



Developing a *collaborative educational pathway*  
for emergency management education in  
New Zealand

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# Developing a collaborative educational pathway for emergency management in New Zealand

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## Abstract

*The international profession of emergency management is growing and evolving rapidly. Despite this growth, significant labour shortages of qualified emergency managers and new expectations under the Tertiary Education Strategy, New Zealand has never had an integrated pathway for education and training for this discipline. This paper outlines a collective vision to develop a collaborative educational pathway in emergency management and provide this continuum from one central geographical location – the Manawatu, a potential world first. This paper reviews a number of key domestic and international documents primarily from New Zealand, United States of America and Canada. The deficiency of domestic research on emergency management competencies has prompted the findings and recommendations of this paper to be peer reviewed from emergency management and humanitarian aid practitioners, academics and scientists both domestically and internationally to ensure its validity. New Zealand does not currently have an integrated and seamless professional development pathway for current and aspirant emergency managers. This paper outlines a pathway that has been conceptually supported endorsed by the partner organisations including Massey University, International Pacific College, Tai Poutini Polytechnic and the Emergency Management Academy of New Zealand. The pathway provides for a professional development continuum from certificate to doctorate level that is aligned to the Tertiary Education Strategy, with alternative qualifications sitting in isolation and without collaborative integration. With all levels of the Pathway available from Palmerston North, it is recommended that the collaborative educational pathway be adopted, Manawatu be established as the Centre of Excellence for Emergency Management Education and that further local research is conducted to validate assumptions of core competencies are applicable to the New Zealand environment.*

## Introduction

This paper has been developed for *130.703 Project in Emergency Management* as part of the Massey University *Graduate Diploma in Emergency Management*. The intention of the paper is to provide an outline of a collaborative educational pathway in emergency management concept and how this model can be used to establish and promote Manawatu as a centre of excellence for emergency management education. The paper is the result of literature review, statistical analysis, discussions with stakeholders, personal opinion and critique by national and international educational and/or emergency management experts (refer Annex B). With the lack of integrated educational pathways, there is current demand for an educational pathway that provides multiple entry and exit points to further professionalise and evolve emergency management within New Zealand. A range of domestic and international literature has been reviewed; however there are deficiencies in the availability of research in this area specific to New Zealand and Australia and in absence of this much of this paper's basis has been derived from research undertaken in the United States of America.

## Background and Significance

### *What is Emergency Management?*

"Emergency management is the discipline and profession of applying science, technology, planning, and management to deal with extreme events that can injure or kill large numbers of people, do extensive damage to property, and disrupt community life." (Drabek & Hoetmer, 1991).

The basic model of comprehensive emergency management hinges on an integrated process of reduction, readiness, response and recovery (New Zealand Fire Service Commission, 1998). Within New Zealand, this approach is known favourably as the 4 R's.

**Reduction** refers to assessing the hazardscape and reducing the likelihood and/or consequence of those hazards. Such measures include land use zoning (e.g. restricting development on floodplains), installation of flood protection structures, development of building codes for seismic resistance and other mitigating strategies.

**Readiness** prepares for the level of residual risk once reduction measures have been applied and focuses on preparation for the eventuality of such risks. Public education programmes such as Get Thru (Ministry of Civil Defence & Emergency Management, 2006a), training of emergency management personnel, developing and exercising emergency management plans are all part of the readiness phase.

**Response** focuses on the events immediately prior and during an emergency. Response includes rescue, relief and protective measures to save life and property.

**Recovery** is the process of regenerating a community following an emergency; not necessarily returning a community back to its former state as this is not always possible or appropriate. Recovery is a short to long-term process that restores social, cultural and physical aspects of community life.

Within the Oceania Region the practice of emergency management largely rests with government agencies at national, regional (or state) and local levels depending on that country's framework; although many large organisations such as corporate, military bases and educational institutions also employ dedicated or portfolio emergency managers.

Within New Zealand the public generally associate emergency management with civil defence. Civil defence was introduced formally as part of the introduction of the Civil Defence Act 1962. The Act, passed in December 1962, designated armed attack and natural disaster as the two types of emergency with which the civil defence organisation were designed to cope. But within the Ministry, emphasis continued to be placed on the nuclear threat. During the early 1960s the Ministry's Regional Commissioners focused consistently on the dangers of nuclear attack, while the Minister increasingly emphasised natural disasters (Ministry of Civil Defence, 1990).

Later the Civil Defence Act 1983, was introduced to replace the 1962 Act and was the catalyst for much of the development of emergency management within New Zealand as we know it today.

The Civil Defence Emergency Management Act, 2002 replaced the 1983 Act with an all hazards approach to emergency management. It required local authorities to form Civil Defence Emergency Management Groups

based on Regional Authority boundaries and required a more cooperative group wide approach to emergency management.

Civil defence historically was established to provide civil assistance to cold war threats and evolved into natural disaster response over time. Internationally, the practice of civil defence has also evolved to the practice of emergency management, and the terminology “Civil Defence Emergency Management” is confined to New Zealand. This was largely at the insistence of the Minister of the day as a compromise between traditional and contemporary terminology. Because the public have a historical association with the term civil defence and the regulated civil defence logo, the New Zealand public continue to associate with “civil defence” despite the global shift to “emergency management” terminology.

With the world continuing to globalise through advancement in transportation, communications, information sharing and technology, emergency management is now a truly international industry. Emergency managers are now becoming more globally transportable and connections are being made through the establishment of two new international regions within the International Association of Emergency Managers, specifically Oceania and Europa.

With increasing frequency and consequence of natural disasters internationally, there are now greater opportunities for emergency managers becoming involved in humanitarian aid operations such as those involved with United Nations Disaster Assessment Co-ordination (UNDAC). The skill sets between emergency managers and humanitarian aid (response management) are very closely aligned and provide great opportunity for emergency managers to experience large scale disaster whilst contributing to the response management through their range of skills and knowledge.

## ***Emergency Management Sector Changes***

### **High demand for emergency management officers**

There has been significant restructuring within the sector in the past few years in response to a review of civil defence and a greater awareness of the impact and consequences of natural disasters. This combined with the fact that many of those working in the industry are nearing retirement age; means there is a high demand for experienced and/or qualified emergency management officers. Demand has also risen as a result of the Civil Defence Emergency Management (CDEM) Act 2002. This was introduced because of natural disasters in New Zealand and abroad, and a greater awareness of the need for a systematic approach to disaster preparedness and response. The CDEM Act 2002 has raised the profile of emergency management and caused many CDEM and other private sector organisations to raise their staffing levels in this area (New Zealand Careers Service, 2007).

### **Emergency management growing in importance**

In the past, managers within emergency services (Fire, Ambulance or Police) or officers from the military often moved into the role of emergency management officer prior to retirement. But growing operational demands and increasing public expectations of emergency management means the role of emergency management officer is now seen as a profession in its own right, with its own training and qualification requirements. There are legal requirements under the CDEM Act 2002 for all employers of emergency management officers to ensure their staff are competently trained. There is also a greater focus on training in risk reduction and public education, rather than just emergency response. Many people are taking up tertiary training ranging from certificates through to postgraduate study to get into the role or further their professional development (New Zealand Careers Service, 2007).

### **More technical skills required**

Emergency management officers are increasingly required to have a high level of technical skill due to the introduction of geographic information systems (GIS), global positioning systems (GPS), satellite communication systems (New Zealand Careers Service, 2007), earth sciences and hazard management.

### **Turnover moderate among emergency management officers**

Turnover among emergency management officers is moderate. Some change employers for variety and career progression, as internal progression is often limited. The high number of emergency management officers expected to retire over the next few years is likely to contribute to higher levels of turnover (New Zealand Careers Service, 2007).

### **Competent emergency managers required**

Emergency managers as well as any other personnel involved in civil defence emergency management are required by the Civil Defence Emergency Management Act 2002 to be competently trained. Although the term “competently trained” is rather subjective, the use of the National Qualifications Framework that uses competency based training and assessment is recognised by the Director of Civil Defence as appropriate to support organisations to meet this legislative requirement.

*“The aim of RAPID (Response And Preparedness in Disaster – Project) is to ensure that responder-level training is consistently delivered throughout the country to enhance resilience and interoperability between CDEM Groups and agencies. The modules provide professional, standardised resources to assist CDEM Groups in meeting their legislative requirement to sufficiently train personnel in accordance with section 17(1)(b) of the CDEM Act 2002 (Ministry of Civil Defence & Emergency Management, 2006b).”*

However the National Qualifications Framework is limited in its ability to provide academic strength to the modern emergency manager hence the need for a pathway that transitions from competency based training to academic education and research, as later discussed in *Emergency Management Core Competencies* (Etkin, 2006).

## The New Zealand Tertiary Education Framework

The New Zealand tertiary education framework requires all courses and qualifications to be measured using the same key criteria known as the level and credit values. Levels are assigned to qualifications (1-10) to indicate their complexity; credits are assigned to indicate the typical amount of time required to achieve the qualification or course. All qualifications recognised by the New Zealand Qualifications Authority are registered on the online New Zealand Register of Quality Assured Qualifications, marketed as Kiwi-Quals.

10	Doctorates
9	Masters
8	Postgraduate Diplomas and Certificates, Bachelors with Honours
7	Bachelors Degrees, Graduate Diplomas
6	Diplomas
5	
4	
3	Certificates
2	
1	

### NZ Tertiary Education Levels

**Source:** New Zealand Register of Quality Assured Qualifications, 2008.

The New Zealand Qualifications Authority also operates a National Qualifications Framework (NQF). The NQF provides a national database of unit standards and national qualifications (Certificates or Diplomas) for both secondary schools and the vocational sector. There are over 15,000 unit standards on the NQF which are building blocks of national qualifications. Unit standards are developed by standard setting bodies for specific industries or by national standard bodies for generic and cross-industry competencies. Unit standards and National Qualifications achieved through secondary schools, Industry Training Organisations or training providers accredited by the New Zealand Qualifications Authority are recorded on a national database which can provide a national transcript known as a *Record of Learning*. Unit standards and qualifications once on the learner's *Record of Learning* are permanently recorded even though the unit standard or national qualification may expire and be removed from the National Qualifications Framework.

Historically the Massey University Graduate Diploma in Emergency Management has been the only university level qualification in emergency management available in New Zealand until the Auckland University of Technology (AUT) emergency management programme was launched this year (2008). The Massey Graduate Diploma in Emergency Management has evolved since its inception in 1992 when it was formerly offered as the Diploma in Civil Defence and as part of its initial development received seed funding from the former Ministry of Civil Defence. Since then it has continued to keep pace with industry changes and in 1998 it was changed to the Diploma in Emergency Services Management (offered from 1999) and in 2000 became the Graduate Diploma in Emergency Services Management (offered from 2001) and was changed to its current title, the Graduate Diploma in Emergency Management in 2004 (offered since 2005) (Neall, 2008). Over 55 Graduate Diploma's in Emergency Management (or former variations), two Masters Degrees of Philosophy in Emergency Management have been awarded by Massey University since 1994. No Doctorate Degrees in Philosophy in Emergency Management have been awarded to date (Massey University, 1992-2006). University of Canterbury also offer post-graduate qualifications majoring in hazard and disaster management, however these require an undergraduate degree in science and are more suitable for hazard management practitioners as opposed to emergency management practitioners. Massey University is the only University in New Zealand to offer a full range of post-graduate studies to doctorate level in emergency management.

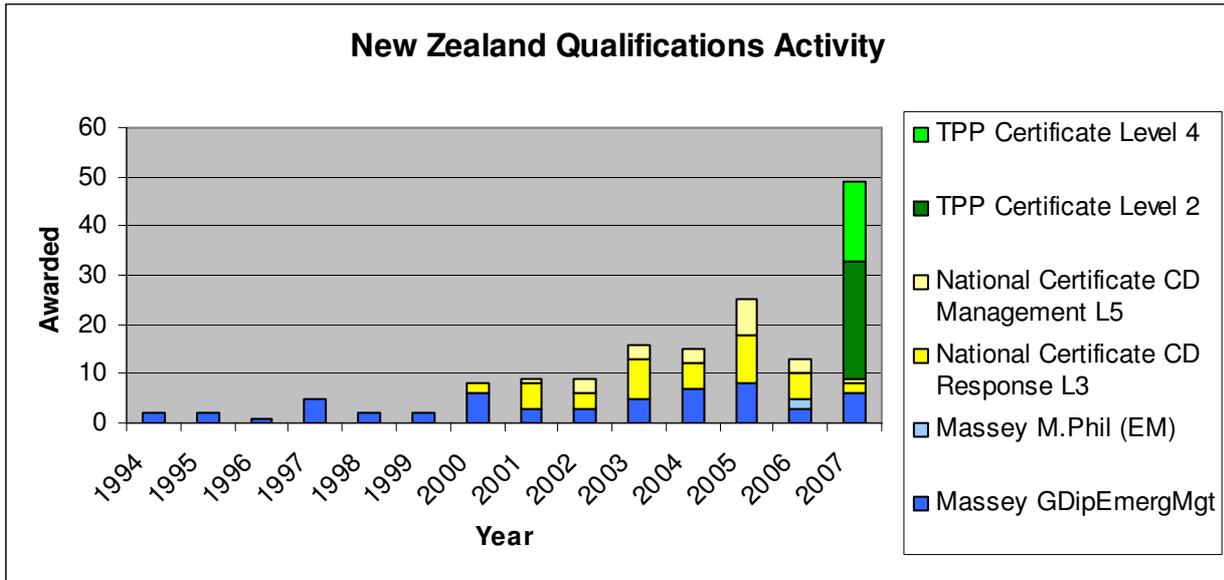
The National Qualifications Framework has two National Certificates in Civil Defence; National Certificate in Civil Defence (Response) Level 3 and the National Certificate in Civil Defence Management Level 5. These have been available primarily by workplace training and assessment through the Local Government Industry Training Organisation, the *Gazetted* standard setting body for Civil Defence pursuant to the Industry Training Act 1992. Since their introduction in 1997, over 40 people have been awarded the National Certificate in Civil Defence (Response) Level 3 and over 20 people have been awarded the National Certificate in Civil Defence Management Level 5 (NZQA, 2008) – an average of 5.54 certificate graduates per annum. As at the 31<sup>st</sup> of December 2007, there had been over 8,618 unit standards achieved to date from the Civil Defence sub-field (NZQA, 2008).

In 2006, Tai Poutini Polytechnic in partnership with the Emergency Management Academy of New Zealand (EMANZ) developed two tertiary certificates in emergency management (level 2 and level 4), comprising of local (exclusive to the provider) standards and unit standards from the National Qualifications Framework.

Tai Poutini Polytechnic awarded 40 Certificates in Emergency Management at its inaugural graduation ceremony in 2007 (EMANZ, 2007) less than eighteen months from its launch – an average of 26.66 certificate graduates per annum. The success of this new qualification is already apparent and it is making a sound impact on the emergency management sector (EMANZ, 2007).

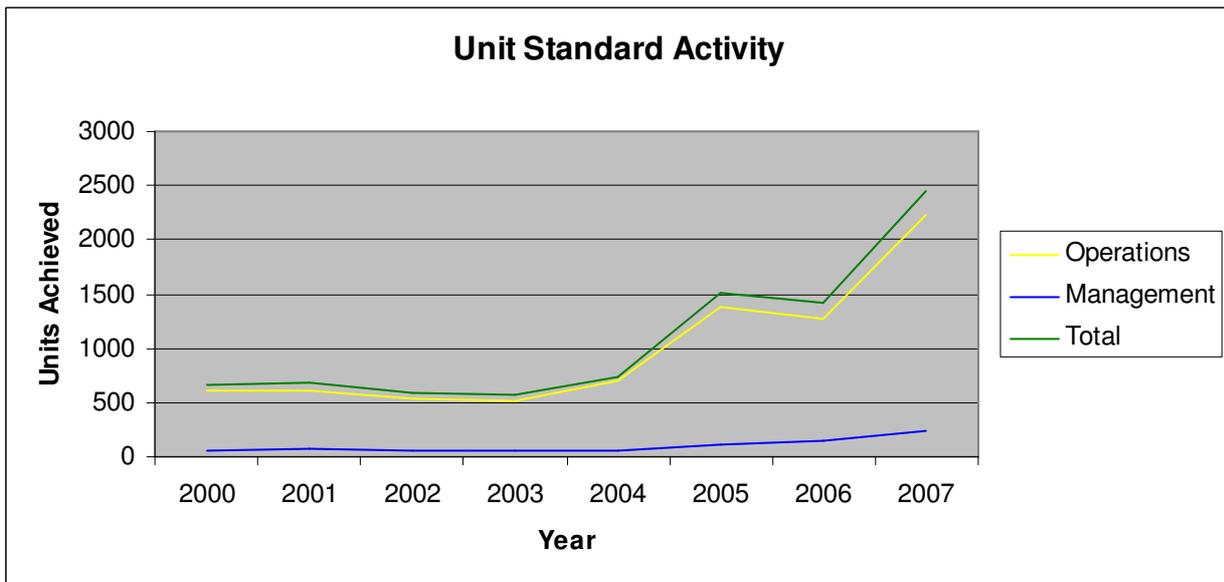
There has been a growing trend in the achievement of emergency management qualifications in New Zealand since 1994, with now over 158 people holding nationally recognised qualifications at various levels in civil defence emergency management (refer Table 1). There has been significant growth in emergency management qualification achievement and this can be mainly attributed to the introduction of the Tai Poutini Polytechnic emergency management programme in 2005. Although there is a significant increase in civil defence unit standard achievement (refer Table 2), there has been a reduction in National Certificate achievement since 2005 which coincides with restructuring of the Ministry of Civil Defence & Emergency Management. This reduction could be attributed to the Ministry's relationship with the Local Government Industry Training Organisation that has seriously deteriorated since new professional development staff were appointed; and the Ministry may no longer be a strong supporter of the national qualifications for politically unknown reasons.

As the AUT emergency management programme was only introduced in 2008, no statistics have been included in this report.



**Table 1:** New Zealand Qualifications Activity.

Source: NZQA, 2008; Massey University, 1994-2007; Tai Poutini Polytechnic, 2007.



**Table 2:** Unit Standard Activity

Source: NZQA, 2008.

## ***The New Emergency Manager***

### ***“Career Outlook: Very Good***

*The outlook for emergency management officers is very good and the number of people employed in this occupation is expected to grow moderately over the next two to three years” (New Zealand Careers Service, 2007).*

Historically emergency managers have come from an emergency service or military background, however the sector evolution away from cold war preparedness has prompted a more diverse range of new emergency managers being employed that have proven to be equally effective, especially where in New Zealand there is little or no formal education in civil defence emergency management as part of progression requirements within emergency services and the military.

Despite the changes in emergency management practice, some areas the sector within New Zealand still draw on the ‘can-do’ macho-male (Britton, 1999). The de-militarisation and internationalisation of emergency management also now places demands on a new generation of emergency manager and there is a need to fill this demand with highly adaptable, practical and educated emergency management practitioners.

There has been considerable research into “new emergency managers”, particularly in the United States where since Terror Attacks of September 11 2001, research has prompted significant changes in homeland security and emergency management curriculum, including:

- Top Ten Competencies for Professional Emergency Management, by Wayne Blanchard, 2006, Federal Emergency Management Agency.
- Emergency Management Core Competencies, by David Etkin, 2006, York University.
- The Emergency Manager of the future. Workshop Summary by Monique Hite, 2003, National Research Council.
- Outlines of Competencies to develop successful 21<sup>st</sup> century emergency managers, by Wayne Blanchard, 2003 (draft), Federal Emergency Management Agency.
- Top 10 Core Competencies and Courses as Selected by Practicing Emergency Managers, by Daryl Spiewak, 2005, International Association of Emergency Managers.

The globalisation of emergency management ensures that such research is equally valid and applicable within Oceania as it is elsewhere. Consolidating the range of research by various faculty and discussions from higher education conferences administered by the Department of Homeland Security, Blanchard developed the “Top 10 competencies for Emergency Management” (Blanchard, 2005) to assist institutions design new emergency management education programmes. These competencies include:

1. Comprehensive Emergency Management Framework or Philosophy
2. Leadership and Team Building
3. Management
4. Networking and Coordination
5. Integrated Emergency Management
6. Emergency Management Functions
7. Political, Bureaucratic, Social Contexts
8. Technical Systems and Standards
9. Social Vulnerability Reduction Approach
10. Experience

There is no one qualification within Oceania that encompasses all the above competencies, in fact qualifications alone do not make a competent emergency manager. A credible emergency manager needs to have both practical skills as well strong academic subject knowledge. Since 1993, there has been an internationally accepted credentialing system that requires a range of attributes, including practical experience and academic understanding.

This credentialing system is known as the Certified Emergency Manager (CEM®) and has been developed by the International Association of Emergency Managers. CEM® requires the following:

1. **Education:** A university degree (any discipline) or substituted experience in emergency management.
2. **Experience:** Three years of full time emergency management including a major exercise or disaster.
3. **Training:** 100 hours in both emergency management and general management.
4. **Contributions:** At least 6 contributions to the profession outside of job requirements

5. **Essay:** Completion of an essay that confirms knowledge of emergency management principles.
6. **Examination:** Completion of a multi choice examination based on international and regional emergency management curriculum.

Since 1993, over 1,000 emergency management professionals have met the requirements of this prestigious international credential (Armstrong, 2007a). The CEM® is well aligned to Blanchard's top 10 competencies as it also ensures experience beyond academic requirements.

The International Association of Emergency Managers also provide an entry/graduate level credential known as the Associate Emergency Manager (AEM®)(Armstrong, 2007b). The AEM® is based on the same requirements as the CEM®, however only requires training, essay, reference and exam components from the CEM® (International Association of Emergency Managers, 2007); making it ideal for diploma and degree level emergency management graduates. The International Association of Emergency Managers also has an international student chapter that provides students to be non-voting members of the association at lower membership fees, access to mentors, and the benefit that they may apply for scholarships for emergency management projects and stipends to IAEM conferences.

There has been no competency profiling undertaken to date for Australian Emergency Managers known to Emergency Management Australia (Flemming, 2008) or for New Zealand (Stewart, 2008) (Stuart-Black, 2008). Meanwhile in the United Kingdom, a project is underway to develop national occupational standards for Civil Contingencies (Lawson, 2008). Despite this, Blanchard's "Top 10 competencies for emergency management" is valid and very applicable to the New Zealand environment.

However despite the demand for new emergency managers, there is no integrated or collaborative pathway for aspirant emergency managers to enter the industry and nothing available in New Zealand to meet the gap between applied training certificates (Level 5 and below) and post-graduate education in emergency management (Level 7 onwards).

## Developing a Collaborative Educational Pathway

### Emergency Management Core Competencies

Etkin’s *Emergency Management Core Competencies* identifies competency areas across the range of emergency management professionals, from practitioners, managers, senior policy makers and researchers. The model clearly illustrates the various levels of education and how they relate to levels of practice within emergency management.

### Differentiating Educational Programs in Emergency Management



Source: *Emergency Management Core Competencies* (Etkin, 2006)

There is a need to develop a collaborative educational pathway that is aligned to international best practice, that allows engagement from a range of learners at varying levels of experience and qualification, that is integrated through a continuum from certificate through to doctorate level education whilst promotes benchmarking against international credential such as the CEM®. To date no such pathway has existed within New Zealand or Oceania.

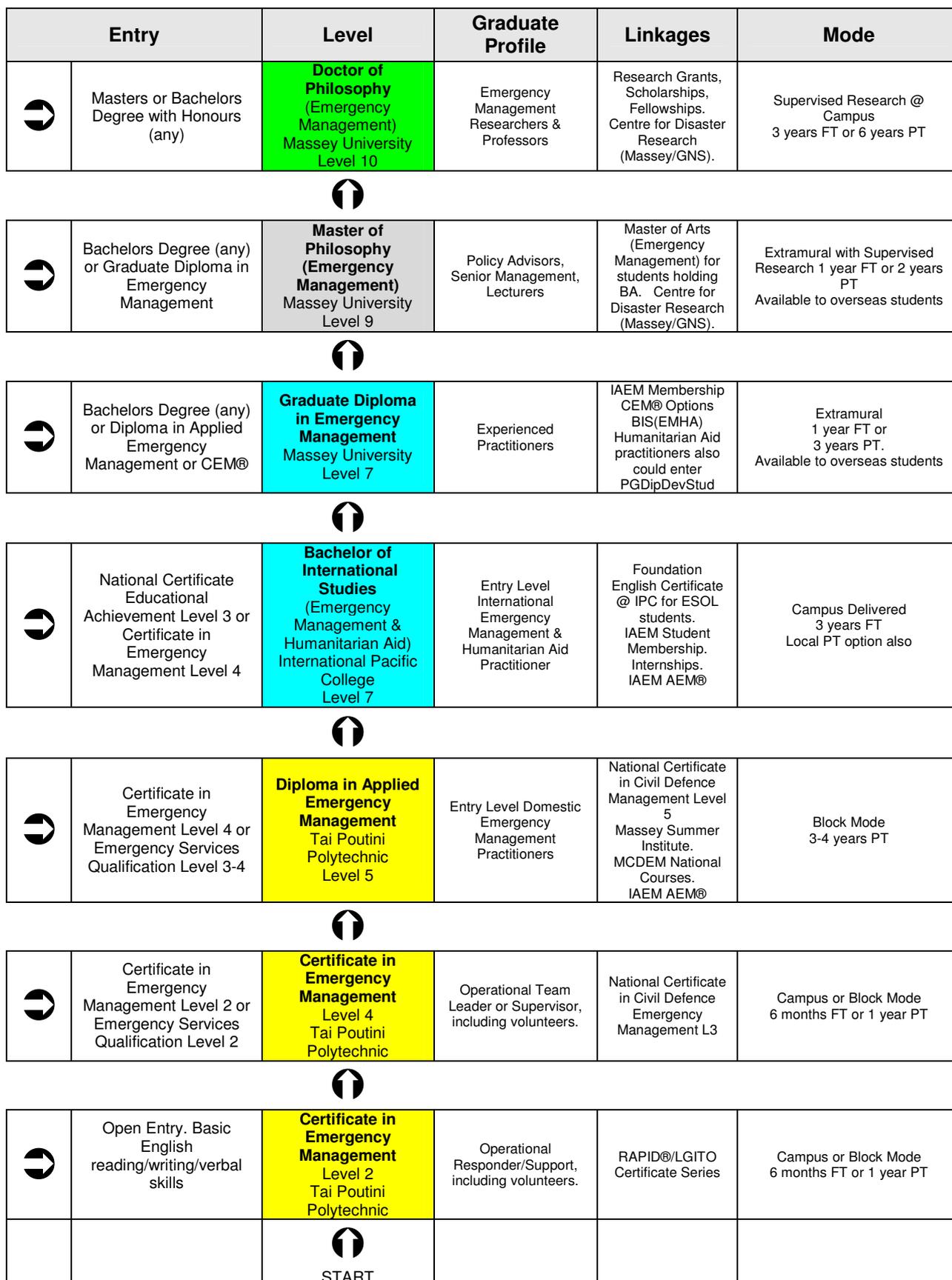
## ***Collaborative educational pathway***

Developed prior to learning about Etkin's model, the Emergency Management Academy of New Zealand developed a pathway to provide for the first time in New Zealand's history a collaborative and integrated emergency management education and training pathway. The *collaborative educational pathway* is based on niche education providers working together. Since the development of the *collaborative educational pathway* the Tertiary Education Commission has produced its Tertiary Education Strategy; which supports collaborative provision: "The new tertiary education system will be focussed on a differentiated but complementary network of provision. This requires stronger collaboration between tertiary education organisations to maintain student pathways, and build on each others' strengths" (Ministry of Education, 2006b).

Etkin's model adds further weight to the collaborative educational pathway that has been developed. Conceptually, the collaborative educational pathway has been endorsed by some of New Zealand's leading emergency management training and education institutions, including Massey University, International Pacific College, Tai Poutini Polytechnic, and the Emergency Management Academy of New Zealand. The pathway provides an integrated and collaborative continuum in emergency management from certificate to doctorate level, all centrally coordinated and available in Palmerston North. A summary of each qualification (current and proposed) is available (refer Annex A).

The initial draft of the pathway in 2006 caused for the development of a Diploma in Emergency Management, however since then the pathway has developed and prompted the development of a new major within the existing International Pacific College Bachelor of International Studies to incorporate the cultural and international studies aspects required by a truly global transportable and recognised emergency manager. This diversification to an international emergency management context for the degree major responds to government expectations for providers to "Provide education with an increased international dimension – support New Zealand and New Zealanders to compete internationally and support New Zealand's contribution to international economic and social development and environmental sustainability, especially in the Pacific" (Ministry of Education, 2006b).

### Collaborative Educational Pathway Diagram



**Note:** *Entry requirements for the above qualifications have been simplified for the purpose of this paper. For detailed and formal requirements, please contact the provider directly for further information. Subject to change without notification. Box colours have been selected to reflect Etkin's core competencies framework.*

## **Learner Profiles**

To further illustrate the collaborative educational pathway, a range of typical learner profiles have been developed and hypothetically engaged.

### **Learner Profile – International Student**

International learners will be able to engage effectively into the pathway at varying levels depending on their qualifications and experience. For learners seeking an undergraduate qualification in emergency management, their study can commence at International Pacific College through their Foundation English programme to prepare them for entry into the Bachelor of International Studies (Emergency Management and Humanitarian Aid) or BIS(EMHA).

The BIS(EMHA) may be accessible for learners from within the Pacific Region through the assistance of NZAID or other scholarships, increasing sustainable disaster management and community resilience within the Pacific.

Upon graduation of the BIS(EMHA), graduates can continue with the pathway including the Graduate Diploma in Emergency Management and Masters of Philosophy (Emergency Management) extramurally, part-time or full-time back in their home country if they wish.

International students wishing to undertake doctorate level research may be eligible for assistance under the New Zealand International Doctoral Research Scholarship (NZIDRS) programme. Initiatives developed by Government such as “domestic status for new international doctoral level students’ initiative” also make it easier for doctoral level students to engage in the collaborative educational pathway.

## **Learner Profile – Domestic School Leaver**

A new generation of emergency managers can be drawn from the secondary education sector through a number of ways that encourage and engage young learners.

Students awarded the National Certificate in Educational Achievement Level 3 (Year 13) can enter the Bachelor of International Studies (Emergency Management & Humanitarian Aid). Through scholarships, domestic students may be eligible for full or partial scholarships at IPC to undertake the BIS(EMHA), creating another incentive for a new generation of emergency managers. Students seeking applied technical skills that would be beneficial to future careers in emergency management, emergency services and military, could also enter and complete the Tai Poutini Polytechnic (TPP) Certificate in Emergency Management Level 2 or 4.

Students awarded the National Certificate in Educational Achievement Level 2 (Year 12) have two options. They can enter and complete the Certificate in Emergency Management Level 4 or upon certificate completion and subject to recommendation, they could then move forward to undertake the BIS(EMHA). This allowance encourages learners to continue to engage in life long learning and strengthens the tertiary education strategy priority to have more people to graduate with a Level 4 qualification or higher before the age of 25 years.

## **Learner Profile – Adult Student – Minimal Qualifications**

There is interest from people that wish to get into the emergency management sector but are not formally linked or involved in any way. Adult students over the age of 25 with sound literacy and numeracy skills are able to enter the pathway by becoming a full time student within the BIS(EMHA) or part/full time complete the Certificates in Emergency Management (Level 2 and Level 4) and continue with the Diploma in Applied Emergency Management part time. Diploma graduates can then study extramurally part or full time and undertake further study at Graduate Diploma level and beyond. Adult learners with minimal literacy and numeracy skills are able to take courses such as Certificate in University Preparation available from Massey University. Learners that are already involved in emergency management part time such as local authority staff who undertake emergency management training a few times a year, could also engage the pathway in a similar fashion by undertaking the pathway part time from Certificates in Emergency Management, then

Diploma in Applied Emergency Management followed by the Graduate Diploma in Emergency Management and beyond.

### **Learner Profile – Bachelor Degree Graduate (Non Emergency Management)**

Learners with an undergraduate degree can enter directly the Graduate Diploma in Emergency Management or Masters in Philosophy (or Arts as appropriate). Such learners may undertake the Graduate Diploma or Masters programmes part or full time. Some learners, especially those involved and interested in research may be able to undertake their research as part of the Joint Centre for Disaster Research, a venture between Massey University and GNS Science, based in Wellington. There are opportunities to continue the pathway to doctorate level. Graduates seeking to develop their applied emergency management skills are encouraged to also undertake the Diploma in Applied Emergency Management Level 5 or Certificate in Emergency Management Level 4.

### **Learner Profile – Experienced Emergency Management – Minimal Qualifications**

Emergency managers already within the sector, but who do not hold formal qualifications in emergency management may have the option to either use CEM® status to apply for admission with equivalent status into the Graduate Diploma in Emergency Management, or complete the Diploma in Applied Emergency Management.

If emergency managers believe they would prefer to undertake under graduate level study, then they can undertake the Diploma in Applied Emergency Management part time and continue the pathway to Graduate Diploma, Masters and Doctorate level as appropriate. Those with more than eight years full time emergency management experience should consider undertaking the International Association of Emergency Managers *Certified Emergency Manager* (CEM®) credentialing process which benchmarks their competency to an international standard without the need to hold graduate level qualifications.

## **Alignment with Tertiary Education Strategy**

On December 14, 2006 the Minister for Tertiary Education, the Honourable Doctor Cullen released the Tertiary Education Strategy for 2007-2012. The document also incorporates the Statement of Tertiary Education Priorities 2008-2010 (Ministry of Education, 2006a). The *collaborative educational pathway* is aligned to the Tertiary Education Strategy, based on partnership between providers and underpinned through engagement of stakeholders.

### ***Expected contribution of tertiary education***

#### **Success for all New Zealanders for life long learning**

The *collaborative educational pathway* provides a continuum of quality education at all levels to ensure New Zealanders and international students alike can engage and continue learning at any point. The educational infrastructure within the Manawatu allows for those with minimal literacy and numeracy skills to be engaged and encouraged to enter the *collaborative educational pathway* should they choose to pursue a career in emergency management. The *collaborative educational pathway* is one that is reasonably rare, that provides an integrated and seamless learning pathway encompassing Certificate, Diploma, Bachelor, Graduate Diploma, Masters and Doctorate level education. No other providers outside of this partnership in New Zealand have achieved such a high level of collaboration.

The *collaborative educational pathway* also ensures graduates can compete globally – an expected contribution of tertiary education (Ministry of Education, 2006b). Additionally the Tertiary Education Strategy sets the achievement of Level 4 or higher level qualifications for New Zealanders, especially advanced trade, technical and professional qualifications as a priority. Again the *collaborative educational pathway* has a concentrated focus at Level 2 and above, with the mechanisms to encourage those with lower qualifications to continue and strive for higher education.

## Creating and applying knowledge to drive innovation

Research is an important part of the *collaborative educational pathway*. At the higher level of the pathway, it provides for the creation of knowledge that can be re-invested back into the curriculum of lower levels, ensuring that subject content remains cutting edge and to best practice. The collaborative nature of the partnership ensures recognition that research is important and more effectively networks researchers, lecturers, practitioners and students. The Massey University and GNS Science *Joint Centre for Disaster Research* can play an important role as part of this research re-investment approach.

## Strong connections between Tertiary Education Organisations and the communities they serve

Outside the confines of New Zealand, linkages already established by the Emergency Management Academy of New Zealand have enabled attendance at the prestigious, by invitation only, Annual Department of Homeland Security (Federal Emergency Management Agency) Higher Education Conference. In 2007, EMANZ was the only tertiary education organisation within Oceania to attend and the opportunity provided access to new curricula in international emergency management and networking with other tertiary education providers involved in emergency management. This approach is well aligned to the Tertiary Education Strategy (Ministry of Education, 2006b), that places the expectation:

### **Tertiary Education Strategy:**

#### **Connections to improve quality and relevance of education and knowledge.**

Strong connections both within the New Zealand education system and with educators overseas are critical to improving the quality of education and research. These include:

- Professional learning communities of education and researchers.
- International connections in research, education and learning.
- Effective partnerships with schools to ensure that all students have the best possible opportunities to make successful transitions into tertiary education and the workforce.

The Emergency Management Academy of New Zealand has strong linkages with the International Association of Emergency Managers with the Chief Executive of the Academy is currently appointed as the New Zealand Representative for the Oceania Region for IAEM, as well as an active member of the Oceania

Region Professional Development Sub-Committee. The *collaborative educational pathway* is aligned to the International Association of Emergency Managers Certified Emergency Manager (CEM®) credential.

The International Pacific College Bachelor of International Studies (Emergency Management & Humanitarian Aid) is also being developed in consultation with international researchers, educators and practitioners. The Massey University range of graduate and post-graduate studies in emergency management also engage international learners and encourage connections in research in a global context.

As part of the *collaborative educational pathway*, the Emergency Management Academy of New Zealand will also initiate discussions with secondary schools to promote the pathway and ensure barriers for participation are reduced.

The *collaborative educational pathway* encourages connections to support social, cultural and environmental outcomes (Ministry of Education, 2006b). The pathway develops a new generation of emergency management and humanitarian aid practitioners that can effectively respond to the social, cultural and environmental needs of the community before, during and after a disaster. In particular the International Pacific College Bachelor in International Studies (Emergency Management & Humanitarian Aid) provides compulsory papers in culture/languages and environmental studies. There is also an opportunity through college emergency response teams or full time students of the Certificate in Emergency Management to be used domestically in times of declared emergencies. The Emergency Management Academy of New Zealand provides operational support to Civil Defence Emergency Management Groups in the times of need, ensuring educators are kept operationally current and active thereby enhancing the quality of emergency management education programmes.

In terms of professional development of teaching and research staff to improve the quality of education and research, a *revolving door* process that encourages staff to engage in overseas aid projects or domestic emergency management projects shall be established. This will enable staff to seek valuable overseas operational experience during breaks or while on leave during the semester, either through secondment or unpaid leave. It is important to ensure the teachers within the continuum, particularly at the undergraduate levels have significant industry experience and credibility to provide a realistic understanding of constraints and limitations in relation to implementing the theory particularly in the area of reduction (Kingsbury, 2008).

## ***Tertiary Education: Priority outcomes***

### **Increasing educational success for young New Zealanders**

According to the Tertiary Education Strategy the focus of this priority is on young people as the benefits of a tertiary education are higher for those who start early (Ministry of Education, 2006b). The OECD calculated recently that a female school leaver starting a degree can expect a return of 13% a year on her investment in tertiary education, while a female aged 40 when starting a degree gets a return of 7.5% (Ministry of Education, 2006b).

The availability of a Bachelors degree is central to the pathway as it provides a way for young New Zealanders to enter the growing and challenging industry of emergency management and humanitarian aid. New Zealanders are known to be global citizens and our military is held in high regard in international peace keeping operations. The Bachelors degree is accessible for those holding NCEA Level 3 and for those that exit secondary school earlier with NCEA Level 2 who go on to the Tai Poutini Certificate in Emergency Management Level 4. Graduates of the BIS(EMHA) have a transportable qualification that can be used domestically or internationally – in fact there is merit for graduates to seek internships and entry level positions abroad in order for them to return to New Zealander in due course with international experience that can contribute back to our society and economy.

### **Increasing literacy, numeracy and language levels in the workforce**

Emergency management practitioners require good literacy, numeracy and language skills. At all levels these skills are developed further beyond requirements set for NCEA. Massey University also offer a Certificate of University Preparation, allowing those over 20 years of age to develop their skills prior to returning into education. There are also a good number of education providers within the Manawatu that can assist both young and adult learners with developing their literacy, numeracy and language levels prior to entering the *collaborative educational pathway* ensuring there are minimal barriers to engage and participate.

## **Increasing achievement of professional qualifications to meet industry, regional and national needs**

According to the New Zealand Careers Service, the outlook for emergency management officers is very good and the number of people employed in this occupation is expected to grow moderately over the next two to three years (2007). With the growing demand for emergency managers due to retirement and sector growth, there is a national need to develop a pool of new generation emergency managers that possess the right skills and knowledge to protect our communities.

There has been an over reliance to employ former emergency service and military personnel because there is no pool of graduates with entry level qualifications (such as Bachelors Degree or Diploma level).

There is an assumption by recruiters of emergency managers that emergency service or military personnel are likely to be better at emergency management than someone without such an operational background. This “Halo Effect” can be likened to education organisations employing a receptionist for example from the New Zealand Qualifications Authority on the assumption they would be experienced in educational management and policy, when in fact unless their role was specifically in educational management, they would not likely to have these competencies. The same assumptions are sometimes made when recruiting new emergency managers from emergency service and military backgrounds – recruitment should be based on core emergency management competencies, not because of the name of their former employing organisation alone. In the core emergency service qualifications, namely: National Certificate in Urban Fire & Rescue Operation, National Certificate in Ambulance or Royal New Zealand Police College Certificate in Core Policing – there is no knowledge or skill component relating to Civil Defence Emergency Management that ensures a functional understanding of the New Zealand emergency management framework, legislation or strategy. It is only those individuals who may get appointed to Emergency Service Coordinating Committees and similar operational multi-agency working groups, that generally endeavour to learn either informally or formally the discipline of comprehensive emergency management.

Internationally, there is strong research to support that emergency management is a specialised profession and the former command and control approach utilised by those from Police and military roles is questionable (Dynes, 1983).

Our national need is to ensure New Zealanders can engage in both domestic and international emergency management contexts. Accordingly to Dr. Wayne Blanchard in an interview with the IAEM Bulletin Editor (Thompson, 2002), the new generation emergency manager is likely to have the following attributes.

1. College educated—many with EM degrees
2. More professional and knowledgeable
3. Knowledge base: science and research
4. Technologically more proficient/adept
5. Younger
6. More diverse and culturally sensitive
7. Emergency management is career of first choice
8. Building disaster-resistant communities focus
9. Proactive
10. Lifelong learner; reads disaster literature
11. Joins professional associations
12. Plans with jurisdiction stakeholders
13. Better paid
14. Better funding for EM programs
15. Upwardly and geographically mobile
16. Broader range of working contacts

Globally, the emergency management profession is growing. According to the Bureau of Labor in the United States of America, the number of emergency management specialists is projected to increase by 28% to about 14,000 from 2002 to 2012. Reflectively, since 1994 the number of universities and colleges offering emergency management programmes has grown from four to at least 114 (Whitaker, 2007). The recent establishment of an Oceania Region for the International Association of Emergency Managers, through their Certified Emergency Manager (CEM®) credential may well promote further transportability of degree level graduates to head overseas and later return with valuable knowledge and experience.

## **Improving research connections and linkages to create economic opportunities**

The final priority set under the Tertiary Education Strategy is to improve research connections and linkages to create economic opportunities. The *collaborative educational pathway* promotes the return of research back into undergraduate education and overall development of knowledge within the emergency management sector. Initiatives developed by Government such as “domestic status for new international PhD students initiative (introduced in April 2005), and the New Zealand International Doctoral Research Scholarships Programme (NZIDRS) shall continue to actively attract top international research students (Ministry of Education, 2006b).

Developments established prior to the *collaborative educational pathway* such as the Joint Centre for Disaster Research reinforce connections and linkages to create economic opportunities with the Pathway supporting the initiative with the generation of more graduates likely to pursue post-graduate education and research activities.

Already, the Emergency Management Academy of New Zealand is seen as a reputable international provider of emergency management education and training, with projects in Nepal, Indonesia, United States of America, Republic of Marshall Islands and United Arab Emirates completed to date. The new partnerships established under the *collaborative educational pathway* will further create economic opportunities for all those involved and also promote joint ventures domestically and internationally where appropriate.

## **Manawatu - Centre of Excellence**

With all aspects of the *collaborative educational pathway* available from Palmerston North in Manawatu there is more than geographical merit in having Manawatu to become the Centre of Excellence for Emergency Management Education.

### ***Global Destination***

The *collaborative educational pathway* paves the way for Manawatu to be established as the *Oceania Centre of Excellence for Emergency Management Education*.

Through this collaboration there is an opportunity to create significant economic opportunities by making Manawatu a preferred destination for emergency management education and training, from certificate to doctorate level, for both domestic and international students.

The majority of partners to the *collaborative educational pathway* are based in Palmerston North, Manawatu. Palmerston North is known as “Student City”. It has a significant infrastructure to attract and support students both domestic and international. Palmerston North has the only full time Student City Coordinator, sponsored by Vision Manawatu and as part of this initiative the brand and website [www.studentcity.co.nz](http://www.studentcity.co.nz) provides valuable information for potential and current students alike.

The emphasis of Palmerston North being an international Student City is very apparent with the formation of International Education Manawatu. A network established to promote economic growth through developing Manawatu as a preferred destination for international students, from secondary to tertiary levels. Three major institutions already operate from Palmerston North, these are; Massey University, International Pacific College and the Universal College of Learning (UCOL) and are members of International Education Manawatu. There are over 3,000 international students in the Manawatu (Vision Manawatu, 2007) and they are well supported through a range of services specific to ensure their pastoral care.

Although Tai Poutini Polytechnic is based on the West Coast, they are recognised as the only Polytechnic to have emergency management programmes in their charter. The remaining partners to the *collaborative*

*educational pathway* are all within a five kilometre radius and there is excellent public transport between IPC, Massey and the City Centre.

The basis of the Pathway is collaboration. The development of the pathway has ensured a continuum of education, but without a central point of delivery and support there is a risk that the approach becomes fragmented. To ensure the Pathway can meet strategic requirements set by the Tertiary Education Strategy it will be vital to jointly promote and market Manawatu as the *Oceania Centre of Excellence for Emergency Management Education*.

## **Student City**

*"International students recommend Manawatu for its exciting student life, lower study costs, and easy access to educational institutions as some of the benefits of studying in the region. Safe, affordable, high-quality accommodation is available within a home-stay, hostel or private flat. International students from many countries enrich the region enabling students to enjoy a truly unique international experience. Students enjoy the friendly welcome they receive in the Manawatu, which is one of the most affordable locations for study within New Zealand"*. International Education Manawatu.

Manawatu is the ideal *Centre of Excellence for Emergency Management Education*. Its central location makes it accessible for domestic students. International students have easy access to the Manawatu through the Palmerston North International Airport, complimented with well established national rail and bus networks. The City of Palmerston North has a population of approximately 78,000; about 40% of the population are studying (Student City, 2007). In Palmerston North there is a free bus service for students to and from Massey University, International Pacific College and the city. As the city is set on a flat plain, many students elect to use bicycles to travel around and those using private motor vehicles can enjoy the wide roads and low volume traffic.

Palmerston North city boasts a diverse range of student accommodation from campus hostels, flats, apartments and home-stay options. As "Student City", Palmerston North, is the ideal destination for students wishing to study emergency management. This approach is consistent to the Tertiary Education Strategy that expects that New Zealand is promoted internationally through international study, research and

academic exchange opportunities and connections; and to provide high quality education for international students sustaining a high-value export education sector (Ministry of Education, 2006b).

## ***Local Support***

Within the Manawatu there are excellent networks and relationships within the emergency management group and with the local tertiary education organisations. Many of the local emergency managers are current students or graduates of the Massey University Graduate Diploma in Emergency Management or Tai Poutini Polytechnic Certificate in Emergency Management (delivered by the Emergency Management Academy of New Zealand). Since February 2008, the Manawatu-Wanganui Civil Defence Emergency Management Group has a Memorandum of Understanding (MOU) with the Emergency Management Academy of New Zealand to provide operational support during a local emergency as well as training support services. It is these key relationships that can add value to the delivery of education programmes as many of the local emergency management practitioners have expressed interest to become guest speakers on local emergency management education programmes, let it be the IPC BIS(EMHA) or proposed Diploma in Applied Emergency Management. This ensures academic programmes are delivered with operational credibility and also provides aspirant emergency managers an opportunity to interact with future employers and vice versa.

Local military establishments including Royal New Zealand Air Force Base Ohakea and New Zealand Army Linton Camp also can add value to having Manawatu as the *Centre of Excellence for Emergency Management Education*. Their presence can increase opportunities for military personnel to undertake emergency management education programmes, their resources may well be available for exercises and training and their offers to provide guest speakers, especially around international humanitarian aid interventions would certainly add value to the continuum and Centre of Excellence concept.

## **Recommendations**

### ***Adoption of collaborative educational pathway***

The *collaborative educational pathway* marks a milestone in the history of emergency management education. It integrates providers in a collaborative fashion and provides learners a multi entry and exit pathway across all educational levels, from certificate to doctorate. The strategic joint marketing of this qualification will see greater uptake of emergency management education and generate graduates that can meet the challenges of today's evolving and demanding emergency management environment.

### ***Formalising of Manawatu as the Centre of Excellence***

With its significant educational and student pastoral care infrastructure, Manawatu has the opportunity to further enhance its international reputation as a world class study destination. The addition of emergency management study options through the *collaborative educational pathway* will create Manawatu as the niche location for all levels of study while ensuring expectations for collaboration are achieved under the Tertiary Education Strategy. Through marketed partnerships, Manawatu should be formally recognised as the *Centre of Excellence for Emergency Management Education*.

### ***Local research***

Despite excellent research undertaken overseas in relation to emergency management competencies, there has been no research undertaken in New Zealand or Australia on the competencies required for a contemporary emergency manager. Although the overseas research provides generic outlines and are believed to be applicable to the New Zealand environment, it would be appropriate to undertake local research to validate any such assumptions. In addition to this void of research, there is also insufficient data available in New Zealand in respect to the labour statistics for emergency management officers such as demographical information, salary range, qualification range and geographical distribution.

Such information is required if the sector wishes to plan for the future of emergency management, in particular to respond to a forecasted shortage in human resources due to turn over and an increase of experienced emergency managers retiring (New Zealand Careers Service, 2007).

## Appendix A: Qualification Summary

### *Certificate in Emergency Management (Level 2)*

<b>Provider</b>	Tai Poutini Polytechnic
<b>Level</b>	2
<b>Credit</b>	45
<b>Entry</b>	Open
<b>Purpose</b>	To provide introductory practical training in emergency management, particularly response.
<b>Target</b>	Emergency management responders and support personnel.
<b>Curriculum</b>	Core modules including civil defence emergency management framework, health and safety, stress management, incident management, radio operation, disaster survival and incident reporting. Followed by a wide range of elective modules including disaster rescue, radio and satellite communications, swiftwater/flood response, aircraft safety, emergency welfare, emergency operations centre support and other similar topics.
<b>Website</b>	<a href="http://www.tpp.ac.nz">www.tpp.ac.nz</a>
<b>Linkages</b>	Depending the electives chosen, graduates should also be eligible for LGITO/RAPID® Certificates.  Local linkages with Secondary Schools delivering leadership and/or emergency management programmes could also be integrated to provide efficient and seamless transition from secondary education to tertiary education.

### *Certificate in Emergency Management (Level 4)*

<b>Provider</b>	Tai Poutini Polytechnic
<b>Level</b>	4
<b>Credit</b>	60
<b>Entry</b>	TPP Certificate in Emergency Management Level 2
<b>Purpose</b>	To provide applied leadership and incident management skills, supplemented with further practical training in emergency management, particularly response.
<b>Target</b>	Supervisors of emergency management responders and support .
<b>Curriculum</b>	Core modules including emergency powers, applied incident management, leadership and teamwork. Followed by a wide range of elective modules generally at a higher level including exercise management, media liaison, technical rescue, swiftwater/flood response, adult education, emergency welfare and other similar topics.
<b>Website</b>	<a href="http://www.tpp.ac.nz">www.tpp.ac.nz</a>
<b>Linkages</b>	Depending the electives chosen, graduates should also be eligible for the National Certificate in Civil Defence Emergency Management (Operations) Level 3 and further LGITO/RAPID® Certificates.  Local linkages with Secondary Schools delivering leadership and/or emergency management programmes could also be integrated to provide efficient and seamless transition from secondary education to tertiary education.

## ***Diploma in Applied Emergency Management***

<b>Provider</b>	Tai Poutini Polytechnic
<b>Level</b>	5
<b>Credit</b>	130
<b>Entry</b>	<ul style="list-style-type: none"> <li>▪ TPP Certificate in Emergency Management Level 4 or</li> <li>▪ TPP Certificate in Search &amp; Rescue Level 4 or higher SAR qualification or</li> <li>▪ National Certificate in Civil Defence (Response) Level 3</li> <li>▪ National Certificate in Ambulance Level 4 or</li> <li>▪ National Certificate in Fire &amp; Rescue (any sector) Level 4 or higher qualification or</li> <li>▪ NZ Police Training Services Certificate in Core Policing (or former version) or</li> <li>▪ NZ Defence Force Senior Non Commissioned Officer Course – Sergeant equivalent</li> <li>▪ NZ Defence Force Commissioned Officer Course – Lieutenant equivalent</li> </ul>
<b>Purpose</b>	To provide a part time programme comprising of applied emergency management skills.
<b>Target</b>	Newly appointed Emergency Management Officers, typically those who already have a Bachelors Degree, Diploma or Certificate in related field.
<b>Curriculum</b>	Curriculum is still under development but likely to include CDEM framework/legislation, comprehensive emergency management, leadership, emergency management functions (welfare, EOC, communications), exercise management, media management, relationship management/integrated emergency management, crisis management, emergency planning, public education, risk management, incident control/management. Credit transfer from other disciplines is likely to be included in the qualification including New Zealand Defence Force and emergency services. The Massey University Summer Institute and MCDEM courses may also be incorporated through the completion of short post-course assignments. The IAEM examination may be able to be integrated into the Diploma as a final requirement.
<b>Website</b>	<a href="http://www.tpp.ac.nz">www.tpp.ac.nz</a>
<b>Linkages</b>	<p>Possible linkages to the National Certificate in Civil Defence Management Level 5 and a graduate pathway to the Massey Graduate Diploma in Emergency Management.</p> <p>This qualification should provide sufficient training and education opportunities to award the IAEM AEM® credential.</p>

*This qualification is under development. Any aspect is subject to change.*

## ***Bachelor in International Studies (Emergency Management & Humanitarian Aid)***

<b>Provider</b>	International Pacific College <i>EMHA lecturers supplied on secondment from EMANZ</i>
<b>Level</b>	7
<b>Credit</b>	360
<b>Entry</b>	National Certificate in Educational Achievement Level 3 or equivalent; or Tai Poutini Polytechnic Certificate in Emergency Management Level 4 with recommendation
<b>Purpose</b>	To provide a graduate entry level qualification for those seeking a career in international emergency management and/or humanitarian aid.
<b>Co-Requisite</b>	Tai Poutini Polytechnic Certificate in Emergency Management Level 4 or National Certificate in Civil Defence Emergency Management (Operations) Level 3
<b>Target</b>	International students, school leavers (NCEA Level 3), Certificate in Emergency Management Level 4 graduates.
<b>Curriculum</b>	Economics, International Relations, Internationalism, Environmental Studies, Research Skills, Interdisciplinary Project, Languages/Culture, and specified papers pertaining to emergency management and humanitarian aid (50% of BIS).
<b>Website</b>	<a href="http://www.ipc.ac.nz">www.ipc.ac.nz</a>
<b>Linkages</b>	<p>Most Graduates should be able to receive IAEM Associate Emergency Manager (AEM®) credential upon completion of an IAEM essay and examination.</p> <p>IAEM Students Members may also be eligible for IAEM scholarships whilst studying full time. NZAID Scholarships may be applicable for Pacific Island students – subject to NZAID approval.</p> <p>IPC also offer scholarships for NZ and Australian citizens/residents for this programme, subject to availability.</p> <p>Internship opportunities for graduates are to be investigated and offered if available.</p>

*This qualification is still under development by IPC and EMANZ, above requirements and information subject to change. This qualification is planned to be available from 2009.*

## **Graduate Diploma in Emergency Management**

<b>Provider</b>	Massey University
<b>Level</b>	7
<b>Credit</b>	120
<b>Entry</b>	Bachelors Degree (any) Diploma in Applied Emergency Management (entry method subject to approval) For experienced emergency managers, holding no formal qualifications – the CEM® may provide sufficient credentials to enter the programme with admission with equivalent status.
<b>Purpose</b>	To provide higher education and research activities in emergency management practice as part of ongoing development of modern emergency managers.
<b>Target</b>	Emergency Management Officers already in the industry who seek further development of emergency management practice/academia and research skills.
<b>Curriculum</b>	Two papers from Natural hazards, Coping with Disasters, Emergency Management; with the balance of the qualification from a range of related papers.
<b>Website</b>	<a href="http://www.massey.ac.nz">www.massey.ac.nz</a>
<b>Linkages</b>	<p>The Graduate Diploma in Emergency Management can be structured to lead into the Master of Arts (Emergency Management) or Master of Philosophy (Emergency management) depending on what undergraduate qualifications the student has.</p> <p>As the Graduate Diploma is taken typically part time over a four year period, if employed in emergency management the Graduate already holding AEM should be able to receive the IAEM Certified Emergency Manager (CEM®) upon three years of experience including a major exercise or actual disaster and other specified criteria. If the Graduate Diploma is completed in one year of full time study or three years part time study, the student may be awarded <i>distinction</i>.</p> <p>Those holding a Bachelors Degree or with professional experience may also be interested in the AUT Post-Graduate Certificate in Emergency Management.</p>

## ***Master of Philosophy (Emergency Management)***

<b>Provider</b>	Massey University
<b>Level</b>	9
<b>Credit</b>	240
<b>Entry</b>	Bachelors Degree (any) – example IPC BIS(EMHA) Graduate Diploma in Emergency Management (entry method subject to approval)
<b>Purpose</b>	To provide higher education in emergency management research, including the dissertation of a thesis in emergency management.
<b>Target</b>	Emergency Management Officers already in the industry who seek further development of
<b>Curriculum</b>	120 credits in emergency management from prescribed list, and a 120 credit thesis in emergency management (one or two part).
<b>Website</b>	<a href="http://www.massey.ac.nz">www.massey.ac.nz</a>
<b>Linkages</b>	<p>The Graduate Diploma in Emergency Management can be structured to lead into the Master of Arts (Emergency Management) or Master of Philosophy (Emergency Management) depending on the students undergraduate qualification.</p> <p>Students may also participate in research at the joint <i>Centre for Disasters Research</i>, a collaborative venture between Massey University and GNS Science. This linkage further ensures research findings can be redistributed into current methodology at all levels within the pathway.</p> <p>Students already holding a Bachelor of Arts, may undertake the same curriculum as above and be awarded the Master of Arts (Emergency Management).</p> <p>Those holding a Bachelors Degree may also be interested in the AUT Master of Emergency Management.</p>

## **Doctor of Philosophy (Emergency Management)**

<b>Provider</b>	Massey University
<b>Level</b>	10
<b>Credit</b>	480
<b>Entry</b>	Bachelor or Masters degree with 1st or 2nd class honours (Div) I or equivalent.
<b>Purpose</b>	Graduates will be able to conduct independent research in emergency management at the highest level, and communicate effectively to different audiences.
<b>Target</b>	Emergency management researchers
<b>Curriculum</b>	The degree of Doctor of Philosophy (PhD) is the highest supervised degree offered by Massey University. It is awarded for a thesis which is an integrated and coherent report that demonstrates a candidate's ability to carry out independent research and analysis at an advanced level in a particular field of study. The thesis may consist of several studies or cases, in which event their relationship to one another must be demonstrated. The thesis may consist of a candidate's published or unpublished work or a combination of both, provided this has not been used for the award of any other academic qualification.
<b>Website</b>	<a href="http://www.massey.ac.nz">www.massey.ac.nz</a>
<b>Linkages</b>	<p>Students may also participate in research at the joint <i>Centre for Disasters Research</i>, a collaborative venture between Massey University and GNS Science. This linkage further ensures research findings can be redistributed into current methodology at all levels within the pathway. Possible linkages with the New Zealand International Doctoral Research Scholarship Programme (NZIDRS).</p> <p>AUT Master of Emergency Management Graduates may also be interested to undertake this qualification.</p>

## Appendix B: Consultation List

<sup>1</sup> The Author wishes to thank the following people for their critique and review of this paper in its draft form.

The organisations of those listed, do not necessarily endorse the findings or recommendations of this paper.

### Academia & Research

**Assoc. Prof. Scot Phelps** JD MPH CEM®  
Southern Connecticut State University

**Dr. Bob Stewart** PhD  
Institute of Natural Resources  
Massey University

**Lawrence Arps** BEd MEdAdmin  
Director - Academic Services  
Tai Poutini Polytechnic

### Practitioners – Emergency Management

**Shane Bayley**  
Manager – Emergency Management  
Horizons Regional Council

**Stewart Davies** QSM  
Campus Emergency Management  
Massey University

**Robert Patton** MPhil(*Development Studies*) DipCD QSM  
Manager – Emergency Management  
ADRA New Zealand

**Anna-Marie Schopp** MPH BSc CertEMgt MIAEM  
Operations Manager  
Emergency Management Academy of New Zealand

### Specialist Consultants

**Kristin Hoskin** MSc GDipEmergServMgt MIAEM  
Kestrel Group Ltd

**Peter Kingsbury** BSc MSc  
Natural Hazards and Risk Management Consultant

### Standard Setting Body

**Kevin Wafer**  
General Manager  
Local Government Industry Training Organisation

Specialist Education Providers

**Tom Roche** DipTTeach NCCDMgt  
Executive Tutor  
Emergency Management Academy of New Zealand

**Chris Schraders** BBS PGDEPD MIAEM MNZOQ  
Special Projects Manager  
Emergency Management Academy of New Zealand

## Appendix C: Websites

Auckland University of Technology (AUT)	<a href="http://www.aut.ac.nz">www.aut.ac.nz</a>
Destination Manawatu	<a href="http://www.manawatunz.co.nz">www.manawatunz.co.nz</a>
Emergency Management Academy of New Zealand	<a href="http://www.emanz.ac.nz">www.emanz.ac.nz</a>
Emergency Management Institute (FEMA)	<a href="http://training.fema.gov/emiweb/edu">training.fema.gov/emiweb/edu</a>
GNS Science	<a href="http://www.gns.cri.nz">www.gns.cri.nz</a>
International Association of Emergency Managers	<a href="http://www.oceania-iaem.com">www.oceania-iaem.com</a>
International Education Manawatu	<a href="http://www.iem.net.nz">www.iem.net.nz</a>
International Pacific College	<a href="http://www.ipc.ac.nz">www.ipc.ac.nz</a>
Joint Centre for Disaster Research	<a href="http://diasters.massey.ac.nz">diasters.massey.ac.nz</a>
Local Government Industry Training Organisation	<a href="http://www.lgito.org.nz">www.lgito.org.nz</a>
Massey University	<a href="http://www.massey.ac.nz">www.massey.ac.nz</a>
Ministry of Civil Defence & Emergency Management	<a href="http://www.civildefence.govt.nz">www.civildefence.govt.nz</a>
New Zealand Careers Service	<a href="http://www.careers.govt.nz">www.careers.govt.nz</a>
New Zealand Legislation	<a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
NZ Register of Quality Assured Qualifications	<a href="http://www.kiwiguels.govt.nz">www.kiwiguels.govt.nz</a>
Our Region – Manawatu	<a href="http://www.ourregion.co.nz">www.ourregion.co.nz</a>
Project RAPID®	<a href="http://www.rapid.org.nz">www.rapid.org.nz</a>
Student City	<a href="http://www.studentcity.co.nz">www.studentcity.co.nz</a>
Tai Poutini Polytechnic	<a href="http://www.tpp.ac.nz">www.tpp.ac.nz</a>
Tertiary Education Commission	<a href="http://www.tec.govt.nz">www.tec.govt.nz</a>
Vision Manawatu	<a href="http://www.visionmanawatu.org.nz">www.visionmanawatu.org.nz</a>

## Appendix D: Abbreviations

AEM®	Associate Emergency Manager (IAEM Credential)
AUT	Auckland University of Technology
BIS(EMHA)	Bachelor of International Studies (Emergency Management & Humanitarian Aid)
CEM®	Certified Emergency Manager (IAEM Credential)
DHS	Department of Homeland Security (US)
EMANZ	Emergency Management Academy of New Zealand
EOC	Emergency Operations Centre
FEMA	Federal Emergency Management Agency (DHS)
FT	Full Time
IAEM	International Association of Emergency Managers
IEM	International Education Manawatu
IPC	International Pacific College
OECD	Organisation for Economic Cooperation and Development
LGITO	Local Government Industry Training Organisation
MCDEM	Ministry of Civil Defence & Emergency Management
NCEA	National Certificate in Educational Achievement
NQF	National Qualifications Framework
NZ	New Zealand
NZAID	New Zealand Agency for International Development
NZQA	New Zealand Qualifications Authority
NZIDRS	New Zealand International Doctoral Research Scholarship programme
PT	Part Time
PTE	Private Training Establishment (Registered by NZQA)
RAPID®	Response And Preparedness In Disasters (MCDEM/LGITO Project)
TEC	Tertiary Education Commission
TPP	Tai Poutini Polytechnic
UNDAC	United Nations Disaster Assessment Coordination

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## About the author



**Steve Glassey** NDipAET CertEMgt NCCDMgt MIAEM  
**Chief Executive**  
**Emergency Management Academy of New Zealand**

Steve Glassey has been involved in Civil Defence (Emergency Management) since 1989.

Steve is the Chief Executive and founder of the Emergency Management Academy of New Zealand (EMANZ), a New Zealand Qualifications Authority Registered Training Establishment. Since its inception in 2005, EMANZ has grown to be the largest provider of emergency management training in New Zealand with over 1,600 students and delivering over 120 courses per annum throughout New Zealand and overseas. The Academy employs over eight full time staff and over 15 casual tutors covering a spectrum of courses including emergency management, technical rescue, incident management, hazardous materials response and much more.

Steve has experienced a diverse array of occupations, including service with the Royal New Zealand Navy, Society of Prevention of Cruelty to Animals, Ambulance Service, New Zealand Fire Service National Headquarters and Ministry of Civil Defence & Emergency Management. Steve also has additional volunteer experience with the New Zealand Red Cross, New Zealand Mountain Safety Council, St John Ambulance, Rural Fire, New Zealand Disaster Assistance Response Team and the Swiftwater Rescue Education Trust.

Operationally, Steve has worked at the coal face as a Paramedic Rescue Technician and strategically in the National Crisis Management Centre during various events. Steve has delivered emergency management projects in United Arab Emirates, Nepal, Indonesia, and the United States of America, with many of these associated with his humanitarian aid work for the Adventist Development Relief Agency (ADRA).

Having been both a volunteer and career practitioner in emergency management, Steve has strong networks at all levels of emergency management in New Zealand and has received acclaim for national level projects including contributions to the National Urban Search & Rescue Programme, *Response And Preparedness In Disaster* (RAPID) Project and developing the *Collaborative Educational Pathway for Emergency Management* (a joint concept between Massey University, International Pacific College, Tai Poutini Polytechnic and Emergency Management Academy of NZ that provides education from certificate to doctorate level in Palmerston North, New Zealand).

Currently Steve is studying a Graduate Diploma in Emergency Management through Massey University and has already achieved several national qualifications in Civil Defence, Emergency Management, Fire & Rescue Services, Specialist Rescue, Health & Safety, Adult Education, and Urban Search & Rescue.

In addition to his role as New Zealand Representative for the International Association of Emergency Managers (IAEM), Steve is also on the IAEM Oceania Region's Professional Development Sub-Committee and is leading the development of the Oceania Certified Emergency Manager (CEM®) credential.

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