarity about whose responsibility long-term psychological disaster recovery is	Although it was obvious that people in Matata needed psychological and social support, it was only as a result of a singular situation whereby Ministry of Social Development personnel was able to access funds to contract a community psychologist that long-term recovery work could be carried out in Matata. Consequently, there is limited capacity to facilitate long-term recovery approaches that focus on psychological and social wellbeing. *Best practice:* 1. There needs to be clarification about who is responsible for psychological and social disaster recovery if the MCDEM holistic recovery process is to be implemented with success. 2. Psychological and social impacts need to be considered with the same priority as physical infrastructure and environmental impacts. 3. Resources need to be allocated to long-term psychological and social disaster recovery.
9. Limited operational/implementation guidelines for holistic disaster recovery	The CDEM Act 2002 is a fresh and innovative policy approach to disaster recovery. It can take time to incorporate new changes at the service delivery level that reflect the high level strategic direction. *Best practice:* 1. To support agencies delivering disaster recovery it would be useful to provide more detailed information about how recovery agencies and the holistic recovery structure can support communities at a service delivery level.

6.0 DISCUSSION AND CONCLUSIONS

Long-term disaster recovery can take five to ten years (Peterson, 1997, Gordon, 2004). Simply knowing that can ease people's expectations and any unnecessary pressure that they may be putting on themselves to be performing or coping better.

There has been an unspoken assumption that social, psychological and community issues following a disaster will be resolved as a consequence of dealing with the immediate physical and economic problems and consequently there has been very little coordinated effort in the area of recovery (Paton, 1997, Angus, 2004). However recovery encompasses individual, social, cultural, physical, economic and environmental dimensions, and as such requires a multifaceted approach.

Recovery in Matata has been a highly charged emotional and political time. There has been tension between *normalcy-generated demands*, to get things back to pre-disaster and *mitigation-generated demands*, to prevent a reoccurrence of the disaster (McEntire, 2007, Luketina 1985).

Indeed one of the most common trends of local recovery is the community's desire to rebuild as soon as possible. During this time it is crucial to recognise the local climate and all efforts should be guided by the community's vision of itself. If no vision is in place help should be given to construct a development plan, while consistently attempting to find common understandings where tensions exist (Peterson, 1997).

Communities *will* recover. However, that recovery will be more successful when efforts are tightly knit and well-organised with frequent, sustained interaction between community and local government and officials. People involved in the recovery process should have the capacity to communicate and collaborate, be adaptable and assist in the implementation of coordinated, consistent programmes.

Community participation is crucial post-disaster as people are often suffering from a strong sense of powerlessness and being directly involved in their own recovery gives them a sense of control and hope. At all times it is important to remember that recovery is a social process, not just a physical/environmental rebuilding process.

6.1 Community recovery approaches

There are a number of key components, based on the lessons from Matata, that are critical to any successful community disaster recovery approach. These include:
- A strong foundation to community recovery that is based on principles of empowerment and community involvement. Although Community Psychology is only one model that can be applied to disaster recovery, it does provide a useful tool for community development and recovery post-disaster.
- Disasters are unique - as are the communities that are affected. A multi-faceted approach is always required to meet the needs of diverse populations within communities.
- All disaster recovery work should be grounded in community dynamics, and communities'

historic and cultural contexts.

- It is important to encourage and support community leaders to actively become involved in disaster recovery. This could include kaumatua, kuia, or a community reference group. In this way it is possible to enable communities to heal and recover without external agencies taking over.
- Forward-looking approaches can provide positive opportunities for people to interact and recover without unduly focusing on the disaster, which can in itself create continuing stress. For example, focusing on a community plan allows people to look towards the future and be in control of what the future may hold.
- It is important to move into the affected community immediately following a disaster before too much psychological damage has occurred.
- Carry out a comprehensive mapping of disaster, the immediate damage and probable/possible psychological and social impacts on the community.
- An emphasis on strengths, skills and competencies in community. If strengths enhanced early in disaster recovery intervention approaches problems may be avoided as people have a sense of competence, control and confidence.

6.2   Recommendations for disaster recovery practices

The following recommendations are drawn from the author's:
- discussions with residents in Matata;
- discussions with a number of the responding agencies;
- personal experiences of working closely with the Matata community; and
- past research and case studies around long-term psychological and social disaster recovery.

These recommendations have been developed as tools for improving and enhancing long-term psychological and social disaster recovery.

1. To better understand people's needs following disaster, and increase knowledge of how disaster recovery processes have been successful and/or limited in their approach, it is considered necessary to carry out a comprehensive evaluation throughout New Zealand with communities who have suffered from disaster in the past ten years. At this stage it would also be possible to identify any long-term psychological and social impacts.

2. To respond effectively to people suffering from psychological effects, post-disaster recovery initiatives must provide accurate information about trauma, post-trauma and productive coping skills. Consistent support must be given and adequate time and space, so people can ventilate and discuss the details of the disaster.

3. Increase understanding of disaster psychology and the possibility that psychological trauma may be preventable particularly if disaster recovery approaches begin immediately before any psychological damage has been suffered.

4. Partnership between government, regional services and community is essential to successful disaster recovery. As early as possible, responsibilities need be clarified between the parties and the expectations of the disaster recovery process.

5. Timing of interventions is important. Take action immediately because the mind will be trying to process the information and early psychological support (such as a letter to all households about disaster and possible impacts) can augment and direct normal automatic processing.

6. Very few people who have experienced a natural disaster seek professional help so it is important to be proactive. Do not sit and wait for people to approach for help. Be careful not to base assessments on victims' behaviour but only on incident and what happened. Often victims' behaviour can be misleading (e.g. shock usually generates a calm and sensible approach to the event). As well, the New Zealand culture can be to act heroically and to cope alone. If possible, avoid situations where people ask themselves if their reactions or feelings are more severe than others, and if not, to question whether they really need help. Everybody in a community suffers when a disaster hits.

7. Provide continued support by creating an ongoing sense of security, so that people in the community are less likely to experience feelings of isolation and loneliness. It is possible to do this by supporting the unity of groups that exist within communities immediately following disaster by creating a shared vision or focus and addressing the disaster experience with the whole community.

8. Create opportunities for people to have feelings of achievement, personal control, coping and fun. It is important to remember that disaster recovery work is like community development and it is critical to include and seek approval for any community activities.

9. Do not pathologise people's reactions. Instead, give disaster-affected communities, individuals and family/whanau opportunities to do things for themselves.

10. Begin psychological and social disaster recovery from the starting point of what happened, not the psychological or physical reactions of people.

11. Map the incident, asking important questions including:

- How many were evacuated?
- Was anyone injured?
- What was the rescue like? Did it involve dangerous situations?
- How long did the rescue/evacuation take?
- Which populations have been significantly affected by event?
- What losses have people suffered?

6.3   Summary

Recommendations are often only as good as the support, commitment and resources behind them. Without commitment to holistic disaster recovery from a number of sources, the needs of communities post-disaster may not be successfully met.

Normal psychological processing of a shocking traumatic event can take six months. However, if there has been a significant impact either through life-threatening situations or ongoing stressors, recovery can take years. Long-term consequences of trauma when people have received no specific psychosocial support but have only tried to overcome their experience with the help of friends, relatives and other social networks can be more pronounced.

The adage that 'time heals all wounds' is not necessarily correct. Indeed, past research has found that 30-40% of people are unable to process trauma experiences without professional support (Duffy and Wong 2003).

Communities who have suffered from disasters deserve to have the utmost support and assistance to help them through. Communities are key players in their own recovery and although they may feel powerless it is important to remember that communities have the skills and expertise needed to regather and rebuild psychological and social wellbeing. It is essential to involve community in decisions and make them feel competent; empowering them to take positive action that moves them forward towards the future with hope.

7.0   ACKNOWLEDGEMENTS

8.0   REFERENCES

Angus, Lynda, 'Our Direction for Recovery in New Zealand' in *NZ Recovery Symposium 04 Proceedings,* Sarah Norman (ed), Wellington: Ministry of Civil Defence and emergency Management, 2004.

Coghlan, Andrew, 'Recovery Management in Australia: A Community Based Approach' in *NZ Recovery Symposium 04 Proceedings,* Sarah Norman (ed), Wellington: Ministry of Civil Defence and emergency Management, 2004.

Davies, Tim., Debris flow emergency at Matata, New Zealand 2005: Inevitable events, predictable disasters, Department of Geological Services: University of Canterbury, 2005.

Duffy, Karen, & Wong, Frank., *Community Psychology,* USA: Library of Congress, 2003.

Eyre, Anne, 'Psychosocial Aspects of Disaster Recovery: Practical implications for disaster managers' in *NZ Recovery Symposium 04 Proceedings,* Sarah Norman (ed), Wellington: Ministry of Civil Defence and emergency Management, 2004.

Few, Roger, & Matthies, Franziska (eds), *Flood Hazards and Health: Responding to Present and Future Risks*, Sterling: EarthScan, 2005.

Gordon, Rob, 'The Social System as site of Disaster Impact and Resource for Recovery' in *NZ Recovery Symposium 04 Proceedings,* Sarah Norman (ed), Wellington: Ministry of Civil Defence and emergency Management, 2004.

Luketina, Francis., *The Social and Psychological Aspects of Natural Disasters,* Wellington: Department of Social Welfare, 1985.

Laube, Jerri, & Murphy, Shirley., *Perspectives on Disaster Recovery,* Connecticut: Prentice Hall Inc, 1985.

McEntire, David., Disaster Response and Recovery: Strategies and Tactics for Resilience, North Texas: John Wiley & Sons Inc, 2007.

Meichenbaum, Donald, 'Disasters, Stress and Cognition' in S.E. Hobfall & M.W. de Vries (eds), *Extreme Stress and Communities: Impact and Intervention,* Netherlands: Kluwer Academic Publishers, 1995.

Ministry of Civil Defence & Emergency Management, *Focus on Recovery: A Holistic Framework for Recovery in New Zealand*, Wellington: Ministry of Civil Defence & Emergency Management, 2005.

Nelson, Geoffrey, & Prilleltensky (eds), *Community Psychology: In Pusuit of liberation and wellbeing,* New York: Palgrave Macmillan, 2005.

Paton, Douglas, 'A Conference Report on Disaster Psychology Symposium, New Zealand Psychological Society, 1997, retrieved 24th January 2007, from http://www.massey.ac.nz/~trauma/confrnce/nzpss97d.htm

Paton, Douglas, & Bishop, Brian, 'Disasters and Communities: Promoting Psychosocial Wellbeing' in Douglas Paton and Nigel Long (eds), *Psychological Aspects of Disasters,* Palmerston North: Dunmore Press, 1996.

Peterson, Jeanine, 'A Review of the Literature and Programs on Local Recovery from Disaster', 1997, retrieved 22nd January 2007, from http://www.eriskcenter.org/

Rubin, Claire, Saperstein, Martin, & Barbee, Daniel., Community Recovery from a Major Natural Disaster, University of Colorado: Institute of Behavioural Science, 1985.

Saari, Salli., A Bolt from Blue: Coping with Disasters and Acute Traumas, London: Jessica Kingsley Publishers, 2005.

Whakatane District Council, *Long term Council Plan,* Whakatane: Whakatane District Council, 2003.