

The role of the New Zealand Earthquake Commission

Introduction

A fundamental duty of national governments is to house their citizens. Homelessness may be one of many issues which challenge some regimes in normal times, but after a widespread disaster it is the central concern.

Recovery of a community cannot commence until housing is found for all, even if initially temporary arrangements have to be made.

It may be thought the insurance industry can relieve this burden. Prudent home owners would surely take out a policy protecting them from the financial effects of damage from natural disasters and therefore not be callers on government assistance. In practice, disaster after disaster in the last quarter of the last century has demonstrated that the insurance mechanism does not work well for these events. Policies cost too much and are too restrictive. People choose not to purchase.

These disasters have also shown that societies will not tolerate allowing destitution and homelessness to descend on those who exercised their free choice not to purchase insurance cover. The result has been the sometimes unexpected necessity for governments, often assisted through overseas loans or charity, to provide for the housing of the majority of the victims of a natural disaster.

Following such an experience, many countries, often facilitated by the World Bank, have sought ways to manage this risk which inescapably falls to them. The New Zealand Earthquake Commission (EQC) model has been presented as an effective risk management option. In New Zealand itself, the government is investigating whether the EQC organisation can be utilised to cover a wider range of government risk.

The Earthquake Commission is becoming ever better prepared to cope with the enormous load of housing repair claims that the centralised scheme it administers will one day create. It has turned itself into a virtual corporation, takes advantage of the latest proven technology and leads the way in the collective effort vital for a community recovery.

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The insurance mechanism

Origins of insurance

Curiously, perhaps, the idea of insurance occurred, matured and expanded some time before any coherent theory of risk management — which placed it at the end of the decision chain of risk control — was developed. This was because some methods of risk transfer, like contracting out, require a sophisticated mercantile environment which took time to develop. Risk avoidance is largely common sense (which is not to say it is universally applied), so the age of science and meticulous recording had to arrive before anyone thought to encode a theory of risk management.

It is popularly held that the insurance industry was born in China, where ancient merchants transferred goods which had to negotiate rapids in the rivers onto several craft in a strategy which a later civilisation would describe as not putting all your eggs in one basket. The practice readily transferred to a financial basis as commerce adopted a monetary system. The many at risk from a similar peril contributed a small amount each to a central pool, which compensated the few who suffered the loss. Insurance spread from ships and cargoes, to buildings, plant and other assets, on to liabilities and personal injury and into specialist areas like loss of profits, pluvious (rainfall), crops, holes in one and so on. Insurance embraced new areas of technological progress and today the insurance of motor vehicles, aircraft, space craft and computers are all commonplace.

The simple concept of the many contributing to the losses of the few developed into a separate branch of the law and principles of indemnity, insurable interest, proximate cause, subrogation and utmost good faith became the

foundation of the practice of insurance.

The type of occurrence conferring the right of a pay-out became known as the 'peril insured against' and these also expanded over the years. The marine perils of fire, thieves, jettison or loss at sea, barratry and restraint of kings princes and people (Turner 1971) have grown with the classes of business to encompass burglary, forgery and defalcation, collision, professional negligence, inability to work through injury or illness, explosion on the launching pad and others too numerous to list. In fact, some policies gave up listing them and opted for the notorious and misleading term, 'all risks'.

As an aside, I know of no insurance policy which has used the term, 'act of God' either as a peril or as an exception to coverage. It is a popular misconception that insurance policies either do, or don't, cover 'acts of God', and the same people seem to be able to hold both beliefs simultaneously. The insurance industry has never been noted for its religious leanings and acts of God are nowhere defined or universally believed in.

In its enthusiasm to expand the list of perils for which insurance was available, the industry swept into the fields of flood, storm and hurricane, earthquake, volcanic eruption, man made disasters and other catastrophic events. And there, in the opinion of this author, it met its limitations.

The theory of insurance

Insurance utilises the natural probability law of large numbers: The larger the number of exposures to risk of independent, homogeneous units the closer will be the actual number of casualties to the probable number in an infinite series (Cockerell, 1987).

So it is necessary for a large number of persons or organisations to be independently at risk from the peril to be insured against. That peril will have a financial impact on the individual but its occurrence must be sufficiently unlikely as to warrant a relatively much smaller outlay of premium. The visitation of the peril must be a random event and all subjects insured must be equally likely to incur it (or as nearly equal for any

differences to be coped with by minor adjustments in individual premiums). Fire and motor vehicle insurance both fit the bill well (Walker, 1995).

Under these conditions, as a result of the law of large numbers, annual losses to the insurer (the holder of the premium pool) will tend to be predictable, enabling the fund to be operated with a high degree of assurance that all calls upon it can be met. Also, because the number of individual events each year is large, it is possible to undertake detailed analyses and construct a sophisticated pricing regime. In this way, the sharing of risk can be made more equitable and, by charging higher premiums for greater degrees of risk, can be used as an incentive to mitigate (Walker, 1995).

The insurance mechanism runs into danger when the peril insured against is not one to which all individuals or organisations are independently vulnerable, but are all vulnerable at once. This is the situation which occurs with the occurrence of natural or man-made disasters like earthquakes or pollution. Instead of the normal randomly selected, but predictable number of, victims, whole swathes of an insurer's portfolio become claimants all at the same time, threatening the financial stability of the firm and its operational ability to cope.

How insurance copes with disaster events

There are two ways adopted by the insurance industry to cope with this problem.

Firstly, companies apply various severe limitations to the coverage they are prepared to sell. The most vulnerable properties are not offered coverage at all. Property owners who can buy insurance are forced to keep much of the risk, through high excess levels (the amount deducted from any claim) or ceilings on the amount to which they can insure. In California, the standard residential earthquake excess is US\$15,000, although this can be lowered by paying an extra premium. In Turkey, the amount deducted from a claim is normally 5% of the value of the property, taken from the 80% of the cost of damage which the insurance company carries. In Japan, property owners' claims are limited to far less than the value of the damage.

The terms of coverage may be very restricted. In Australia there are several categories of flood defined (rather artificially) in insurance policies. Only some types are covered by insurance.

Premiums for disaster insurance cover

in prone areas of the world are prohibitive. They form a major outlay for homeowners. In the Los Angeles area of California, the premium for earthquake damage insurance is typically over \$1,000 per year for a home - and that is before paying extra to lower the excess.

Second, insurance companies purchase their own insurance against a catastrophic hit on their portfolio. Such catastrophe reinsurance spreads the risk more widely and aggregates it with others in an attempt to get the law of large numbers back in operating order. It is generally provided by separate funds reserved for the purpose.

The reinsurance market

One of the best known centres for reinsurance is Lloyds of London, home of over two hundred separate reinsurance funds or syndicates, all guaranteed by the same central fund maintained by a levy on all members. Lloyds has never been unable to meet its liabilities.

The doyens of the reinsurance industry are in Europe with companies like Munich Re, Swiss Re and General Cologne Re around a century old. By contrast, the market in Bermuda is a new phenomenon, with monoliths Ace and XL Mid Ocean the result of recent furious merger and acquisition activity. Some ordinary insurance companies do more than just dabble in reinsurance, and Axa and St Paul, for example, are major reinsurance players. Lastly, having a reinsurance company is sometimes seen, like having an airline, as a sign of national identity and there are several state owned reinsurers. These are a means of exercising some control over the local industry, and the funds that it causes to flow across borders. It will be realised that, in order to work at all, reinsurance must be an international enterprise.

Although reinsurance spreads risk, there are limits to the spread that can be obtained and big events like Hurricane Andrew in 1992 can threaten the stability of the industry. Reinsurers seek healthy rewards for taking on such commitments. The additional layer of activity adds to the cost of insurance. Catastrophe insurance requires higher premiums than normal insurance for the same risk level, and the greater the potential aggregation effect the higher the premiums required (Walker, 1995).

Competition and reality do battle in the reinsurance industry as elsewhere and pricing swings result. The customer of the catastrophe reinsurer exchanges the long wave volatility which could bring

about the ruin of the enterprise, for the shorter wave mercurialism of a highly competitive, short-sighted industry. Reinsurance prices have traditionally been most influenced by the proximity and size of the last big disaster.

EQC has placed one of the world's largest catastrophe reinsurance programs in the market for over ten years now, and its annual pricing experience serves as an example.

This is not the only matter that has had to be contended with. The availability of capacity has also been problematic in the past, although there is an argument that the industry has resolved this issue, partly by introducing large amounts of new capital and partly by straying into financial markets with newly designed hybrid products for the protection of insurance portfolios.

EQC first entered the market with a programme designed to soak up all the capacity of acceptable security (perceived ability to keep its side of the bargain when the earthquake occurred). This was estimated at around NZ\$1 billion worldwide. Five and six years later (Hurricane Andrew having blown away more than some towns and villages in Florida), such a programme could not be filled and EQC had to be content with three quarters of that amount. For the past two years, at least, as the seller's market attracted capital, EQC has placed a programme of over NZ\$1.5 billion and could have placed twice that, at the price taken (that is a guess, of course, as we did not test the market).

The human element

So insurance companies offer a partial, expensive financial disaster protection to the property owner. Many people take the rational decision not to insure because the product is so poor and the likelihood of needing it so low. Today, even after the Northridge earthquake in Los Angeles shocked some out of their complacency and gave the impetus to the formation of the California Earthquake Authority, the figure for California is reported as 17% of homes insured against earthquake. The World Bank cites 15% as the proportion of homes insured in Istanbul, with the figure elsewhere in Turkey as low as 2%. At the time of the 1995 earthquake at Kobe, Japan, only 3% of the homes in the prefecture had insurance.

Another paradigm is at work here; it is the natural human tendency to shut out unpleasant possibilities, or do anything about them. There is a well-documented

hierarchy of denial:

- it is not going to happen
- if it does happen, it will not effect me
- if it happens to me it won't be too bad
- if it happens to me and it's bad, there is nothing I can do, so why are you badgering me with exhortations to protect myself?

Just designing a limited insurance product and putting it on the shelf to sell does not address the need of the community. Like any 'bad', the product must be pushed out to the market and sold by persuasion, even coercion. The fact that few home-owners are contributing to the premium pool (and these are probably those for whom the risk is most apparent, so that insurers are being selected against) increases the insurance companies' risk levels and they react by raising prices and limiting coverage even more, thus further discouraging buyers and perpetrating a continuous spiral.

Solving the problem

The EQC scheme

New Zealand's post war politicians may have had an inkling of this theoretical framework or they may have stumbled upon a good solution which geological luck has turned into a winner. Over the past fifty-five years this country's state-sponsored disaster insurance scheme has been tinkered with—most notably in 1993 when it was withdrawn from the non-residential market—but its vital features have remained. The scheme adopts an insurance framework but counters its failings by using the power of the state.

The features of the Earthquake Commission (EQC) insurance scheme are:

- Universality—the scheme is as compulsory for residential property owners as the premium collection mechanism can make it. If a home is insured, then the insurance company is compelled to pay the EQC premium and EQC is bound to insure. Thus EQC insures about 90% of New Zealand homes and the human denial hierarchy is irrelevant. Until 1993, commercial property owners were also compelled to insure with EQC. Continuation of this would have necessitated a far more complex form of cover and increased EQC's liabilities to unmanageable levels. It appears that the insurance industry is needed here in all its choice and variety; commercial property owners can make their own risk management choices, including alternatives like facility duplication and avoidance of risk-prone areas. The absence of a duty to

businesses to ensure their survival allowed the Government to withdraw from this insurance coverage.

- Near universal application of the scheme allows reasonable terms and conditions to be applied. The EQC premium rate of 5 cents per \$100 of cover is the cheapest in any geologically hazardous area in the world. Excess levels are nominal; EQC pays 99% of the claim amount subject to a minimum contribution of NZ\$ 200 by the claimant (the land coverage provisions are different).
- Coverage is for physical damage. Although there is a maximum sum insured (\$NZ 100,000 on each dwelling and \$NZ 20,000 on contents), over 95% of all damage to homes will be met by EQC because virtually all damage up to the sum insured is covered.
- The perils insured against are earthquake, volcanic eruption, hydrothermal activity, landslip and tsunami. Fire following any of these is covered.
- The insurance is simple. It covers the stated perils, for a specified sum, under quite straightforward terms and conditions. In particular, there is one flat rate of premium. This avoids the endless controversy that differential rating, to try to reflect various shades of risk, would generate.
- Premium collection is a simple matter—another legacy of a flat rate system. The edict is unequivocal—if you insure your home your insurer must pay the EQC premium (which is then collectible from you) and EQC must provide the insurance. Apart from a few fringe issues surrounding the definition of a 'home' and suchlike (e.g. is a caravan on a permanent site, a student hostel, a private hotel, a 'home?') the scheme virtually runs itself, with minimal record keeping at EQC.
- Despite all this simplicity, the scheme has some innovations not found in other insurance policies, demonstrating its priority of meeting the needs of citizens over the practices of the insurance industry. The scheme covers loss of land from the perils listed above plus storm and flood. EQC will reimburse the value of the land around and under the house and that under the main access way to the property. There is a higher excess regime applicable to this cover. The Earthquake Commission Act defines physical damage to include damage which has not yet occurred but which is imminent, a provision which exercises the Commission's claims staff and advisers

extensively from time to time.

- Apart from premium collection which can be readily policed, EQC is independent of the insurance market and any other commercial enterprise. EQC is not a creature of the market, neither does it rely on it for funding, claims settlements or continued existence.
- EQC concentrates the need of a small country for reinsurance protection, and thus becomes a powerful buyer. The size of its programme and its ability to provide quality analysis (because it can utilise national statistics) make it a prestigious client in the world-wide reinsurance market.
- The legislation controlling EQC contains a government guarantee that all the obligations of EQC will be met. This is a necessity for a compulsory scheme and it provides EQC with the best financial security available. Standard and Poors recognise this with their claims paying ability rating of AAA for the Commission.
- EQC is not set in a competitive environment. Setting aside financial reserves and preparing to help a community to recover from a disaster do not fit an environment driven by market forces. Non commercial performance measures and controls can ensure an ability to be prepared for the event, treat claimants fairly and expeditiously, invest funds wisely, encourage mitigation and research, and play the right part in the coordinated approach that is essential to a disaster recovery operation.

EQC can be seen as a creature of its time and culture. It has worked through good luck; Ruamoko, the Maori god of earthquakes and volcanoes, has not rolled over violently in all the years EQC has existed. Other countries have their own means of compensating for the shortcomings of the insurance market. Spain, California and other states of the USA, Iceland and numerous national pooling arrangements all provide examples of centralised systems. As international agencies like the World Bank encourage disaster-hit countries to seek ways of mitigating the affects of the next catastrophe, there are many models to investigate.

Catastrophe response

A part of the insurance compact often overlooked is the need, as well as taking the premium and issuing the policy, to be able to deal with claims. In normal circumstances, this is rarely an issue, but a disaster event imposes huge financial

and logistical burdens on an insurance company.

Planning for the event and putting in place the logistical preparations do not come easily to commercially driven organisations. They require investments of time and money which may not provide a return during the working lives of those responsible for them. The experience in other countries is that, with the exception of extremely large companies like State Farm in the United States, insurance company — or industry — plans, such as they are, are found wanting when disaster strikes. In not only the insurance industry, disaster planning is too easily relegated to an area which never receives attention. An organisation like EQC is focussed on being ready for the widespread catastrophe and has the ability to make realistic, cost-effective arrangements which are, however, a pure drain on the bottom line. This need is well recognised by the government and the national treasury. The shareholders of commercial entities tend to be not so insightful or patient.

EQC's preparations

Concentrating the financial protection of homes into one organisation means concentrating the means by which that protection will be activated. An organisation like EQC is focussed on high impact but very low probability events. A small staff is all that is necessary to run the scheme day to day — ensure premiums are collected, the normal trickle of claims are met and the ordinary chores associated with running an efficient office are done.

This core of personnel requires manifold but scaled expansion when a catastrophe occurs. Even a non-profit organisation could not maintain the hundreds of staff that would be necessary to cope with the worst case scenario. It is a financial and logistical impossibility. The solution adopted by EQC has been to become a 'virtual organisation'.

Virtual organisations employ a minimum number of permanent employees but achieve their objectives through a web of contractual out-sourcing arrangements. At EQC we have researched our needs following a disaster of the type to which we will be called upon to respond. We have then sought out the best suppliers via tenders or market intelligence and signed contracts for the supply of specified products or services up to agreed levels within a certain period after being notified. For this, EQC pays annual retainers and agrees the costs it will meet

if contracts are activated.

As already stated, being ready incurs a financial expense for a benefit that may not accrue in a working lifetime. As well as the cost of the retainers, the costs of the exercises, tests, training and maintenance of interest of all our catastrophe response partners, are considerable. Altogether, EQC expends several millions a year on just trying to be ready. This has to be seen as legitimate operational expense.

Once contractual arrangements are in place, EQC incorporates them into its day to day operations. It is the best form of testing and exercising. So EQC is permanently in catastrophe response mode; most of the time we are ticking over on idle, but responding to an unusual sudden event is a matter of scaling up to the necessary levels what is already there, not trying to activate an arrangement that has, at best, only been tested or exercised in rather artificial circumstances.

Perhaps some examples will make things clearer.

On a day by day basis, EQC could control its 3,000 or so claims a year on a notebook computer with off-the-shelf software applications. However, our computerised claims management system resides on mirrored IBM AS400 mini-computers linked to NT servers (if this incomprehensible to you, what I am saying is that these are powerful machines with fail-safe features). With the software these computers run, EQC has the capability of managing up to 200,000 claims from a single event — our worst case. The critical point is, we run our claims from this system all the time. We have out-sourced the running of the system to IBM and our day to day usage has ensured mutual understanding of needs and confidence that the system works.

We have also out-sourced to a third party claims administration firm in Australia, the 'back office' claims handling function. Our two claims staff at EQC head office in Wellington could easily cope with a normal claims level, but it would take forty such people to service a 60,000 claim event. Our partner could expand to meet this demand within the time frame we have agreed, and in the meantime they handle all our claims. They are not waiting for the day when EQC has to activate the contract, they are operating under it now.

A vital part of a catastrophe response is to keep the public informed. Our communications and public relations consultants have been involved in our planning right from the start. With them,

we have designed information resources as ready as possible for release. These are press releases, advertisements, radio announcements, posters for distribution in the affected areas (for example, by nailing them onto lamp posts and telegraph poles or placing them in shopping malls and libraries), mail drops and notes for the Chairman or a Commissioner who may be called by the press. Our consultants should glide from their normal service level into the task of catastrophe response.

Not all activities necessary for a large catastrophe response can be built into day to day routines or envisaged as a simple scaling process. For example, if Wellington were affected by the earthquake, it may be necessary to operate the EQC hub from somewhere else. We have prepared for this to the extent that we have an alternative site, partially serviced and configured, at Manakau near Auckland and we can operate our alternative computer systems from there. Another retainer we have is with a helicopter operator from out-of-town. The aircraft will circle certain agreed landing sites in Wellington to pick up EQC staff if they are available and transfer them, firstly to a central location, and then out of the disaster area in order for them to make their way to Manakau. Obviously, this is not something we can incorporate into normal office procedures (however much the staff enjoy scenic helicopter flights) or do by sample or on a small scale, so we rely on testing the arrangement on paper and having an exercise at least once each year. So the staff get their ride.

In order to manage and control this web of contractual obligations and to scale up (and down, as the work load starts to decline after the event) effectively, sophisticated information and supervisory systems are required at headquarters. EQC has invested in some advanced technology. A hazard expert system, due for delivery early in 2001, should give vital initial indications of the expected affects of a large earthquake. EQC's initial response will be informed by the number of claims by categories of severity, their distribution (shown on a geographical information system) and total cost, as calculated by this computer program. Input of the total number of claims expected into a specially designed systems dynamics model will provide indications of the extent and areas of scaling up required. The balance among the various resources called upon by EQC will be monitored on this model to gain insights about bottlenecks and surpluses.

A future development is to have the model provide cash flow projections for both the costs of running the response and of actually settling the claims.

There are plans to utilise the internet to make available EQC's repair costing software. This should help to standardise and expedite the settlement of claims. The involvement of the building industry in compiling the database of material and labour prices is intrinsic to the success of this endeavour.

EQC's other roles

Facilitating research

EQC's disaster insurance scheme benefits from the other roles the government assigns the Commission under its Act. These are also functions that entities driven by commercial imperatives find difficult to undertake, and government control ensures they are not just left to chance. The Commission's expenditure on research and mitigation advice not only serves the objective of safer communities but reduces the potential for claims and their cost when they do occur.

Support for research into natural disasters and methods of reducing or preventing the damage they cause is primarily given through the Earthquake Commission Research Foundation. This internal EQC body has the objective of:

Reducing the damage caused by natural disasters as defined in the Earthquake Commission Act (1993) in order to build safer communities by:

- providing support for activities and research projects
- generating, disseminating and applying knowledge
- developing skills

The Foundation conducts biennial contestable grants rounds of about NZ\$700,000. Applications are open to all New Zealanders and are judged by a panel of independent experts. The average value of the 105 projects approved under this programme in the past ten years is just under NZ\$ 30,000. Project times of up to three years are allowable. About one in four applications is successful.

Projects are peer reviewed. On completion, summaries are placed on EQC's web page and published in the New Zealand Society for Earthquake Engineering's Bulletin. Copies are sent to university and national libraries. They are available from EQC free or at cost of reproduction.

Other assistance for research includes expenditure of NZ\$ 150,000 per year on university scholarships and lectureships in order to develop research skills and

encourage entry into the fields related to seismic studies. Organisations that utilise and promulgate the results of research are supported to the extent of NZ\$60,000 per year and New Zealanders who participate in conferences and workshops at home and overseas, or who travel to the sites of recent earthquakes to report on aftermaths, are funded.

Thus, through EQC, the government is investing in the growth of expertise and knowledge, and the country's level of preparation for disaster.

A future role for the Foundation is to attract other funding from outside the Commission. The Foundation has been set up as a pseudo-trust so that conversion to a true trust to meet the needs of other participants would be an easy task. EQC looks forward to a time when the Research Foundation is recognised as a means by which some private enterprise firms may invest in research and development.

The Commission itself is investigating with Government the possibility of extending its role in research to partnering with the Institute of Geological and Nuclear Sciences to provide the national hazard monitoring network needed by a country which sits astride two of the world's major tectonic plates. 'Free to air' availability of the output of a world-class monitoring system would revolutionise the research capability of New Zealand scientists.

Public education

People have to know how to help themselves, and EQC has a role in public education. The Commission produces two school kits for the national curriculum. It also supports the Institute of Geological and Nuclear Sciences/Victoria University initiative called 'Quake-trackers', by which seismographs with ancillary equipment are installed in selected schools and the pupils taught how earthquakes are detected and characterised. Their work adds to the earthquake catalogue and is real research.

The Commission's television advertisements, magazine articles, newsletters, seminars, brochures and 'how to' sheets all make a contribution to increasing public awareness and knowledge. Collaboration with other organisations like local authorities, the Ministry for Emergency Management and the Insurance Council have resulted in posters, press announcements, Guidelines for Local Authorities and Telecom Yellow Pages revisions. Maintaining levels of awareness and knowledge is an onerous task and a

collective approach among several agencies is the way of the future.

EQC's flagship for public education is its sponsorship of the Awesome Forces exhibit at Te Papa (the Museum of New Zealand). This very successful investment has improved public knowledge through an enjoyable experience of the country's spectacular geological and meteorological features. It is not the only sponsorship of its kind; EQC also provides funds to the Taupo Volcanic Activity Centre and to travelling exhibitions which attract school children. EQC has its own static displays which tour the country, appearing in libraries, banks, shopping malls, conferences and other public places.

The Te Papa exhibit spawned a series of lectures and a book, both also sponsored by EQC which has provided funds for several publications, most recently 'Caught in the Crunch' by John Taber and Rebecca Ansell (Harper Collins), 'Rocked and Ruptured: Geological Faults in New Zealand' by Jeffrey J. Aitken (Reed) and 'Magnitude Eight Plus: New Zealand's Biggest Earthquake' by Rodney Grapes (Victoria University Press).

Educating the public by popularising science and reaching out to school-children is seen by EQC as the future trends. A recent trial of supplying to parents through primary school children samples of household safety hardware with instructions on use had a promising result.

Showing and telling the public how they can preserve their homes and possessions from damage is another matter which can be progressed and maintained only through collaboration, coordination and cooperation among many organisations. These approaches are all of a type that are at odds with competition and market dictates. Their import is good reason for government involvement in many aspects of New Zealand life. Public education, with its spin-off of better claims outcomes, is therefore a neat fit with government-sponsored disaster insurance.

Conclusion

We cannot predict disasters to a degree of accuracy that is of much practical use. It is not the disasters themselves that create the problem; it is the human settlements, with their accommodation, commerce and infrastructure, that cannot withstand the forces sent against them. We can still do much to make these communities safer and better prepared.

There is a need in a country particularly prone to one type of disaster or another, for an organisation with a duty and an

interest in sending out the mitigation message. People can make their homes and businesses safer by taking quite elementary precautions. For an organisation like EQC, a government agency tasked with bearing the financial brunt of damage to homes following a catastrophic event, there is self interest and promotion of the public good involved in encouraging mitigation activity.

This is the third leg of the EQC stool; the legs which make for the stable and focused organisation are:

- a simple, universal scheme for the affordable insurance of New Zealanders' homes
- a comprehensive plan for responding to a natural disaster
- a programme of public information, supported by strong support for research and science, on how communities can make themselves less vulnerable to the effects of extraordinary natural events.

EQC cannot prosecute any of these activities alone. The insurance scheme requires the collection of premiums and this is currently done through the insurance industry. Planning for the big event must be progressed in conjunction with all the other organisations that will have parts to play in the response and

restoration. There will be a chain of assistance and that chain, as the saying goes, will be only as strong as its weakest link. This is our challenge to all our potential colleagues. A real challenge for community leaders will be to coordinate all this effort.

Community preparedness is another shared responsibility. The susceptibilities of emergency services, infrastructure, lifelines, vital facilities, means of transport and communication, supply chains, commerce, and organisational structures are each critical to the performance of the whole.

Preparedness will never be complete. EQC continues to reassess and improve its own catastrophe response program. I will end with one of the tenets to which we hold: we are better prepared this week than we were last week, and next week I will say the same.

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About the Author

David Middleton, FCII, MBA, was appointed General Manager of the Earthquake Commission (EQC) in January 1993. His first task was to lead the organisation through the withdrawal of compulsory disaster insurance from commercial property and the conversion of the scheme to a purely residential one based on modern insurance practices. During David's time at EQC, the Commission has developed its capability to respond to a large influx of claims following a serious event and formalised these logistical plans into its Catastrophe Response Program. The Commission has also continued to lead the way in New Zealand in the area of natural disaster research funding and education about mitigating damage.

A Chartered Insurer, having been elected a Fellow of the Chartered Insurance Institute, David is also a Fellow of the New Zealand and Australian Institutes, and has also completed a Master of Business Administration degree with distinction, at Victoria University.

This article has been refereed

New Disaster Web Site

Disasters on the Web: providing an index to information for Victoria, Australia – www.disasters.au.com

New disaster Web site

A new Web site launched in March 2001 at GDIN2001 in Canberra has been developed under a grant from EMA to explore how disaster-related information on government and other Web sites can be located and made available to the community.

This Web site is designed to help 'improve community awareness of risk, preparedness and response' (Australian Goal 1) and also provides useful information for schools (IDNDR Major Theme 2. Education 2000) in the primary, secondary and tertiary curricula, by making use of the Internet, and developing and evaluating the effectiveness of a Web-based current disaster information service.

The site provides a starting point for seeking disaster information for Victoria, with a guarantee of up-to-date and accurate information, and links to information on individual disasters, indexed by type. Geological, meteorological and human-caused disasters are all included. Links to further information on the region in which a disaster has occurred e.g. satellite imagery, maps, climatic data, links to researchers with a prior knowledge of the area, and to available scientific and other

publications, reports and data sets is also being provided when available.

In addition, the site is developing data sets of background information, including information on the study and understanding of such disasters as earthquakes, landslides, floods, storms and fires. A related new site which is beginning to develop information on the risks and hazards associated with possible future volcanic activity in Southeastern Australia is also being linked to this disaster Web site for Victoria.

The site is currently housed on a University of Melbourne server, and is most easily located via the Web URL: www.disasters.au.com

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