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**A STRUCTURED APPROACH FOR INTEGRATED EMERGENCY
MANAGEMENT PLANNING AND RESPONSE FOR
PRE- DECLARATION EMERGENCIES**

**A thesis presented in partial fulfillment of the requirements for the degree
of Master of Philosophy**

in

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Abstract

This thesis study arose from the need to develop a disaster plan for St John Southern Region. To facilitate this, a multiagency approach began in 1999 with all the emergency services, local authorities, regional councils, Ministry of Health and Ministry of Civil Defence and Emergency Management to prepare a predeclaration CDEM integrated response plan to link between routine emergencies and CDEM declarations. This planning process continues currently in 2006 under the guise of the Otago Southland Emergency Planning Group (OSEPG).

Books, periodicals, emergency management articles sourced from both publishers, occurred from Massey University, the Police College Emergency Management collection and also Internet searches. The review was split between New Zealand authors and international authors. The review sought comparisons between integrated emergency management planning, interagency training considerations, response issues and incident management systems used to manage emergencies. These reviews allowed a comparison to research findings generated by this thesis.

This thesis aims to develop policies to encourage integrated planning and response for pre-declaration events. It also aims to demonstrate a process to integrate the response of diverse agencies and compares the Coordinated Incident Management System with the Otago Southland Emergency Planning Group planning and response arrangements.

Information for the study was derived from developmental notes associated with the OSEPG, literature reviews and Internet comparative studies along with interviews with all the agencies participants associated with the OSEPG during the last seven years to obtain a comparative analysis.

This thesis is not about the management of disasters, but is a planning emphasis for pre-CDEM events. A structure for integrated predeclaration planning is explained along with facets of the planning framework that has been operationalised in some sectors to integrate various levels of operational planning and response between some of the emergency services and rural communities. This thesis states that integrated planning and response as well as diversification of response resources at major incidents are advantageous to pre-CDEM declaration events.

This thesis has demonstrated the worthiness of having planning processes for pre-declaration emergencies. Forums such as the OSEPG have proven it is possible to enhance the planning and response continuum between routine and declared emergencies i.e. pre-declaration emergencies.

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Definitions

ACC	Accident Compensation Corporation
AED	Automated External defibrillator
All Hazards	Term used to define types of hazardous activity; can include, natural hazards, technological hazards , system failures, medical epidemics, environmental illness, ecological disasters, biotechnical and genetic engineering, political unrest and criminal action
CDC	Clutha District Council
CEM	Comprehensive Emergency Management. Colloquially known as the 4 R's covering reduction, readiness, response and recovery
CIMS	Coordinated Incident Management System
CDEM	(From CDEM Act Section 4) means the application of knowledge and measures and practices that; <ul style="list-style-type: none"> • Are necessary and desirable for the safety of the public or property and • Are designed to guard against, Prevent, reduce, or overcome any hazard or harm or loss that may be associated with an emergency and includes the planning, organisation, coordination and implementation of those measures, knowledge and practices.
CDEM Act	The Civil Defence Emergency Management Act 2002
CDEM Group	A group established under Section 20 of the CDEM Act, comprised of local authorities working in partnership with emergency services, major utilities and support agencies to realise that emergency management principles are applied at local level.
CEG	Coordinating Executive Group established under Section 20 of the CDEM Act. Comprised of senior executives of local authorities, regional councils, emergency and health services
CFR	Community First Response
CIMS	Coordinated Incident Management System
CODC	Central Otago District Council
DCC	Dunedin City Council,
DHB	District Health Board
EOC	Emergency Operations Centre. A facility where the direction and coordination of emergency activities during an emergency or disaster will occur.
ESCC	Emergency Service Coordinating Committee
GDC	Gore District Council
GIS	Geographical Information System

HFA	Health Funding Authority
ICC	Invercargill City Council
IEM	Integrated Emergency Management. Process to operationalise Comprehensive Emergency Management
IMT	Incident Management Team comprises Incident Controller, Operations Manager, Planning and Intelligence Manager and Logistics Manager
HSTLC	Hazardous Substances Technical Liaison Committees
MOH	Ministry of Health
MCDEM	Ministry of Civil Defence and Emergency Management
OMT	Operational Management Triage. Process to triage patients' numbers based on ease of recovery, effort required, resources required, number of victims and urgency of attention (medical triage)
ORC	Otago Regional Council
OSEPG	Otago Southland Emergency Planning Group
OSERP	Otago Southland Emergency Response Plan
PRIME	Primary Response in Medical Emergencies
PHEC	Pre-Hospital Emergency Care. The lowest level of qualification permissible to crew First Response Units whether Fire or Ambulance Service
QLDC	Queenstown Lakes District Council
RAPID	Response and Preparedness in Disasters
SDC	Southland District Council
SOP	Standing Operating Procedure
USAR	Urban Search and Rescue

1.0. Overview of the research project

1.1. Background and Justification

This thesis begins with an overview of the research project, the author's professional background and justification for undertaking this work. The overall objectives of the project are presented and the key objectives of the thesis are introduced. The thesis comprises six chapters that document the background methodology, results and interpretation of the study.

This project explores an area in emergency management not examined in other studies. The OSEPG planning group is unique to New Zealand. Information sought worldwide for the literature review indicates no other group like the OSEPG exists in any country where emergency planning is driven by emergency services linking routine emergency planning and response to government legislated CDEM or equivalent declaration processes. The discussion section introduces collaborative planning for emergency services; Civil Defence Emergency Management (CDEM), integrated planning and response to routine emergencies, through to CDEM declarations needing to be seen as part of a response continuum. Some OSEPG outputs have been successfully implemented in other areas of New Zealand.

In 1998 St John Southern Region recognised a need to enhance emergency planning within a Comprehensive Emergency Management (CEM) framework. "It is the responsibility of emergency management professionals to understand the total system, i.e. all aspects of CEM and how all various components fit together" (Britton 1998). Emergency services and Civil Defence in Otago and Southland previously did not undertake any integrated emergency planning for regional or local emergencies that could lead to Civil Defence declarations that required a coordinated approach. Although St John Southern Region responsibilities to its Priory Trust Board, delegated through the Chief Executive Officer to his Ambulance Service Manager, contained an obligation to update its regional disaster plan, no planning process existed.

This provided the catalyst for developing cooperation among emergency services, subsequently leading to the formation of the Otago/Southland Emergency Planning Group (**OSEPG**) and development of the Otago Southland Emergency Response Plan

(OSERP) for -“pre civil defence declaration” emergencies. With no mandate other than to support planning frameworks, St John took a lead role in forming the group. It comprised emergency planners from the Police, Fire and Ambulance Service as well as local authority Civil Defence Officers, NZ Army, Ministry of Health, Amateur Radio Emergency Corps (AREC), Rural Fire, Red Cross and input from the Ministry of Civil Defence and Emergency Management.

The OSEPG uses an “All Hazards” approach and Comprehensive Emergency Management frameworks for its planning work. The response plan known as the Otago/ Southland Emergency Response Plan (OSERP) uses the Co-ordinated Incident Management System (CIMS) framework for operational management when the plan is activated. OSERP allows large numbers of response resources to be utilised by an incident controller of pre-declaration emergencies and activation of Emergency Operation Centres (EOC’s) in support when required.

Prior to 1999 Civil Defence created Standing Operations Procedures to manage Civil Defence Emergencies and operate their Emergency Operations Centres; there was no planning within Civil Defence for pre-declaration emergencies. One outcome of developing multi-agency emergency planning groups and planning processes, was that emergency planners from across the primary emergency response agencies, along with representatives of Civil Defence organisations, moved away from isolationist (siloe) organisational planning frameworks.

Once inaugurated, OSEPG became involved in the conceptual development of integrated multiagency planning and found a pathway to apply multiagency planning processes that would not conflict with the local authority Civil Defence Plans, yet provide a continuum for an integrated response from routine through larger scale emergencies to disasters where Civil Defence Emergency Management declarations may occur and incident control moves to MCDEM or CEG’s of CDEM Groups.

Up to 1999 Police, Fire and Ambulance emergency services believed they had the capability to manage all community emergencies based on the assumption that all services had resources available to respond. The planning processes, however, identified response gaps in some communities’ and particularly medical response. Solutions to some deficiencies, such as building first response capability in rural communities, were developed as a result of this integrated planning process.

The planning process outcome was the realisation by Fire and Ambulance emergency planners that Integrated Emergency Management (IEM) principles usually applied to emergency events can also assist “normal” incident management. This response enhancement is seen at Fire and Ambulance co-response emergencies such as road traffic accidents. Responders with similar skill sets work in a complementary way to provide patient care and/or rescue trapped victims at small-scale incidents. With effective coordination and using IEM principles, a similar level of cooperation could be achieved at larger events.

Research for this project collected and analysed the views of numerous organisations involved in emergency management in Otago and Southland and brings together a cross agency perspective of emergency management planning and response at a regional level. A comparative analysis of interview responses by the author confirmed the thesis hypothesis of the need for structured planning processes for pre-declaration emergencies and integrative processes to be developed across agencies to enhance response to emergencies. Analysis of the Otago Southland Emergency Planning Group (OSEPG) project tests this hypothesis. This research has instigated development of policy initiatives and frameworks in New Zealand for pre-declaration emergencies.

The CDEM Act (2002) subsequently required the collective of emergency service personnel, along with Civil Defence Emergency Management Officers, to have an integrated planning focus. This ensured a linked pathway between tactical planning by response agencies and the CDEM strategic planning process. The planning process can be carried out through an Emergency Service Co-ordinating Committee (ESCC) or by formation of an emergency planning committee, similar to the OSEPG, chaired by Civil Defence Emergency Management staff attached to a CDEM Group. A collective of District ESCC’s could opt to form a regional emergency committee such as the Otago Southland Emergency Planning Group to give a regional perspective of integrated emergency planning and response. This would allow effective transition of key working criteria from routine emergencies to Civil Defence Emergency Management declarations.

This thesis discusses the transitional planning arrangements that have been put in place to 2005 in Southland.

1.2. Professional context

I manage ambulance operations for St John in Coastal Southland and Wakatipu and conjointly, have responsibility for emergency management planning for St John in Southern Region, which encompasses the provinces of Otago and Southland. My interest in integrated emergency planning has been part of my professional career for over 25 years. Completion of the Massey University Graduate Diploma in Emergency Services Management and now undertaking the Master of Philosophy degree in Emergency Management has further enriched my professional understanding of the complex subject of CEM. This research is motivated by my interest in integrating emergency planning and response into more cohesive integrated response frameworks across the Primary Response Agencies and rural communities using practical, common sense and best practice solutions.

1.3. Objectives of this study

The objectives of this study are to:

1. Identify and develop policies for encouraging integrated emergency response for pre-declaration events
2. Develop systems to integrate the response of diverse agencies
3. Compare and contrast the Otago / Southland Emergency Planning Group integrated response policies/arrangements with the Coordinated Incident Management System (CIMS) – deriving best professional practice based on optimal aspects of both approaches.

This thesis will explore the integrated emergency planning processes in Otago and Southland from 1999 – 2005 based on a Comprehensive Emergency Management Planning framework. It will discuss the difficulties associated with emergency planning across response agencies that have similar response roles, but structures or organisational cultures that are different and may be governed by statute or contracts. The study examines a pre-declaration Civil Defence Emergency Management plan, (OSERP), and the transition of the planning group (comprising Emergency Service Emergency Planners and Civil Defence Officers) into the planning structures of the CDEM Group system following the passing of the Civil Defence Emergency Management Act (2002). The study identifies the need for integrated emergency planning prior to the introduction of the CDEM planning process.

1.4. Structure of the thesis

This thesis is presented in six chapters. The first chapter introduces the issues around backgrounding why this study was carried out, in particular the why of how OSEPG came into existence. It introduces Comprehensive Emergency Management (CEM) and how it relates to the levels of incidents, which will allow understanding of the integrated response planning and response processes that are discussed within the body of the thesis.

The second chapter reviews literature from within New Zealand and overseas, exploring the themes for integrated emergency planning in emergency response frameworks in four countries as well.

Chapter Three discusses research methodology used in the thesis to examine the outputs of the OSEPG work over the last five years.

Chapter Four presents the results of the interviews, including responses from across the agencies interviewed in order to evaluate organisational thinking at the time the interviews were held. The interviews are found in Appendix One.

Chapter Five comprises the main discussion with expansion on the key findings from the surveys. It also introduces unpublished material in which the author has been engaged for the last five years. This material is assimilated into the key findings to contribute conceptual planning frameworks that are considered together with projects that have been operationalised from the OSEPG conceptual frameworks.

Chapter Six discusses the significance of the project, summarises the conclusions of the study and makes recommendations that have been generated from current research.

1.5. Introduction

Systematic pre-planning for potential emergencies using the New Zealand Coordinated Incident Management System (CIMS) and using tactical pre-plans (if they exist) may reduce the need to declare Civil Defence Emergencies. Such declarations are initiated

on statutory requirements for taskings (e.g. Evacuations) or resource requirements for event resolution against agency operational constraints. As a result of the pre-declaration emergency planning process, the concept of a monitoring Emergency Operations Centre (EOC) to support emergency operations has been developed. Using Integrated Emergency Management principles, operational tasking and agency interdependencies to manage large-scale emergencies is evaluated. Trigger factors that initiate EOC procedural activation and the capability of agencies to meet the demand yet maintain some form of residual response capability is also examined. Community First Response development in Southland is also discussed as an enhancement tool for initial emergency response.

1.6. Comprehensive Emergency Management and Levels of Incidents

Britton (1998) refers to CEM as “the ability and responsibility of organisations, communities or nations to manage all types of emergencies and disasters by co-ordinating the actions of numerous agencies. The framework of Comprehensive Emergency Management (CEM) is based on the 4 R’s. The “comprehensive” aspect of CEM thus includes all phases of emergency activity: reduction, readiness, response and recovery. It applies to all risks; natural, environmental and technological within a local-central government partnership.”

The differences between accidents, emergencies and disasters need to be clearly understood. Emergency Services, in the course of their response work, attend emergency incidents that can be defined as accidents, emergencies and disasters in order of increasing impact. The nature of the emergency event impacts on the degree of inter-service liaison required at incidents and this is where the Coordinated Incident Management System (CIMS) is utilised in the response to these events.

Britton (1986) suggested that accidents, emergencies and disasters could be differentiated in relation to their consequences and their level of disruption in relation to;

- the number of people involved and their relationships to victims
- nature and extent of the involvement of the population within the affected **'social system'**

- Nature and extent of destruction, dislocation and disruption exerted on the social system.

Accident

This is defined as an event that:

- Produces short or long term consequences that are restricted to a clearly **defined** geographical area and have a **highly localised** focus.
- Usually restricted to small groups of persons involved.
- Involves response demands that fall well within the capability and resources of those responding

The majority of the incidents response agencies face in a daily and weekly fashion are routine and meet the definition criteria of an “accident”. Both the Fire and Ambulance Services would deem a head on car crash an accident as it meets the definition above, as would a community cardiac arrest attended by them. The Coordinated Incident Management System (CIMS) could be used, but accidents as incidents can be resolved within 20-40 minutes so CIMS could be activated only with an Incident Controller and Operations Manager, if needed at all.

Emergency

This is defined as an event that:

- Occurs within a localised geographical area (not as focused as an accident) e.g. a rail, plane or tourist bus crash.
- Involves a **substantial** number of participants (victims and helpers), including emergency services and health services, i.e., a multiagency response still within combined agency resources.
- Involves **more complex** remedial action because of the greater area affected and the number of people involved. The greater complexity and response demands results in a noticeable time interval between event occurrence and resolution’ (Britton 1986).

An emergency often temporarily renders a small section of community infrastructure inoperative (e.g. Power lines down, railway lines damaged, airport closed) but does not produce any significant disruption or destruction of overall social structure or to

normal operational processes. Although involving demands that are more complex, Emergencies are dealt with within agency operational parameters with a full Coordinated Incident Management System (CIMS) brought into operation for this type of incident. Such incidents may take up to half a day or more to resolve with the Lead Agency Incident Controller changing as tasks are completed with incident resolution. A monitoring Emergency Operations Centre (EOC) may be activated. These levels of incidents can possibly occur once or twice a year in the Southland area. Two noteworthy events were the Homer Tunnel Fire in 2002 and the large arson fires in the Gore area in 2004.

Disaster

This is defined as an event that:

- Results in a **temporary** but overall **breakdown** of social processes, routines and interactions of a community.
- Results in **a quantity** of victims forming a significant proportion of the total population being affected.
- Suddenly exposes victims and **social systems** they inhabit to demands and experiences outside the normal realm of human experience.
- Results in widespread and diffuse destruction of **functional and administrative infrastructure** to the extent that ongoing societal routines are no longer possible.
- The demands and complexity of the event **exceeds** normal operational parameters and resources of the combined Emergency Management agencies, which require contingency management to deal with non-routine demands relating to the scale of the incident with **ambiguity** and **uncertainty** involved.
- Poses a **significant threat** to the systems of biological survival, order, meaning and motivation.
- Has the potential to **exhaust the emergency management capabilities** of a community, thereby increasing the affected community's reliance on external aid, assistance and resources' (Britton 1986).

CDEM declarations will take place against the background of both a serious emergency with rapid onset and also for slow onset events such as a serious drought

and a potential Avian Influenza Pandemic. The disaster is identified in hindsight. The community affected can range from a small local community, through regional impacts across a number of communities, to a national emergency affecting cities, towns and rural communities *all at the same time*. This immense level of emergency e.g. flood, earthquake or large rural fire, would require involvement by the Ministry of Civil Defence and Emergency Management in a support role for event resolution and a CDEM local declaration for tasking priorities. The CDEM Group Controller directs group-wide activity and provides advice to local controllers under section 27(2) of the CDEM Act.

Recent examples of disasters included the 1984 Southland floods, 1999 Queenstown floods, 2000 Central Otago fires and 2004 Manawatu and Bay of Plenty floods. CIMS at both CDEM level in an EOC and at IMT level at individual incident sites will be in action. There are some issues that have to be considered in order to manage this level and complexity of event and these will be covered in the main discussion (Chapter 5).

The specific focus for the ambulance service is to ensure all resources, services and personnel can be fully and effectively engaged in the response and recovery phases. To achieve this St John has to communicate, co-ordinate and cooperate with other agencies to ensure there are effective partnerships to assist with the primary and secondary threats of events and the taskings required within emergency incident management. Some tasks have to be shared because ambulance response capability is unavailable or shortages in other areas places demands on the ambulance service requiring them to ration their available resources.

1.6.1. The Four 'R's: The basis of Comprehensive Emergency Management

Reduction

'Reduction' relates to deciding how to minimise risks that impact on communities proactively.

The impacts of potential disasters can be mitigated by:

- For example by effectively developing and implementing a risk reduction programme

- Minimising the causes of a disaster e.g. ' flood proofing housing', not allowing building construction in flood zones
- Reducing the impact if a disaster occurs e.g. removing flammable trees and bushes away from dwellings in the rural/urban interface in fire risk areas.

An example of Reduction is provided by the *Invercargill Lifelines Project* where Emergency Services (Police, Fire, Ambulance, Civil Defence and Health) were required to complete a report in 2003 on the impact of environmental and technological risks on the emergency services as they are the key facility lifelines in Invercargill City. St John carried out a risk analysis for its own organisation and investigated the impact of seismic vulnerability, flooding, windstorm, snowstorm, marine inundation and technological hazards on its own emergency response structure in the Invercargill area.

Mitigating measures that could be developed or planned to reduce potential impact were written into the Lifelines report. One outcome was the need for priority routes and bridges to be identified to enable emergency services to access hospitals and various sections of the city, including evacuation routes. Some joint partnership work with the Invercargill City Council engineers and asset managers has occurred in relation to these points. St John needs to ensure its business continuity in order to provide the Coastal Southland area with a functional ambulance service during and following any environmental or technological hazard impact.

Reduction within St John is governed by the requirements of the Resource Management Act (1991), the Building Act (1991), the Occupational Health and Safety Act (1992) and their amendments. These acts apply to the construction and layout of the co-located Fire/Ambulance station in Invercargill and outlying district ambulance stations. All ambulance stations have to comply with a building 'warrant of fitness', and be subject to an annual inspection as well as an annual audit under the Health and Safety Act. All stations are audited each year for a fire safety compliance and evacuation scheme. All buildings are covered by replacement insurance.

10 years ago ambulance stations were built on sites close to main roads and not necessarily subject to a hazard analysis or assessment of external environmental risks. There is now greater concern about siting of key lifeline facilities and St John is more vigilant in planning new ambulance station sites e.g. away from potential flooding spots and ground that may be prone to liquefaction following an earthquake. The main

problem in siting stations in risk areas is the ability of staff to access buildings and ambulances to egress from stations. If vehicles cannot leave stations in the first instance the service would be unable to respond to community emergencies and transport patients to medical facilities.

A further outcome from the Invercargill Lifelines project was the identification of the need to have an additional spare ambulance capacity available that was based in Invercargill, plus increased spare vehicle stocks to mitigate against having ambulances “off the road” when needed most. Small stockpiles of mechanical spares are kept at the contracted vehicle repairers. This is outside the “just in time” method of keeping minimal spares at designated locations. Additionally, ambulance equipment stocks have been increased to reflect the level of risk of the Southland province becoming isolated in an emergency.

Readiness

Readiness relates to development of response plans and the capability to implement them. Readiness action is based on the belief that community disruption will occur from hazard impact and plans and procedures should be written to identify the level of resources needed or available to respond to the impacts when they occur. This area of the 4 R's relates to activities undertaken to protect human lives and property in conjunction with threats that cannot be controlled by mitigatory measures. The areas that need to be considered are;

- Identification of critical resources
- Notification systems for emergency services to effectively respond e.g. interagency agreements
- Measures to ensure that effective processes are in place to manage emergency operations
- Public education about potential hazards in areas to create an awareness of effective home and business protection measures

Readiness within St John includes functional staff turnout procedures and response plans, which are the responsibility of the St John emergency planning group. Measures have been instigated to ensure St John can respond by identifying the regional response resources available across all ambulance districts. Operational management

decentralisation means that District Operations Managers can operate independently of regional control. The trained staff to care for sick and injured people can be sourced from both the Ambulance and Events Groups with operational qualifications that are compatible with each others primary responsibility. Mass casualty stores are held at district stations. CIMS training has been widely held and staff are conversant with integrated emergency management systems within St John as well as across other agencies that may be involved. Radio communication networks for normal and abnormal operations are set up so that if Southland is isolated landline 111 calls can be received at the Invercargill Fire and Ambulance Station. Ambulances can be dispatched by radio using vehicle-paging systems that will operate in an emergency mode. A national and regional major incident plan is utilised. There are mutual aid agreements with allied response agencies and some communities where first response partnerships are in operation.

St John sponsors two emergency planning groups. The first group is an internal *St John emergency-planning group* comprising the ambulance District Operations Management group, emergency planner and senior ambulance management. This group addresses emergency management planning issues that relate to the St John infrastructure readiness, response and recovery capability under a CEM framework. The second planning group St John sponsors is **OSEPG**, formed in 1999 to meet a perceived lack of interagency emergency planning.

Response

Emergency response activities aid the affected population and are usually a coordinated effort by a number of diverse groups, some which are formalised, some volunteer and other emergent groups that form during the emergency itself and disband as soon as the emergency is over. Groups should be coordinated through an Emergency Operations Centre (EOC). Some emergent groups may not be known to an EOC during times of crises however. Time is often an urgent decisive factor in resolving some taskings e.g. Persons trapped in wreckage.

Factors to be considered for response are:

- Provision of emergency aid and assistance
- Reducing probability of secondary impacts
- Minimising problems that may occur during longer and complex recovery operations

- Contributing to reduction and readiness for future events.
- Taking into account needs for long term community recovery planning (i.e. the 10 year + time frame).

For St John, response is by provision of emergency medical services. This also includes activation of the partner Emergency Responders e.g. Fire First Responders and Community First Responders, treatment and transport of primary and secondary victims, operation of a communications centre; interfacing with an incident control structure using CIMS and liaison with the media. During an accident or emergency, ambulance services deal with incidents within their own operational resources, with additional resources brought in through mutual aid agreements with other St John regions.

During multiagency incidents the ambulance service retains its own operational structure, even if a CDEM declaration has occurred. As a support agency the ambulance service reports to the Lead Agency Incident Controller. During a CDEM declaration the CDEM controller will task the Lead Agency Incident Controllers to deal with the areas requiring priority tasking for that emergency. Contained within each Incident Management Team will be an ambulance liaison person who is either acting as an advisor to the Incident Controller if there is not much ambulance response activity or an Ambulance Commander reporting to the Operations Manager who is directing the operational tasks for each agency.

Residual resource capability is the resource required to be available to be utilised for secondary impacts or other community emergencies. A project within OSEPG currently is examining the response agencies' residual resource requirement for other community emergencies. Remobilisation of available back-up crews can be initiated through the planning frameworks of a CIMS Incident Management Team and a Response Coordinator, as occurred during the 1999 rural fires in Alexandra. CIMS was in place at Alexandra with a Rural Fire Response Coordinator based in Dunedin co-ordinating the rural fire response to additional fire emergencies in Otago and Southland during this period.

Recovery

Recovery begins when the disaster impact has been stabilised. Initial stages of recovery will begin during the response phase when planning arrangements for the

longer term re-commissioning of communities begin. As part of reduction and readiness for future flooding new flood banks were built following the Invercargill 1984 floods. In 1978 in Kelso Southland, houses were shifted from flood prone areas. A recovery phase could therefore be seen to be mixed into the other 4 R's. The emphasis is to try and return the quality of life of communities to at least similar levels that prevailed prior to the disaster.

The aim of recovery is both short term and long term and relate to those impacted by the event.

- Provision of immediate support is undertaken to return vital life support systems to minimum operating levels as soon as possible.
- Continuance until a community returns to its full set of normal social routines

The short range objectives are relief and rehabilitation while the long range: objectives are reconstruction or relocation.

There are two aspects of recovery being considered in this thesis. The first aspect is from a St John intra-organisational recovery viewpoint and is at two levels. The first level is applied to routine accidents and emergencies where the ambulance service considers there is a degree of recovery work required. This focuses on re-commissioning the operational segment of the service to re-establish its core contractual work again, by ensuring there are equipped ambulances to perform a response function to emergency calls. As the primary response winds down patients have to be evacuated to peripheral hospitals, either as incident victims or as hospital patients, because more seriously injured patients require their beds. There is debriefing of operational staff, evaluation of the emergency response, critical incident stress management for staff, restoration of supplies, vehicles; meeting the welfare needs of the ambulance staff and their families is also part of this process.

The second level is more complicated where a disaster has occurred in an occupied area or district and is impacting on a community or communities. Dependent on the degree of impact, there is a need for a business recovery plan allowing the organisation to rebuild its infrastructure. The plan has to be flexible, adaptable and current, defining the organisation's policy direction, with priorities for re-activating the essential parts of St John i.e. business and contract sectors, financial planning,

reimbursement procedures and administrative infrastructure in recommissioning. This is identified within organisational risk management planning processes and is addressed through the St John emergency-planning group. A summarised business continuity plan for a key facility i.e. emergency service lifeline may be of interest to CDEM planning arrangements as it provides an assurance that the key facility lifeline can function and respond following a major impact, even in a limited fashion.

The second aspect is considering community recovery that is longer term, dependent on the area of impact which may be district- or region- wide and on the complexities of the infrastructure damage or social system failures that require support for communities. Recovery of communities may be dependent on the business recovery plans of organisations and the interdependencies between infrastructural assets to ensure that priority rebuilding can occur and that community resources can be supported to allow for this. Some processes for Invercargill Ambulance are detailed in the Invercargill Lifelines project report (2004).

In the long term, recovery passes from the primary emergency response agencies to government agencies such as Work and Income New Zealand (WINZ), Inland Revenue Department (IRD) or other departments who will deal with societal rehabilitation and structural reconstruction. Response and recovery, although having different objectives, are inter-related in that both activities under CEM occur together, one predominates initially- (Response) with Recovery building up as Response lessens. There can be a transitional phase when both activities may be occurring side by side. An illustration of this phase occurred in the New Orleans Flood Disaster created by Hurricane Katrina (2005) where rescue and evacuations (Response) and reconstruction of levees occurred simultaneously (Recovery) to protect and allow drainage of flooded areas in order to reactivate city life support systems such as transportation and road access.

1.7. Summary

In chapter one the research topic has been introduced and the justification why the subject needs to be researched. The author's professional interest in the research topic is outlined and the structure in which this thesis will be presented is outlined. Finally the background to the study that defines levels of emergencies and also the principles of CEM is discussed.

2.0. Literature Review:

Integrated Emergency Planning

2.1. Introduction

This chapter will explore New Zealand and international literature relevant to Integrated Emergency Planning, focusing on a comparison of planning frameworks used in Australia, North America and the United Kingdom. The objective was to compare and contrast these frameworks with processes followed during the formation and development of the Otago Southland Emergency Planning Group and the planning in the transition to the CDEM planning structures.

2.2. Emergency Management – New Zealand

Emergency Management in New Zealand has evolved rapidly in the last five years. The Civil Defence and Emergency Management Act was passed in late 2002. With it came legislation to proactively manage hazards by encouraging a risk management approach, together with Comprehensive Emergency Management to coordinate sector responses during times of disaster. Within the Act, CDEM capabilities will be enhanced by (MCDEM 2002);

- Strengthening relationships between sectors and agencies involved in CDEM planning
- Encouraging cooperative planning for continuity of service and contribution to disaster response
- Seeking commitment to deliver more effective risk management, especially risk reduction through a range of policy and planning initiatives”

MCDEM responsibilities are a mix of policy, planning and advisory. There is still an operational focus where MCDEM staff support regional CDEM organisations during emergencies at Group level. Within MCDEM policy is created and developed into programmes for initiation e.g. CIMS and Project RAPID (Response and Preparedness in Disasters). The Planning function includes more extensive work with emergency services at both a governance level through the CDEM Group CEG's and through

planning objectives, targets and actions using the various emergency service/emergency management committees. This integration of readiness and response for emergency management and emergency services has changed 'the way' emergency management capabilities are delivered to the wider community, leading to a more coordinated delivery of service by the CDEM agencies and a wider involvement of business and community in this delivery.

The MCDEM Director's guidelines (2002) were developed to advise and assist local authorities and emergency services on how to meet their anticipated responsibilities under the CDEM Act. It provides guidance for the formation and conduct of CDEM Groups and development of a CDEM Group Plan. There is flexibility in the planning arrangements for CDEM Groups to develop the structures and arrangements appropriate for local circumstances. The CDEM Act requires that operational arrangements for CDEM management include an appropriate body of trained and competent personnel, plus an organisational structure and process arrangements to ensure CDEM delivery to communities. The OSEPG worked with the Southland CDEM Group to facilitate some of the operational planning arrangements by developing a strategy to enhance multi-agency communication capability during emergencies to overcome known gaps in the communication linkages after the introduction of the CDEM Act (2002).

2.3. Literature Review

Hazard Analysis

Hazard is defined as a potential harm or situation with the potential to cause widespread disruption or loss. Relating risk analysis to risk management, where risk is the possibility that something might happen to have an impact upon objectives, is measured in terms of consequence and likelihood. Risk analysis is a systematic process followed to understand risk and to determine the level of risk present in the environment that is being analysed. Risk analysis provides the starting point for risk evaluation and decisions on how to treat risk. It needs to include social structures as the consequences of events can impact on community infrastructure. Risk management is the culture, process and structures put into place to manage adverse effects, to realise potential opportunities, and is an integral part of emergency management.

Salter (1995/96) felt the management of emergencies and disasters could be improved by the adoption of a broader and more holistic view of risk and the development of tools designed to assess community vulnerability. He developed a framework that moves away from a focus on hazard agents to one of a focus on communities at risk and further suggests that organisations should be audited for competence as providers of measures of social protection. Development of broad risk assessment processes is also suggested in order to determine the possibility of adverse effects from exposure to hazards (Salter 1995/1996). This should consist of a vulnerability assessment and hazard identification which when integrated would lead to a qualitative understanding called “risk profiling” Salter (1995/96). When preparing for large-scale disruptions, Emergency Managers and hazard researchers need to plan for the restoration of normal routines following impacts. Britton (1995) advocated that hazard mapping should include critical resource siting e.g. emergency services.

Britton (1993) gives a further example of hazard analysis where he mentions seismic risk in relation to lifeline utility vulnerability in Wellington City. Here, integrated planning between the utility providers was necessary for the city’s hazard and emergency management strategy. Britton (1995) goes on to state that hazard analysis and risk assessment are essential components of emergency response planning. This context is reflected in the OSEPG work as predeclaration emergencies are predominately technological rather than natural. In the New Zealand context emergency planners and hazard researchers need to work together to mitigate the impact of large-scale events and pre-planning prior to an event is essential. The CDEM group system provides this through the Act. The New Zealand Fire Service has recently undertaken risk profiling of hazards in Invercargill City. Britton (1989) wrote that there needed to be change in attitude towards hazards in general and towards hazard reduction measures whether on an individual front or collectively within communities or government. Since 2002 the CDEM Act has been the driving force and framework for this change and this is appearing in the CDEM Group plans that are now in operation.

Williams et al (1998) define risk management as a general management function that seeks to assess and address the causes and effects of uncertainty and risk on an organisation. They further suggest that risk management should be broken down into three main areas of strategic (setting organisation objectives), operations (moving the organisation to its mission) and risk management (to achieve the organisations mission). All three areas overlap at various parts of the management process. Jackson and Janssen (1989) suggest that corporations are participants to a social contract and

are holders of a delegated authority which entails certain obligations; one such obligation is to prevent and mitigate disasters. This objective can be achieved by introducing a proactive risk management programme that work both within an organisation's infrastructure as well as creating linkages with community groups that improve goodwill and establish partnerships.

Burton et al (1993) discuss bearing loss or sharing loss and the overlap of individual capability and collective possibility. Other actions include modifying extreme events (hurricane modification by cloud seeding) or to change resource use or location (moving a business from a flood zone). They went on to say that capital expenditure and preplanning can lessen impacts from hazards. Further examples are given of changing land use and moving population away from danger by redesigning a city with open areas where the population can go following an earthquake. Similar examples have occurred in Southland where the township of Kelso was abandoned; houses and the population moved away owing to repetitive floods during the late 1970's. They also pointed out that people have difficulty in defining and significance of a future hazard. People have different time horizons or the length of time they would look forward. Cognitive and affective obstacles also stand in the way of accurate individual recognition of uncertainty and probability. These factors can impact on effective risk communication principles to effectively communicate a risk message. For example, the Southland consultation within the Community First Response project brought various levels of response in relation to the seriousness of a future hazard event occurring in a person's lifetime.

Mileti and Sorenson (1988) noted the variable ability of people to process risk information. The differential factors that created the variables were education of community members, their cognitive abilities, pre-emergency knowledge, experience with a hazard and the degree of fatalism with which life is approached. This point was noted when the rural consultation on Community First Response in Southland occurred and marked variations in attitudes amongst Southlanders of the risks in their community were noted.

In some communities people live on flood plains, close to active fault lines or in the rural – urban interface in high fire risk areas. Britton and Lindsay (1995) stated the city planners should not place the community at risk during redevelopment and renewal schemes. In Wellington houses are built on or very close to the Wellington fault line whereas in Upper Hutt city planning in Harcourt Park has a road and greenbelt running

along the fault line. Industrial and urban development projects can increase the risk to vulnerable groups. For example, building subdivisions in rural – urban interfaces exposes houses to bushfires. Planning must start within communities to identify the need for intervention strategies, to mobilise resources and support networks rather than imposing help on communities. Further long term effectiveness of interventions would require the promotion of self-efficacy, a sense of community and problem focused coping mechanisms (Paton 1996).

Wildavsky (1988) observes that there is also a fit between risk and safety and that there can be no safety without risk. In the past safety was not a major cost centre within corporate budgets although in recent years more emphasis is placed on risk management and Health and Safety management. This is also reinforced through the CDEM Act (2002) as well.

Business Continuity

A study by the Centre of Advanced Engineering at the University of Canterbury in 1991 as reported in Britton (1993), identified that the Wellington area was vulnerable to a maximum credible earthquake for its utility lifelines from an engineering perspective and that key facility providers were vulnerable in a maximum credible earthquake. Watt (1998) points out that a structured approach to business continuity can be sabotaged by inadequate funding, responsibilities not being fully assigned, a plan not reflecting true business requirements or a complete duplication of business processes. He further advises that business continuity is but one part of the risk management approach; additionally back up systems may need contingency factors as well if these fail. All plans created need to be tested with the appropriate administration and maintenance procedure in place as well and continuity planning needs to be looked at in a social context as well as maintaining infrastructure.

In terms of business continuity Paton (1999) describes how organisational commitment to disaster planning is often weakened by “underestimating risk and overestimating existing capabilities”. This is often due to an “ambiguity of responsibility.” An example of this is prior to OSEPG and the risk and hazard development work, St John felt they had the resources to respond to community emergencies not realising until they had explored the Otago and Southland risks through OSEPG, they had underestimated the risk factors and thus also recognised that medical response capability was underestimated and could be enhanced by developing Community First Response as a collective responsibility with other agencies. Boon (2004) discusses Lifeline projects

which are basically a community risk management exercise where managers of essential utilities and services provided relevant hazard information. The hazard information allows agencies to re-examine existing or develop new risk management plans for their own businesses. He further highlights the long term benefits to be gained through the consultative process, where stakeholders are drawn together into groups to discuss matters of mutual concern.

Functional Plans

Integrated emergency response plans need to be functional and realistic. Kreps (1991) points out that emergency planning does not stop with a written plan. It needs to be all hazards based and there is a connection between the management of routine emergencies through to disasters. A key point of this thesis is that predeclaration planning links routine emergencies with CDEM emergencies. Kreps (1991) points out that resourcing of emergency responses should be based on an emergent coordination model. Thus in New Zealand Britton (1993), Paton (1996) and McGill (2001) have advocated a “holistic integrated planning and response framework.” The core of emergency planning should be directed towards mechanisms, techniques and facilities that promote interorganisational coordination and common decision-making Dynes (1994). This is the basis by which OSEPG plans for pre-declaration emergencies. Based on the experiences during a volcanic eruption, Paton et al (1998) observed that inter-organisational differences in operating structures and procedures amongst organisations must be identified and resolved during reduction and readiness programmes. Paton (1996) observed that planning must start within communities, to identify the need for intervention strategies and to mobilise resources and support networks rather than imposing help on communities. He considered that long-term effectiveness of interventions requires the promotion of self-efficacy; a sense of community and problem focused coping mechanisms. The “Paper Plan” syndrome (Auf de Heide 1989a) is an obstacle to good emergency management. Written plans are only one component for readiness and should not be relied on as the only guide. Disaster planning should incorporate an interorganisational perspective, be tied to available resources and be known and accepted by the participants i.e. they take ownership of the process.” Plans should be based on what people are likely to do, rather than what they should do” (Auf De Heide 1989). He also suggests that effective disaster planning has to be interorganisational.

Readiness and response arrangements: Integrated Emergency Management

Readiness and response arrangements need to be realistic and functional. Quarentelli (1988) points out that disaster is not a physical happening but a social event. A disaster occurs because of the manifestations of internal flaws and problems within society that cause the damage and death toll rather than the event itself. Britton (1995) drew attention to lessons from the Kobe earthquake that could be applied to New Zealand Emergency Management, particularly “that disaster response is only as good as the effort and insights that go into pre-impact planning and preparedness.” Response planning should be based on the realities on what might happen. Impact assessment is a key area for determining the priorities for response and allocation of limited resources. Britton (1995) advocated that Integrated Emergency Management Systems as keys to a practical and worthwhile target for interagency response. These concepts are driving the development of the current multi-agency response framework in Southland.

The National Incident Management System used in North America, the Australian Interservice Incident Management System and the New Zealand Coordinated Incident Management system (CIMS) handbook all advocate similar themes, that effective integrated multiagency teamwork will enhance the management of emergencies by utilising a common organisational structure and standard management structure. The development of CIMS mitigates issues of jurisdictional boundaries causing overlapping responsibilities. Incident Control is vested in an overarching Incident Controller with internal agency command led by an agency’s senior officer in attendance. The Home Office-United Kingdom (1997) states that “Control is” the authority to direct strategic and tactical operations to complete an assigned function and included the ability to direct the activities of other agencies “ whereas Command is “ the authority for an agency to direct the actions of its own resources (both personnel and equipment).

The challenge and requisite skills required to manage incidents may have to occur in a more physically remote fashion, balancing strategic imperatives with frontline realities in a constrained time frame sometimes with limited available information (Arbuthnot and Flin 2002). They also discusses risk assessment at a tactical level of command which is closely linked to situation assessment, drawing on data to make a judgement on adequacy and accuracy that will affect the outcome of the operation and whether it will place staff at risk during an operation.

Sarna (2002) defines heedfulness as an awareness of critical interdependencies and the need to ensure shared understandings and coordinated actions. He points out that worse case scenarios combine high risk factors with low organisational capacity for managing and resolving incidents. Unfortunately it is common place to find high expertise and low heedfulness among key response elements. This can lead to problems e.g. coordination during parts of the Manawatu floods in 2004 or Hurricane Katrina in 2005. This problem area of incident management has occurred in a number of incident management failures and Flin (1996) emphasises that this area needs high research and training priorities to enhance incident management systems.

McIntyre and Salas (1995) describe taskwork as behaviours that relate to operations related activities performed by team members. These comprise technical aspects of the task to be performed (OSERP task list) whereas teamwork behaviours are those that act to “strengthen the quality of functional interactions, relationships, cooperation, communication and coordination of team members’ (CIMS Incident Management Team).

The use of Emergency Operations Centres (EOC's) is crucial along with selecting and training personnel to operate them effectively (Paton 1998). Secure communications systems are a necessity for effective management of emergencies. Britton (1995) advocates the use of EOC's in emergencies and this thesis describes how the concept of using EOC's in pre-CDEM declaration emergencies is written into OSEPG's response plan. Heath (1995) observed that unrealistic goals and task allocations mean that response management slowed because resources diminish without a corresponding change in goal and task achievement rate. Hence there is the need for an incident management system such as CIMS to confirm measurable and achievable targets. Heath (1995) points out that the resources from reserves needed to deal with post -impact requirements can create lost performance, and that failure to integrate equipment, terminology and goals can cause a breakdown in communications. The ability to respond and the time taken to respond are influenced by the provision of resources and where they are placed pre-event. He points out that unless managers receive appropriate training and support there is a risk that resources will be deployed too judiciously or too readily, leaving no reserves. Strategic management is needed to facilitate a sequential process that involves environmental scanning, risk assessment, resource planning and deployment. It is the work of Heath (1995) that forms the basis of the residual response capability study in this thesis and has been further developed by the Southern Region Ambulance Service.

Auf de Heide (1989:b) points out that divisions of labour and resourcing for disasters put unusual demands onto organisations that require internal changes in structure and delegated responsibilities. Tasks have to be shared as well as agency resources. Where unanticipated responses are required, spontaneous organisations may also form to do deal with these and, once they are resolved, disband. Equipment and personnel resources may not be fully available, which hinders the response, and also will cross-jurisdictional boundaries, causing overlapping responsibilities. Hence, compared to routine emergencies, disasters introduce the strong need for multiorganisational and multidisciplinary coordination. It is from Auf De Heide's work that the diversification of emergency response capability as well as the concept of residual response capability was developed in OSEPG along with the enhancement of task allocation and incident resolution. This has been trialled to good effect with Invercargill emergencies during 2004-2005.

Training

"To render plans more effective they should be linked to training programmes, resource allocation and disaster simulation exercises" Paton (1999). Ideally a team – based approach should be used where team members should be selected not only on their functional expertise but also on the diversity of attitudes, professional philosophy, personality and cognitive style. As rapid decisions have to be made during volcanic eruptions in a very short time there is a need for a decision making capability and style which can be developed through training through an effective intuitive "gut feel" style, reflects learning through experience (Paton 1998). However, the intuitive capability could be enhanced with carefully designed simulations. Analytical decision making on the other hand is discussed where time is not a factor to make decisions, thus in an EOC this form of decision making prevails as options are explored for task and overarching incident resolution by the Incident Management Team. Tactical decisions on the other hand are made by forward incident commanders allocating tasks using intuitive reasoning (past operational experience) Flin & Artbutnot (2002).

Additionally, for incidents where demands fall outside normal operational routines, (Paton et al 1998) a disaster training needs analysis should be developed to accommodate multiagency involvement in order to develop systems and procedures capable of supporting an integrated response. Training systems based on Paton's work have evolved in the training simulations applied by the OSEPG in recent years and this thesis describes how diversifying response resources operationalised these concepts.

In Otago and Southland integrated training amongst multi response agencies is delivered using exercises to learn integrated emergency management systems.

Volpe et al (1996) found that teams that receive cross training had better team work than teams without cross training and cross trained teams used more efficient communication than non – cross trained teams. A further finding was that cross trained teams were more effective in terms of overall performance. This factor is seen in the integrated response framework operating in Southland where ambulance skills are taught to Fire-Fighters and First Aid Skills to community members. The cross training is delivering an enhanced operational output and better incident management resolution for the response agencies.

Tannebaum et al (1998) argue that team leaders can improve the performance of their teams by acting as team facilitator. The role of a team facilitator is to work with their teams to develop new ways to improve performance, further the teams' development and assist the team in learning as a team. CIMS Incident Management Courses in Otago and Southland teach this concept to course participants in the leadership section of the training programme.

Smith- Jentsch, et al (1998) advocated "team dimensional training" (TDT) as a method to teach teams to self correct their behaviours in order to improve the development of their teamwork- related skills and knowledge. Team dimensional training facilitates the development of shared mental models, but these need to be adapted to the dynamics of situational demands.

Community

There is a need for strong community interaction (Paton et al 2001) and risk reduction behaviour can be encouraged by integrating hazard education within the community development process e.g. providing community members with hazard scenarios and potential remedial measures (this is the basis on which Community First Response has been developed in Southland).

Community emergency planning should be based on continuity, coordination and cooperation." Common planning and rehearsal activities are required, along with establishment of personal contacts, development of liaison activities and the establishment of shared facilities for emergency operations, (such as emergency operations centres. Britton (1989), Kreps (1990) and Dynes (1994), also argue that

emergency management needs to include both improvisation and preparedness activities. In addition, volunteers should be built into the overall emergency system and emergency-planning needs to consider how they might best be used. (Dynes 1994) and (Paton 1996) therefore advocate the use of volunteers and the cooperation and coordination model to enhance response activities.

2.3.1. International Emergency Management

This section compares selected overseas planning models and incident management systems with those in New Zealand. Three countries, Australia, United States of America and United Kingdom are examined because these systems have had the most influence on the development of emergency management in New Zealand. The incident management systems have been researched and adapted with modification for use in New Zealand as the Coordinated Incident Management System (CIMS). There is significant information available through Internet search engines from the countries mentioned above. The OSERP is based on the New South Wales State Disaster Plan but modified to suit pre-declaration plan functionality in Otago and Southland.

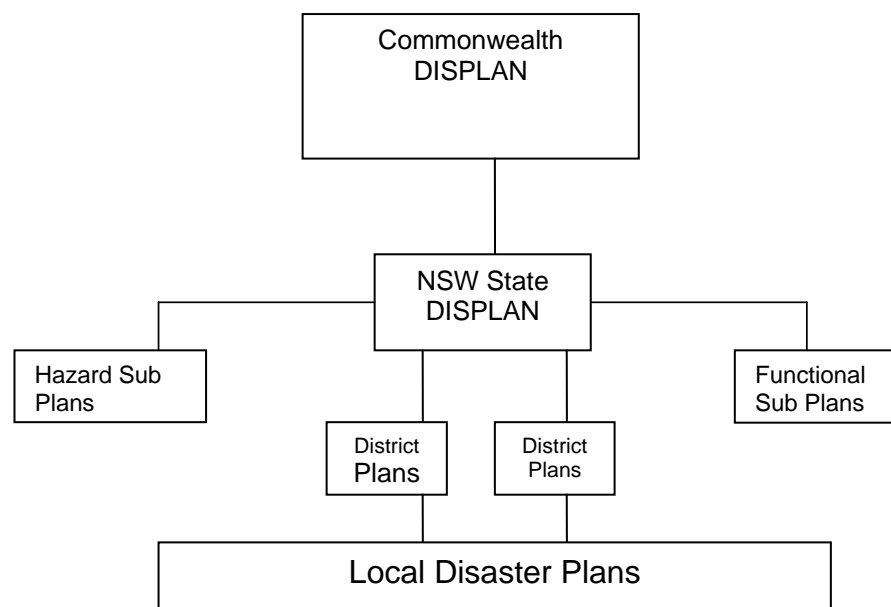
2.3.1.1. Australia

The prime responsibility for the protection of life and property rests with State and Territorial governments in Australia (EMA Australia 2004), as they control most of the functions relating to Comprehensive Emergency Management. These States and Territories have developed counter – disaster arrangements, operate the emergency service agencies and also co-ordinate related activities through emergency/disaster management committees. To make the system work there is a strong reliance on volunteers to provide search and rescue, medical and fire fighting capability. The non-government organisations, including Red Cross, Salvation Army and St John Ambulance, also play strong roles in providing assistance to response and recovery efforts. When the total available resources (government, community and commercial) of an affected state or territory cannot reasonably cope with the needs of the situation, the state or territorial government can seek assistance from the Commonwealth Government. The Commonwealth Government accepts responsibility and prepares and activates plans for providing Commonwealth physical resources in response to such requests.

The Attorney General is responsible for disaster-related matters. Emergency Management Australia (EMA) is nominated as the agency responsible for planning and coordinating Commonwealth physical assistance to the states and territories under the Commonwealth Emergency Management Policy. Coordination of these functions is carried out from the National Emergency Management Coordination Centre (NEMCC). The Commonwealth Government Disaster Response Plan (COMDISPLAN) provides the framework for addressing state and territory requests for Commonwealth physical assistance arising from any type of emergency. COMDISPLAN is normally activated when Commonwealth assistance for emergency response or short-term recovery is requested or likely to be requested.

In New South Wales there is a State Disaster Plan -DISPLAN, (Office of Emergency Services 2005), the objective of which is to ensure a coordinated response to emergencies. The State Minister for Emergency Services may activate DISPLAN without the need for a declaration of a state of emergency. Functional Area Plans to support DISPLAN are endorsed by the State Emergency Management Committee, and approved by the Minister. Disaster Plans are also required at District and Local Government levels. State-level Sub-Plans have been produced for some specific hazards to ensure the appropriate emergency management arrangements are in place.

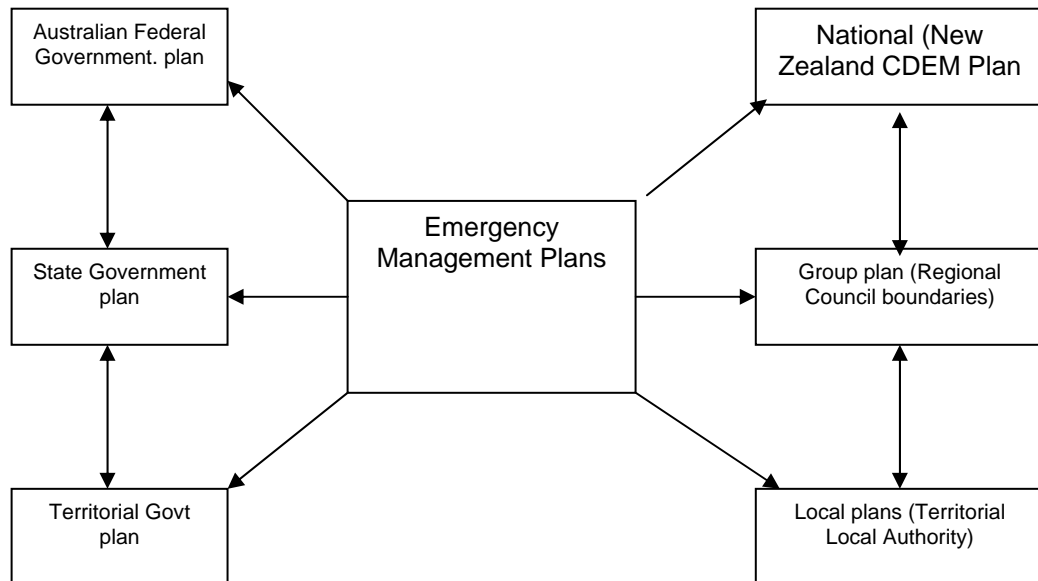
Figure 1. Australian Disaster Plan Levels



During emergencies the Australian Interservice Incident Management System (AIIMS) using the Incident Control System is activated. It is commonly applied to bush fire emergencies, although it can be applied to any level and type of emergency. The Australian Incident Management System is similar to the New Zealand CIMS model in that the Australian Incident Management System shares a common terminology, control structures, consolidated action plans, span of control, integrated incident communications and designated incident facilities as those found in the New Zealand CIMS model. This is why New Zealand Rural Fire Managers have provided a useful resource to assist their Australian counterparts during the summer bushfire season in recent years. Community and personal self-help is also a key concept in Australian emergency management. There is recognition that, if there is a delay in outside help arriving, a community can sustain itself by being prepared and have a basic response capability by being prepared, informed of potential hazards and supported by government agencies under a Comprehensive Emergency Management framework.

Although Australia has a hierarchical Federal and State and Territorial government system, emergencies are managed at State or Territorial level. Normally, The Federal Government provides logistical support coordination if required. Australian Emergency Management is resourced with more personnel, owing to the geographical size and population of the country. New Zealand, in comparison does not have a country-wide legislated emergency service system with its own minister comprising emergency management, fire service and ambulance (not legislated in NZ) as found in a number of Australian states. There are three tiers of emergency management plans territorial, state and federal in Australia and these correspond to local, group and national CDEM plans in New Zealand. Hazard analysis and building community relationships underpin emergency management strategy in both countries.

Figure 2. Comparison between Australian and New Zealand Emergency Management Plans



EMA Australia has a commitment to providing theoretical and practical education for emergency managers through its own training establishment at Mt Macedon in Victoria whereas New Zealand provides emergency management programmes predominately through Massey University and Auckland University of Technology (AUT).

2.3.1.2. United States

The Federal Emergency Management Agency (FEMA) - a formerly independent agency that became part of the new Department of Homeland Security in March 2003 - is tasked with responding to, planning for, recovering from and militating against disasters (FEMA 2004).

The activities of FEMA are predominately;

- Coordinating the federal response to a disaster providing disaster assistance to states, communities, businesses and individuals.
- Advising on building codes and flood plain management.
- Helping equip local and state emergency preparedness.
- Training emergency managers.

- Training and supporting the nation's fire service by provision of funds for USAR teams
- Public Education.
- Administering the national flood and crime insurance programs.

FEMA works with many government, non-profit and private sector agencies to assist the public in preparing for, responding to, and recovering from a disaster. Together, these players are the response agencies to emergencies (FEMA, 2004). Since 2001 FEMA has activated Project Impact –to build Disaster Resistant Communities. This project helps communities by undertaking hazard mitigating actions to reduce disaster impact and losses. To make the project work, FEMA offers expertise and technical assistance to communities and passes on strategy and knowledge through organizing conferences.

During emergencies, a National Interagency Incident Management System (NIIMS) is used. A unified command structure is an important element in multijurisdictional or multiagency domestic incident management under NIIMS. NIIMS provide guidelines to enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan, and interact effectively. A collective approach is used to develop strategies to achieve incident objectives (NIIMS 2004). In the unified command structure, the individuals designated by their jurisdictional authorities (or by departments within a single jurisdiction) must jointly determine objectives, strategies, plans, and priorities and work together to execute integrated incident operations and maximize the use of assigned resources. The New Zealand Coordinated Incident Management System (CIMS) was modeled on aspects of the North American NIIMS system as well as the Australian AIMS system.

2.3.1.3. United Kingdom

There is currently no statutory duty placed on local authorities in the United Kingdom to undertake generic emergency planning (Home Office, 2004). They have a small residual duty to undertake work in connection with Civil Defence, and this has been developed to ensure an effective response to peacetime crises. The Civil Defence General Local Authority Functions Regulations (1993) replaces those that related to the effect of a possible nuclear attack on the United Kingdom. The Regulations stipulate that the principal civil defence functions remain with County Councils in non-metropolitan areas and town councils in urban areas. The Home Office's intention is

that the responsible local authority will develop plans based on the concept of integrated emergency management. There is no longer a requirement to develop plans for use in the event of a nuclear attack, and the emergency planning unit continues to plan, review and revise training and conduct exercises for all authorities involved. In cases where resources required exceed local capability it is expected that agencies will have mutual aid agreements with neighboring services in adjacent areas.

In the event of an emergency, emergency services, health, local government services and public health are expected to have functioning plans. These are based on guidance and instructions given by government or other services and are often coordinated by local authorities or Police. In June 2003 the British Government published the Draft Civil Contingencies Bill, the latest development in the government's review of emergency planning. It is part of the British Government's 'modernising agenda' for local services, and is aimed at modernising emergency management legislation. The Civil Contingencies Bill became an Act of Parliament on 18 November 2004.

The Civil Contingencies Act (2004) provides for a single 'framework' for civil protection in England and Wales, to which stakeholders can subscribe. It sets out a broad scope of duties/requirements across a range of different agencies, with the detail being provided by subsidiary Regulations that will apply to specific agencies or regions/localities. The Act defines an 'emergency' as an event or situation which presents a serious threat to:

- Human welfare;
- The environment;
- Political, administrative or economic stability
- The security of the United Kingdom e.g. terrorist activities

The new Act repeals older civil defence and emergency legislation that was inflexible and out of date (UK Resilience, 2004). Organisations at the centre of a local response (such as local authorities and the emergency services), known as 'Category 1 responders', will have the following duties under the Act;

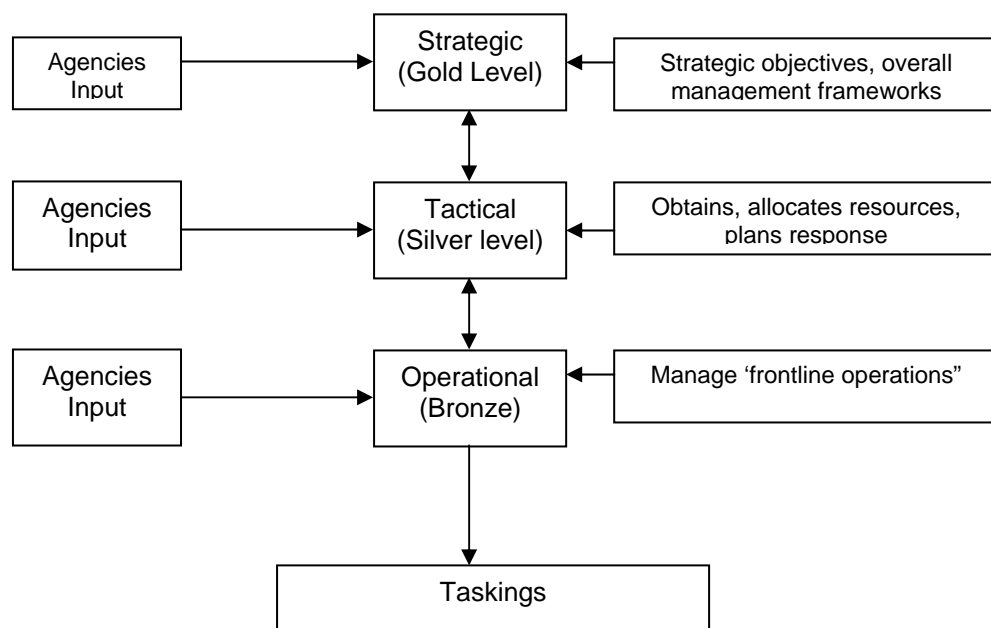
- Risk assessment;
- Contingency planning arrangements;
- Business (service) continuity planning;

- Warning and informing the public;
- Sharing information and co-operation

Emergency planning is based on planning for carrying out functional tasks in an “all hazards” environment. The United Kingdom has recommended that planning should be based on “worse case scenarios” and that a collaborative approach be taken. Planning is encouraged to build on routine arrangements within organisations, using the skills and attributes of organisational staff, but with the flexibility that some personnel may receive additional training to enhance their task capability during major emergencies. This also allows the diversification of task roles for routine emergencies. Community interaction in planning between emergency services and communities is not obvious, however.

The British model of incident management is different in operation to the New Zealand CIMS model, in that each agency arrives at an incident and, dependent on the size or nature of the event, the response is accorded bronze (operational), silver (tactical) or gold (strategic) status. At the start of any incident for which there has been no warning the Operational (bronze) level will be activated first. The escalation of the incident or a greater awareness of the situation may require the implementation of a Tactical (silver) level and finally, a Strategic (gold) level should this prove necessary. There is an expanded commitment of interagency management resources to resolve issues for the next level down in the incident management process. Thus the structure is;

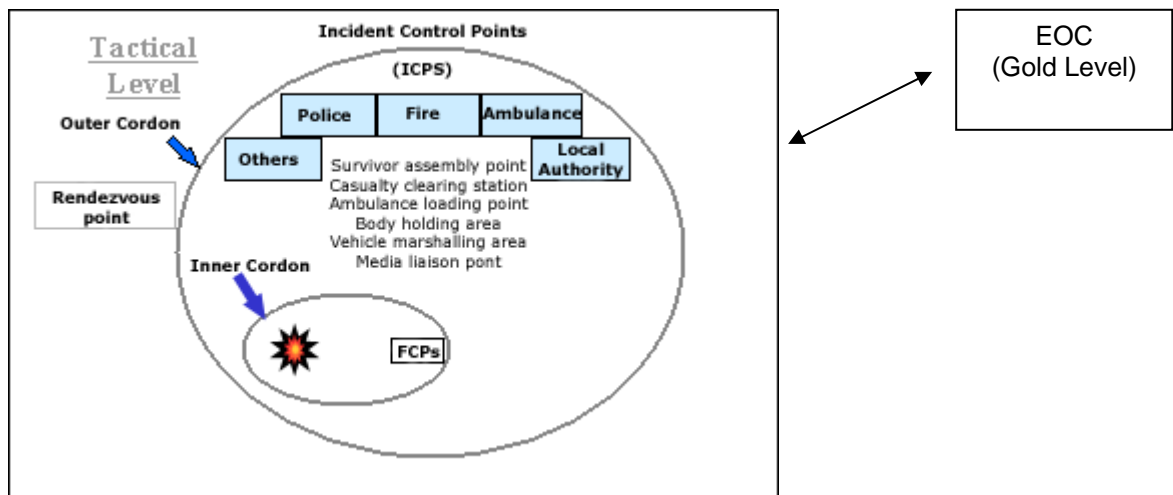
Figure 3. British Incident Management Model



One obvious difference between the British model and that applied in New Zealand is that in the former there could be agencies present at the Incident Control Point with their own command units operating as separate agencies. Command is vertically within agencies but overall control is vested in an overarching lead agency, normally the Police, who take overall management of the tactical coordination (silver level) of emergencies at the Incident Control Points in order to maximise resources to best effect (UK Resilience 2004). Each agency's tactical commanders confer to plan the tasks which are then allocated to their respective incident officers to implement.

For each level of management that is implemented (bronze, silver, gold) there is a need for an individual agency to manage its own activities effectively while contributing to effective liaison and co-ordination meetings with counterparts in other organisations. The appearance at the emergency would be as drawn in Figure 4, which is a generalised map of the incident. Tactical task direction occurs at the Forward Control Points (FCP's).

Figure 4. Tactical (Silver) level British Incident Management Model



For major emergencies e.g. the London terrorist bombings July 2005, one or more agencies may find it necessary to implement a strategic level of management as demands on their resources rise, with consequent disruption of their day-to-day activities. These demands may have long-term implications for people or the environment. These matters require attention by senior management and possibly also by elected members in local authorities. The purpose of implementing a strategic level

of management is to establish a framework of policy within which tactical managers will work. The Strategic Coordinating Group (Gold Level) is not unlike the CEG's of CDEM Groups in New Zealand in that they are composed of senior executive staff from response organisations that can commit their organisational resources to facilitate resolution of the incident. The three levels of emergency management can be adapted for use by any organisation associated with the response. Adoption of this generally agreed methodology can aid communications and avoid inter-agency confusion.

It is agreed by the agencies that emergencies will operate at a specific level, dependent of the size and nature of the emergency. As stated, the Police will normally act as the Incident Controllers in most circumstances. The Police also exercise control under New Zealand CIMS criteria, whilst the other primary response agencies operate interagency directing task activities. CIMS in New Zealand deals with incident management within two structures: incident ground and EOC. The British Incident Management model deals with organisational structures at three levels; incident ground – Forward Command Point (FCP), Incident Control Point (ICP) and EOC, as shown in Figure 4.

2.4. Conclusions

This chapter has reviewed relevant literature on integrated emergency management planning in both New Zealand and internationally focusing on Australia, USA and United Kingdom. Emergency Management researchers advocate planning as a cooperative partnership between diverse agencies. The management of emergencies should be by a coordination and cooperation model with the utilisation of EOC's and an effective integrated communication system. A number of writers indicate the management of emergencies and disasters has to be flexible, in that during disasters both the organisations involved, as well as the demands of managing the event, undergo changes. Disasters are coupled to social issues, specifically where populations reside in vulnerable sites. It is critical to maintain emergency services or utilities when disaster strikes because the flow on effects can hinder the restoration of normal activities

A number of writers indicated that the community should be involved in emergency planning from the outset and they should be given hazard education advice so they can have some ownership of the risk reduction process. Other writers indicated that planning forums should not rely solely on the written plan; rather the process of its

development is the most important part. New Zealand appears to have no obvious work programmes between planning and response for routine emergencies and declared emergencies i.e. pre-declaration emergencies except in Otago and Southland. Pre-declaration emergencies require an integrated interagency planning focus and CIMS like approach for incident resolution and the planning and response modelling needs to interlink into CDEM planning work as well. Compared to overseas models New Zealand does not appear to have a coordinated community- CDEM planning interface.

Australia, the USA and United Kingdom have similar incident management models to NZ, although the United Kingdom operated a different functional structure model. Both Australia and the United states have programmes that involve working with the community to limit disaster impact, but the United Kingdom version of IEMS did not have an obvious community interaction/ partnership component.

3.0. Materials and methods

3.1. Introduction

The purpose and focus of this study is described in this section, along with the rationale for the use of a qualitative methodology and the method of data collection and interpretation methods. A qualitative survey was developed with semi-structured interviews to gather information. Ethical aspects were considered, along with an explanation of the factors required to ensure that the qualitative research remained objective. Fifteen response agencies associated with the Otago Southland Emergency Planning Group were interviewed in 2004.

3.2. Purpose and focus of this study

The hypothesis for this study is that integrated emergency management planning principles will help response agencies and the community to respond to pre-declaration emergency events more effectively. Through the interviews and their interpretation the hypothesis was tested with this thesis proposing practical outcomes that began with a theoretical approach. Two different methods were used to gather the necessary information; reading the background notes, reports, and interviewing the CDEM – emergency managers associated with OSEPG to test theoretical concepts.

3.3. Research approach and methodology

Information for this study has been derived from three major sources:

1. Records from the development of Integrated Emergency Management arrangement policies in Otago/Southland
2. Literature and internet based comparative studies
3. Interviews with response and support agencies in Otago/Southland

The records used for this study were minutes and notes from the Otago Southland Emergency Planning group meetings, personal research notes taken from study days and workshops relative to the development of IEM policies and interviews with key agency representatives from both Otago and Southland.

A number of key individuals were interviewed with semi -structured questions that were deemed appropriate analysing the direction of the planning work. These interviews also allowed a degree of multidisciplinary triangulation, (Janesick 1984 in Schneider et al; 2002 p 34) by analysing responses of multiple agency personnel in addition to response from the internal perspective of one agency (St John).

Interviews and written communications and were held with:

- Civil Defence/ Emergency Management officers from the local authorities in Otago and Southland.
- Some CDEM line managers to gain organisational perspectives
- Emergency service planners and senior staff from the New Zealand Fire Service and New Zealand Police in Dunedin
- Regional management of St John
- The Ministry of Civil Defence and Emergency Management
- A Ministry of Health emergency-planning representative.

All participants in the interviews gave their consent to be interviewed and were known to this author. The actual list by organisation and positions held are listed in Table one. The interviews were designed to gather information on both positive and negative perceptions of pre-declaration emergency planning processes. The interviews gave insight into organisational thinking prior to the formation of an integrated response plan and also current thinking regarding integrated planning for pre-declaration emergencies synonymous with the passing of the CDEM Act (2002).

3.4. Ethical considerations

Ethical committees consider the issues that protect the rights of human subjects, the benefits that come out of the research, any risks in a study, obtaining informed consent and the submission of the research proposal for institutional or external review. The protection of human rights involves the principle of self-dignity and the right to a person's self determination and autonomy in involvement with research. For this thesis each participant in the interview process was known to the author and gave informed consent to be involved in the project interviews. Their thoughts given at interview were

reflections of their organisational thinking at the time on emergency management not their personal beliefs. For this study, no participants from individual organisations are named so that information is shared without restraint. The ethical screening questionnaire was completed and judged by peer review at the Massey University Human Ethics Committee level to be low risk. The author is responsible for the ethical conduct of the research with all the people interviewed.

3.5. Research methods

Two methods were applied to gather information for this thesis. The first method was analysis of the notes and records made during development of the OSEPG work. Literature on the topic was reviewed, along with the history of silo-type emergency planning and earlier solutions tried in this area and accompanied by the collection of baseline information to gauge how improvement might occur. The second method was semi-structured interviews with key stakeholders in the Otago and Southland community. These representatives were interviewed in 2004 to evaluate their organisational perceptions of the changes in planning structures within the planning group and within organisations. All members of the OSEPG signed consent acceptance letters for their organisations and agency representatives to be involved in the planning processes in 1999.

Fifteen agencies were interviewed with seventeen questions posed (Appendix one). The interviews were qualitative and evaluative in nature. Although the interviews with participants representing their organisations only lasted approximately one hour, the responses can be viewed holistically as responses are drawn from numerous agencies.

Qualitative methodology encourages “interplay between the researcher’s knowledge, values and beliefs and the data to occur,” Cutcliff (2000). McGill (1998) stated, “For qualitative research to have any credibility, data must be sourced from those who interact within the boundaries of the research field”. Inductive strategy, as used in this study, is “where the researcher discovers concepts and hypothesis” (a grounded theory) “through comparative analysis” Glaser and Strauss (1967). As only basic themes were sought in this thesis and not a social process, a modified grounded theory approach was taken. In generating grounded theory “researchers do not seek to prove their theories, but merely demonstrate plausible support for them” (Bogdan and Taylor, 1975). Questions contained within the interview aimed at evaluating outcomes of the OSEPG projects. Koch (2003) states, “when an evaluation is driven by objectives (as

commonly occurs) both intended and unintended effects should be recorded". The outcome of the evaluation questions, when analysed, gave findings that compared emergency planning between agencies pre and post OSEPG formation and indicated whether there had been an enhancement in planning processes for pre- CDEM emergencies.

3.5.1. Interview objectives

The objectives for the interviews were;

- To determine the emergency management thinking prior to development of the OSEPG in 1999.
- To elicit each agency's response to integrated planning under OSEPG
- To evaluate the OSEPG process as an appropriate medium to provide an interagency planning forum for pre-declaration emergencies
- To elicit the opinions of various agencies on what role the OSEPG might fill in the CDEM planning structures resulting from the passing of the CDEM Act (2002).
- To establish the effectiveness of "Community First Response" in a community – emergency service partnership.
- To identify the issues surrounding the use of CIMS, the development of tactical plans and specialist response teams from a multiagency perspective.

3.5.2. Interview Process

The original members of the OSEPG were invited to participate in the interviews, although some local authorities had, although invited, infrequently attended meetings following the formation of OSEPG. The author decided that every local authority and regional council in Otago and Southland council needed to be interviewed. Fifteen agencies were thus sent letters. The interviews occurred between July and October 2004. The interviews were made with the personnel as detailed in Table 1.

Table 1. List of interviewees by organisation

Organisation	Position
St John Ambulance	Regional Ambulance Service Manager District Operations Manager – Central Otago
New Zealand Fire Service	Fire Region Commander Regional Planning Officer
New Zealand Police	Operations Manager – Southern District District Search and Rescue Coordinator - Dunedin Sub Controller - Mosgiel
Ministry of Health	Disaster Response Coordinator & Healthline Liaison- South Island
Ministry of Civil Defence & Emergency Management	Emergency Management Advisors x 2
Environment Southland	Hazard Mitigation Planner
Southland District Council	Civil Defence Officer Resources Engineer
Gore District Council	Civil Defence Officer
Invercargill City Council	Director Environmental Planning Principal Officer Emergency Management
Waitaki District Council	Civil Defence Emergency Management Officer
Dunedin City Council	Manager Civil Defence & Rural Fire
Queenstown Lakes District Council	Civil Defence Emergency Management Officer
Clutha District Council	Civil Defence Controller
Central Otago District Council	Civil Defence Consultant
Otago Regional Council	Technical Advisor Regional Services

Each agency was offered the opportunity to participate. Letter, email, telephone and personal communication returned confirmation that agency representatives were willing to be interviewed. All agencies that were sent letters responded positively. Each interviewee was sent a letter some weeks before the interviews explaining the scope of the research, along with a copy of the questions to be asked. The questions were designed to elicit organisational thinking rather than the thinking of the individuals being interviewed. The interviews lasted up to one hour and were carried out at each interviewed agency's location, in relaxed, informal surroundings. The interview questions and responses collated by agency appear in Appendix one. Chapter Four contains a summary of responses from the various agencies as well as interpretation of the themes derived from the interviews. The responses from the agencies are aligned

to Comprehensive Emergency Management concepts of reduction, readiness, response and recovery.

3.5.3. Issues of rigor in qualitative research

The qualitative research in this study results in a methodology audit trail that can be followed by later researchers. Jackson et al (2003) state “all research, regardless of design or approach must address the issue of rigor.” The criteria for judging scientific rigor Sandelowski (1993) are credibility, auditability, fittingness and confirmability.

Credibility refers to the truth of findings as judged by others within the discipline. Auditability is seen as the adequacy of the information provided so that a reader of this thesis can determine whether the results are consistent with the data and the analysis is proper. Fittingness is how others in the discipline evaluate its importance in relation to their own experiences, research and theory development. Confirmability is findings that reflect implementation of credibility, auditability and fittingness standards and could be reproduced by the same methodology.

Roberts and Taylor (1998) stated” There is no one accepted test of rigor in qualitative research, just as there is no one way of doing qualitative research. ” They further suggest that it is up to the researcher to choose the most appropriate means of assessing rigor to reflect the methodological assumptions of the research project. Credibility was determined as the means of assessing rigor for this thesis following the interviews, where research findings were shared with members of the OSEPG and community members at various meetings in Otago and Southland to confirm the findings were consistent with their understanding. These focus meetings showed the emergency management agencies and emergency services the importance of, and necessity for, community relationships. Confirmability has also been deemed to be proven by funding being recently allocated (2005) to the author to expand Community First Response in Southland and new (forward) planning work allocated to the OSEPG on behalf of the Southland and Otago CDEM Groups.

3.6. Data Analysis: Thematic Content Analysis

The data analysis process followed a semi-structured interview using a simple modified thematic content analysis, as described by Lacey & Luff (2001). The interview responses resulted in a detailed and systematic recording of themes and the issues

identified were then linked with the literature review and the previous planning work that has been completed by the OSEPG.

Questions were broken down into broad categories prior to interview, e.g. planning, the OSEPG, CIMS, resource mobilisation and EOC's. These were further broken down to specific questions relating to topics such as advantages of integrated planning, changes in actions by agency for integrated planning and logistical issues in relation to agencies being involved in integrated planning.

The interview process generated themes from the data that was collected. Each interview question was recorded in hard copy with key phrases noted. The key phrases or words were summarised and input into a word document. The process was slow as the phrases had to be taken out of the interview answers. Analysis of the data occurred during the same period as new data was being collected from organisations. There were 255 answers and these were coded into 38 groups or clusters. Percentages were calculated from the number of responses in relation to categories in the 38 clusters and this allowed the comparisons to be calculated across the agencies. These were charted, along with the key findings that came from each interview question in chapter four. A second tier to the content analysis was to identify the meanings of responses given by the interviewees, ensuring they were interpreted in an organisational context.

3.7. Reflections on the research methodology

The study was qualitative in nature using a semi- structured interview process to collect data from fifteen agencies involved with the OSEPG. The time period allocated to collect the data allowed an initial analysis of the information whilst other interviews were being held. Some interviews were delayed as the interviewees became involved in their own district emergencies during this period. All interviews were complete by October 2004. Although taped interviews were considered, the author elected to conduct face- to- face interviews and take notes. To encourage careful and thoughtful reasoned responses each organisation was sent the questions at least two to three weeks before interviews occurred. The author was endeavouring to review the organisational systems in an emergency management perspective and not the thoughts of individuals. However, all interviewees remained anonymous so information could be shared without restraint.

3.8. Limitations of the research

Research looks to uncover and detail new knowledge. The research design is unique to the researcher carrying out the research and their own perspective on the issues. The resources required to elicit information can be limited by available time and can influence the scope of the research. Emergency Management is a complex subject since it interacts with a vast number of organisations, communities and individuals. To truly obtain an overarching perspective of these organisational and community issues a number of years could be spent exploring this perspective. However emergency management is also changing rapidly which is why it would be difficult to keep the signs of such long-term studies current.

3.9. Summary

This chapter described the methods followed utilised in carrying out research involving agencies associated with the OSEPG. Fifteen agencies were interviewed to explore agency perspective on emergency planning and determine changes in planning (based on organisational priorities) that may have arisen from the integrated emergency planning process. Ethical considerations were considered as part of the research and two methods of research are described analysing written records of the planning process and executing semi-structured interviews. The objectives of the interviews were described and issues of rigor in qualitative research were considered. Data analysis was carried out using a simple modified thematic content analysis.

4.0. Results

4.1. Introduction

This chapter presents the interview results by the author. Representatives from fifteen agencies associated with the OSEPG were interviewed. Thematic content analysis was then conducted to extract themes from the interviews. Some interview questions have additional comments added as bullet points to emphasise some key points that arose from the interview questions. Agency groupings were:

1. Emergency Services
 - New Zealand Police, New Zealand Fire Service and St John.
2. Southland Local Authorities
 - Invercargill City Council, Southland District Council and Gore District Council.
3. Otago local authorities
 - Waitaki District Council, Dunedin City Council, Central Otago District Council and Queenstown Lakes District Council.
4. Regional Councils
 - Otago Regional Council and Environment Southland.
5. Government Agencies
 - Ministry of Civil Defence and Emergency Management and Ministry of Health.

4.2. Results

Planning: General

Question 1.

Which agencies did you work with during emergency incidents prior to the development of integrated planning across agencies and CIMS?

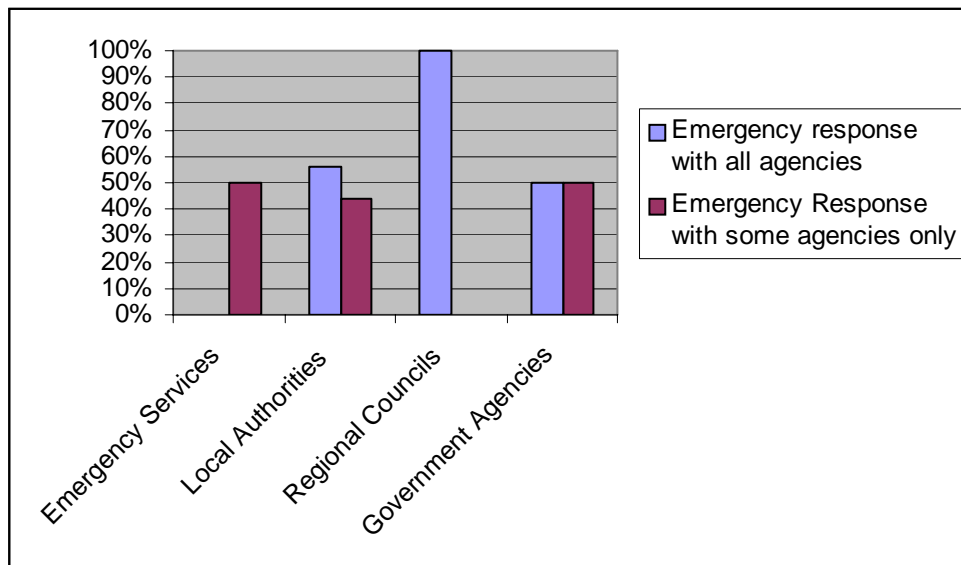
Synopsis of Responses

Prior to integrated planning and the development of CIMS the Emergency Services (Police, Fire and Ambulance) worked with each other at incidents, whether they were

accidents, emergencies or disasters, but this did not extend to planning readiness. CIMS was not developed until the early 1990's and agencies at road traffic crashes and major fires had their own internal command structures, liaising for task resolution as required at incidents, (similar to the current British model). They met at the designated command point but had little contact with Local Authorities or government agencies during other phases. Prior to CIMS, the Lead Agency, for example the Fire Service would have a Command Unit at the incident and Ambulance and Police incident officers would attend occasionally. The major difference pre-CIMS was that the Lead Agency Chief Fire Officer took on all roles that are now split four ways under CIMS i.e. Incident Control, Operations, Logistics and Planning/ Intelligence. Prior to CIMS there may have also been three Control Points at incidents with Police, Fire and Ambulance Command Units all set up but at different sites at the incident. Although incidents were resolved, a consistent issue arising from debriefings was that the inability to communicate with other agencies by radio was an important factor in preventing early resolution of incidents.

Emergency response agencies were brought into Emergency Operations Centres when Civil Defence declarations occurred in order that Civil Defence could coordinate the required level of response across all agencies, as occurs now with the CDEM Act (2002).

In analysing the responses, it appears the contacts were one-sided in that the local authorities responded to the needs of the emergency services during an emergency only when requested e.g. opening up a welfare centre for a pre-declaration emergency, such as the Māhikihi train crash (McColl 2001). Emergency Services did not liaise with Civil Defence unless the request was made by CDEM and a declaration was made i.e. there was no planning mechanism to make consultation happen. Arrangements were ad hoc in the pre-declaration phase with no guidelines available as emergencies escalated. (These guidelines are now available in Appendix 8). The research feedback (Figure 5) indicates that the Emergency Services did not respond as a collective through the CDEM system. The two regional councils stated they did, but this could be assumed to be that the level of emergency was at a level they were specifically involved, such as a regional flooding emergency.

Figure 5. Interagency response prior to integrated planning

In some cases relationships were built on social footings in Invercargill. The New Zealand Police and New Zealand Fire Service interacted with other government organisations, except Civil Defence where interaction was minimal. St John liaised with the hospitals, and with other emergency services at incidents. Regional Councils liaised with all agencies and one council representative commented that CDEM, rather than change planning, has created more structures to enhance the planning processes. In summary, planning was occurring within agencies but not between agencies.

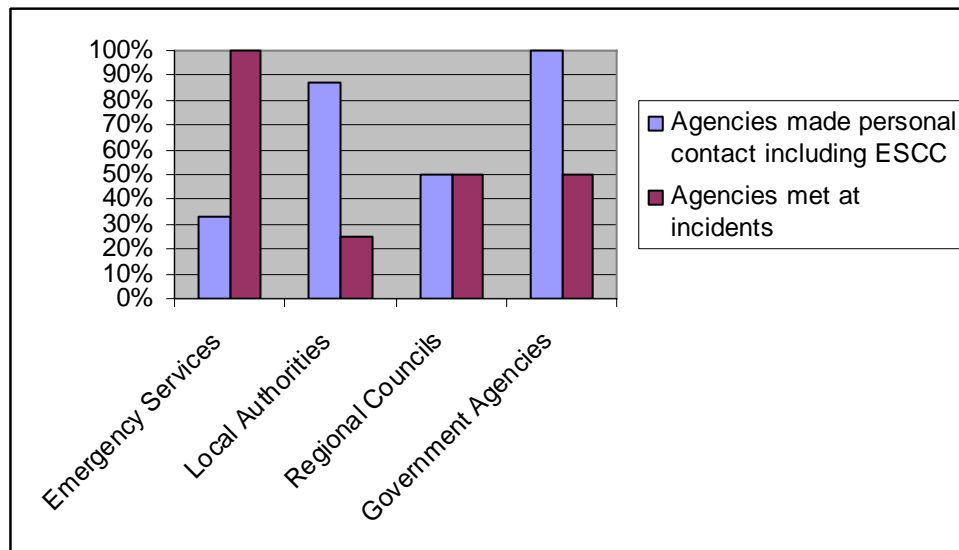
Question 2.

How was the contact with other agencies initiated?

Synopsis of Responses

Prior to integrated planning frameworks being established, contact between some agencies was seen as driven by mandate. The New Zealand Police indicated they were directed to make contact with agencies where they had relevant functions to perform e.g. managing Emergency Service Coordinating Committees (ESCC's). Police have the mandate to establish and coordinate these committees, but not all committees meet regularly in the provincial towns in Otago and Southland. The ESCC committees' roles are meant to pre-plan, at a senior level, procedures for control, organisation and communication which will ensure the coordinated deployment of resources in an emergency.

The ESCC is discussed further in Chapter Five.

Figure 6. Mode of contact

The Civil Defence role in an ESCC is to promote a working relationship with emergency services and to establish procedures for the smooth transfer of responsibility where a state of Civil Defence emergency is declared.

The emergency services indicated they met either when an incident happened or met each other informally. This also included the ESCC forum. The emergency services occasionally met on an informal social basis in a non-emergency environment. Other than this form of contact there was no personal agency contact for joint work projects whereas the government agencies clearly sought personal contact with other agencies, particularly Civil Defence owing to legislative mandate or institutional policies. The local authorities targeted the agencies they wanted to work with to facilitate projects or to be integrated into their response structures. This form of local authority contact with targeted agencies' was not coordinated across the local authorities in Otago and Southland. The local authorities also met the emergency services through the ESCC and Hazardous Substances Technical Liaison Committees (HSTLC), although these committees were driven by the emergency services and not the Local Authorities.

Question 3.

Rate in general the level of nature of contact – close, or minimal?

Synopsis of Responses

Prior to the CDEM Act and the development of CIMS in a CEM context there was no mention of contact for Reduction. For Readiness, contact was minimal on planning

issues, except for the Police and Fire Service commenting that only for non-operational matters dealing with a specific need did they made close contact with agencies. Some Local Authorities offered rescue training, so contact was enhanced during this period, but became minimal once this ended. In Response, contact was close for resolving incidents across all agencies (81. 7%). For routine incidents contact between emergency services was close. The local authorities did not make contact with the emergency services operationally at the same level as the emergency services did between themselves owing to there being fewer emergencies that they needed to become involved with.

The emergency services had less contact for integrated planning than the other agencies, interacting only through either the ESCC meetings or at operational incidents. It is clear from the responses the emergency services did not pursue integrated planning, even through the ESCC meetings provided an opportunity for this to happen. Local authorities tried to keep in reasonable contact with the response agencies in their community to the best of their personal capability. This was by making contact every few months with emergency services and meeting with agencies to advise on matters relating to Civil Defence, but was done on a more ad-hoc level than the ESCC meeting forum.

Question 4.

What were the advantages to your organisation being involved in multiagency “all hazards” emergency planning?

Synopsis of Responses

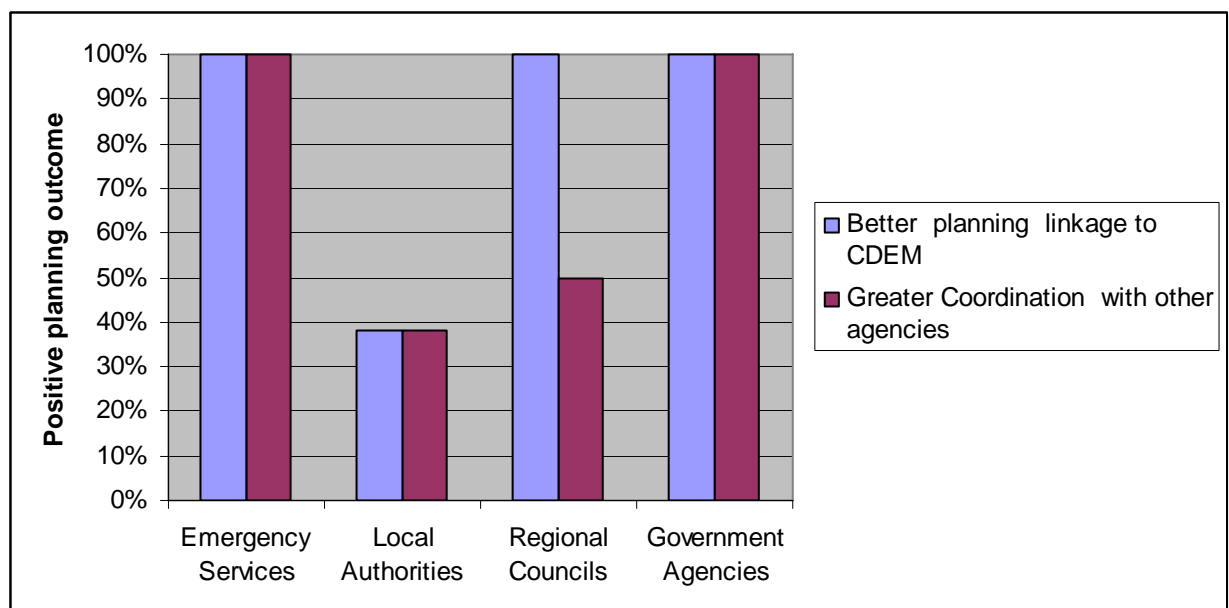
All the agencies interviewed indicated they expected and experienced very positive advantages being involved in “all hazards” emergency planning. A common theme that came through from the interviews was an awareness of the response capabilities and operational procedures of other agencies (33%). The New Zealand Police commented that integrated planning allowed them to view situations from different perspectives and consider other ways of responding to emergency events’. St John recognised there was a potential enhanced interagency response capability through the integrated planning processes. This factor could be transferred to exercises to test integrated response concepts.

The development of the resources database with the OSEPG work allowed the identification of the agency response capability on a provincial basis and also identified the response gaps. The New Zealand Police also shared the planning processes they

use to develop operational procedures for planned events e.g. – The Alexandra Blossom Festival.

Personal contacts between groups in a planning forum allowed names to be put to faces and this led to an understanding how people worked within their own agencies (33%). This personal contact is very relevant. As an example, at the Waipahi Train crash the Incident Controller from the Police was personally known to the author, who was acting as the Ambulance Commander working in liaison with the Incident Management Team. This association had occurred through the work that was being carried out in 1999 with the Otago Southland Emergency Planning Group. This contact made it easier for the response managers to manage emergency incidents when CIMS was activated. Another theme that came from the interviews was there was a better coordination of readiness and response activities across all agencies (33%). Figure 7 shows the differences between the agencies for planning linkages and coordination that came from the integrated planning processes.

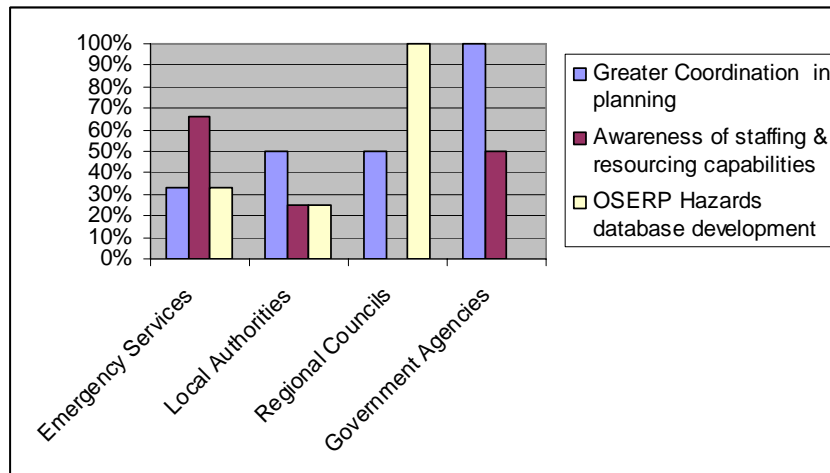
Figure 7. Linkage and coordination enhancement



Better coordination addressed capability response gaps that other response agencies may have had, e.g. St John has medical response gaps in Otago and Southland in a number of communities. To enhance readiness for potential community emergencies, integrated planning can provide means of utilising relevant skills within support agencies to assist a contracted or legislated agency. For example, the Fire and

Ambulance Service can be used to provide an enhanced multiagency readiness and response integrated capability to rural and urban communities for time-critical life threatening emergencies by the provision of community defibrillators.

Figure 8. Integrated planning: changes in actions; all agencies



The awareness of the capabilities across the agency groups (Fig 8) enabled a better understanding of the different roles, operational functions and powers of those agencies within their legislative requirements. Local authorities could see how they could participate within a team with the Emergency Services. It is also gave an insight into other ways of managing emergency situations, avoiding a ‘silo’ mentality; becoming blinkered by their own agency’s sphere of operations. One outcome of applying CIMS meant the Lead Agency resolving an incident could utilise other response agency personnel to assist in the Incident Management Team.

A further outcome from the integrated planning exercise was that other agencies were able to jointly identify risks and hazards that were not always obvious to any one agency. There was also a clearer focus on outcomes and objectives and a better ability to coordinate effort and avoid duplication of tasks. Discussion allowed agencies to also identify the resourcing gaps. The two regional councils have a clear understanding of the advantages for “All Hazards” Emergency Planning. The encompassing nature of involving all parties in a planning forum cannot be underestimated.

Question 5.

Were there any particular organisational issues that caused concerns or were perceived as disadvantages to this planning process?

Synopsis of Responses

40 % of the agencies interviewed felt there were no disadvantages with the integrated planning process. Other agencies all had comments in one form or another. The major comments or concerns from the agencies are;

- Commitment of volunteers within organisations in non–operational roles e.g. planning.
- Reluctance of some local authorities to become involved in integrated planning.
- People moving away and names being lost in the system pre-integrated planning.
- No control over who is involved with Civil Defence.
- There were some personality issues.
- Some commercial businesses were a closed shop. We could not get information.
- Overcoming silo-planning activities.
- Authority boundaries do not agree with the emergency services boundaries thus we have different contacts.
- Geographical spread of meeting venues. Personnel travelling to meetings covered vast distances, which meant they were away from their offices for a considerable time.
- Executive oversight with emergency planning through the CEG is the best facet of the CDEM Act.

MCDEM mentioned the need for greater coordination of rural communities and rural response agencies, as there can be a reduced response capability in rural parts of New Zealand. St John has also recognised this difficulty with response to rural communities it serves and has developed strategies to overcome the lack of rural response capability. These include as a St John initiative activating additional Fire First Response Units in areas where response times are in excess of St John ACC and

MOH contractual response times and the initiation of Community First Response Groups.

MCDEM and the Ministry of Health, along with the emergency services, indicated that integrated rural community planning was identified as an area requiring further development. The emergency services in rural communities are staffed with volunteer personnel and cannot contribute the time to participate in planning for potential hazard events and their consequences owing to their personal and work demands. There is oversight by the overarching organisations e.g. Rural Fire and New Zealand Fire Service but the time commitment for risk analysis at volunteer stations is limited. Solutions will need to be found and a recommendation on this issue is in Chapter Six – Recommendations.

Figure 9. Agency commitment to planning

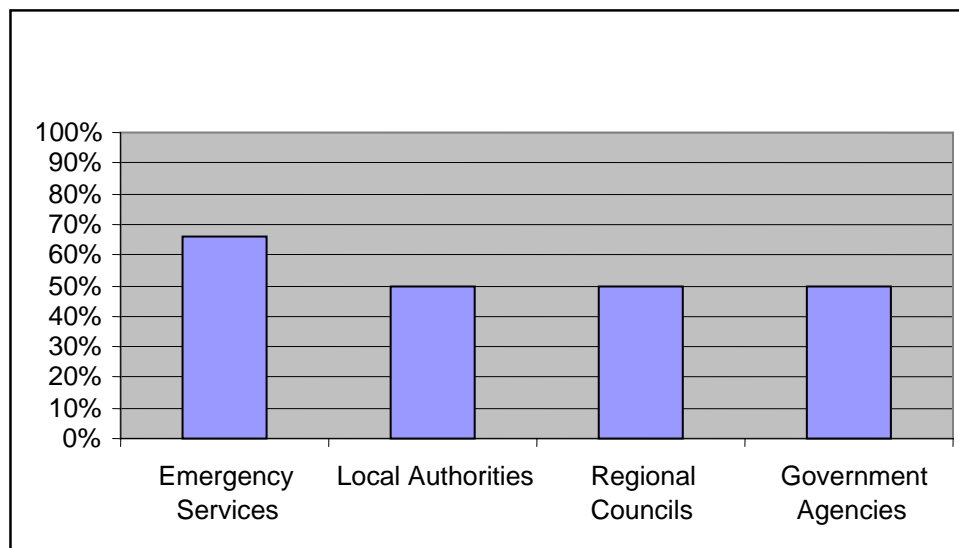


Figure 9 notes concerns from some agencies for commitment to planning through the OSEPG leading up to the passing of the CDEM Act. The agencies participating in the integrated planning processes observed they felt they had to be involved. They realised the planning was occurring on top of the agency's normal working practices, i.e. this was extra work, that may not have been planned for in the yearly business plan of particular organisations. The requirements under the CDEM Act (2002) have subsequently changed this issue: it is mandatory under the act.

It took a while for the emergency services to become involved in emergency planning and the siloed agency planning activity had to be overcome, i.e. moving from intra-agency to interagency planning. The OSEPG was instrumental in facilitating this move in the Otago and Southland region.

In the Civil Defence organisation, planning was intra-agency and did not include the emergency services. Additionally, Civil Defence did not plan for pre-declaration emergencies, as it was not a statutory requirement under the Civil Defence Act (1983). This was a gap identified by the emergency services that led to the formation of OSEPG. The integrated planning activities of OSEPG beyond a legislated mandate and integrated emergency planning extended across all agencies (Emergency Services and CDEM as well as allied support agencies).

Question 6.

What does the new integrated planning process actually mean in terms of changes in actions by your agency?

Synopsis of Responses

75 % of the agencies believed there is more recognition of prioritising, planning and readiness and greater coordination and liaison. Some examples are;

- Recognition that operations are no longer done in isolation.
- A better opportunity for a wider range of ideas to be exchanged.
- Prepares the organisation for wider emergencies and other agencies emergencies.
- There are now regional consistencies.
- Set the standard consistent with the National CDEM Plan.
- Change in actions with an overseeing role.
- Involving people from the community as part of the planning process to contribute to the plans.
- Better position to develop interdependencies.
- More consultation and a better understanding of emergency management matters.
- There is a more active coordination role implementing the general direction of the CDEM Act.

The changes in actions by the agencies indicated the following were happening;

- A more combined, regionally consistent approach to planning and how organisational roles interconnect.
- Recognition of a need to work with other agencies to handle situations in an integrated manner.
- Local authorities are creating closer working relationships with emergency services.
- There is more consultation now than in the past as plans are developed by agencies so that commitment is based on actual capability rather than what might happen.
- “Heads up” meetings for incidents involving the emergency services are becoming more common. Local authorities are invited to attend these as they are in a position to provide support such as the use of their EOC’s earlier than in the past.

Three main themes have emerged from integrated planning:

1. There is a priority for planning to occur in cooperation with other agencies (33%).
2. Agencies need to work together operationally (47%).
3. All planning and response activities need to be coordinated (60%).

Currently the agencies are using the OSEPG as the forum for predeclaration emergency planning and planning sub- project groups are developing tactical plans. Conjoint with this planning, various agencies e.g. Environment Southland, are convening meetings addressing specific emergency management issues that require multiagency input to particular areas e.g. Bluff Port. As the CDEM group plans are completed, the targets, objectives and actions that were identified within these planning documents were initiated in 2005.

Question 7**What further modifications to your operations are required now that the new CDEM Act has been passed?**Synopsis of Responses

The following changes were occurring within the agencies at the time the interviews were being carried out. The changes were;

- Response plans were being rewritten to reflect Comprehensive Emergency Management for reduction, readiness, response and recovery and linked to also reflect the CDEM Act.
- Personnel were being educated in CIMS across all agencies with several courses being run each year.
- CIMS Incident Management Team equipment was being placed in police cars.
- Emergency Services sat on the Coordinating Executive Group of the CDEM Group in Otago and Southland.
- The Ambulance Service had placed equipment pods at strategic locations and was working proactively to build relationships with the rural sector in the area of response.
- The issues of business continuity and recovery planning were being examined.
- The District Health Boards had developed their own emergency plans that linked to CDEM plans.
- Consolidating the partnership relationships under the CDEM Act.
- Greater liaison occurring with other councils.
- More resourcing to consider, implementing the emergency management targets and actions.
- There is a wider discretionary role in CDEM for planning
- Additional liaison was occurring with other agencies including MAF, WINZ, IRD and DOC.
- Creation of a clearer operational structure. More focus was on dealing with tourist activities, recognising the need for agreements with others so resourcing for emergency responses can be enhanced.

- The local Civil Defence plans were being rewritten to reflect the new CDEM organisation.
- Recognition of the planning gaps for emergencies and addressing the transient population. Working with neighbouring areas and emergency services to determine the assistance required for emergencies in their area.
- Emergency services were working together more closely and planning operationally. The Territorial Local Authorities were also beginning to increase their liaison with the emergency services operationally.

Planning and operational measures have to be put in place by CEG's under the CDEM Act. The OSEPG also saw the need for this function but through the wish of its own members rather than by mandate. The Fire Service and Ambulance Service have indicated that more investigative and research work needs to be undertaken in the areas where volunteers are part of their response operations. For example, there are personnel issues related to balancing professional duty hours in their own organisation. The Health and Safety Act and driving regulations impinge on the time personnel can be on duty, staff require being relieved at set time intervals. This issue requires the CIMS Incident Management Team to identify additional regional response resources. Although peer support for staff is shared between the two organisations, some of that peer support may also be required to be involved in the emergency event.

Both the Fire and Ambulance Service have indicated concerns about business continuity and recovery following the impact of an event. St John in Invercargill instigated a risk-profiling project in 2001. It involved the emergency services, Southland councils and MCDEM. Owing to resource constraints the New Zealand Fire Service became the only agency to risk profile Invercargill City, a project that has continued steadily since 2001 with the majority of the suburban and central business area of Invercargill now covered.

MCDEM feels there is need for further human resourcing to manage the support for emergencies and that change could take up to ten years to implement. The Local Authorities, on the other hand, have indicated they need to work more with their local communities and government support agencies such as Work and Income New Zealand (WINZ). Local authority Civil Defence plans are also being rewritten to reflect the concepts and requirements of the CDEM Act (2002).

The Administering Authority of the CDEM Groups, coordinated through the Emergency Management Office, have recognised that they will need more staff resourcing to carry out the CDEM Group yearly work plans to realise the Objectives , Targets and Actions that have been set. There are budgetary issues with more expenditure occurring than thought would occur initially. A positive factor is that there is Chief Executive coordination at a higher level than had occurred in the past, where co-ordination activity was only at the Civil Defence Officer Group level. Now there is senior executive buy- in and co-ordination across territorial authorities and the emergency services through the CEG's.

Question 8.

What has changed in your emergency management methodology for integrated planning?

Synopsis of Responses

67 % of agencies have reported greater coordination with other agencies. The coordination has been achieved by;

- Participation in CIMS training.
- Involving agency managers and planners in development of tactical plans.
- Consultation with other agencies when developing plans.
- St John appointed an emergency planner who actively works with other response agencies and the CDEM sector.
- Changing the philosophy of individual agency planning to integrated planning.
- Using the ESCC to coordinate planning activities.
- Creating more structure at CEG level as well as structure involving other agencies who are involved with CDEM planning rather than ESCC planning.

Agencies are following CIMS principles, whether in the field at emergencies or in the operation of the Territorial Local Authority Emergency Operations Centres. The emphasis on CIMS may also mean there will be a lesser number of declared events. This will be discussed further in chapter five of this thesis.

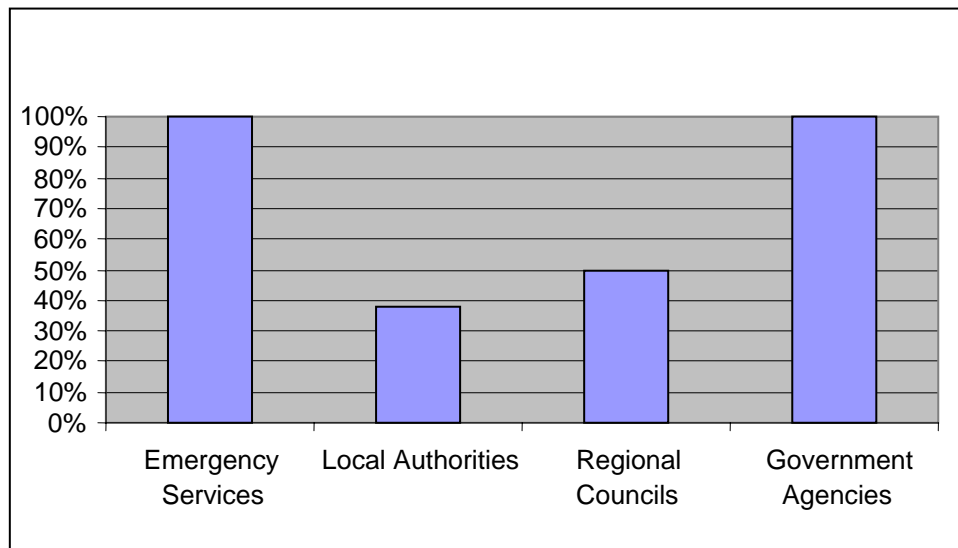
Figure 10. Greater co-ordination with planning

Figure 10 indicates how the emergency services have changed their stance to planning. Greater linkages to local authorities have occurred under the integrated planning framework than existed prior to the CDEM Act and the 4 R's. Another interpretation from the graph is that the emergency services and government agencies are adopting change faster than the Territorial Authorities. The isolationist manner of planning is being altered by modern technology where planning documents can be electronically passed between agencies with ease during consultation phases. Agency heads are meeting earlier to discuss planning issues and are working more collegially. Individual agencies plans are being replaced with group plans from a multiagency point of view e.g. Fiordland Coastal Passenger Ship Emergency Plan. As a result agencies are not writing plans in isolation requiring the involvement of other organisations and hoping it will work when an event occurs.

Comprehensive Emergency Management (CEM) is part of the framework around which agencies are providing input at CEG and CDEM level. Some agencies recognising the need for CEM within their planning frameworks have appointed emergency planners to assist in the development of the planning and response frameworks.

From a Health perspective there is more interaction with the community. MCDEM is aggressively promoting emergency management and is seen a leader and driver. As the driver it is steadily changing the culture of a silo mentality in integrated planning amongst agencies. MCDEM also mentioned that information flows still need more

work, however, as regions are still not communicating with districts as well as they should be.

Otago Southland Emergency Planning Group (OSEPG)

Question 9

What part of the project or its outputs from the Otago Southland Emergency Planning Group (OSEPG) work has specifically interested your agency?

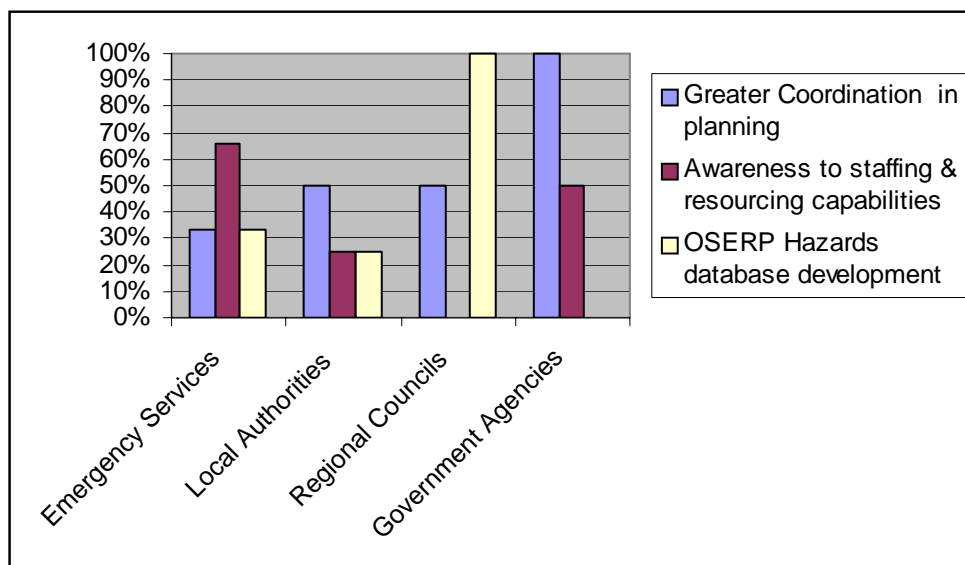
Synopsis of Responses

In order of response point one below indicates why agencies became involved with OSEPG. Points two and three were seen as the secondary benefits.

1. The coordinated approach to planning (60%),
2. The awareness of agencies staffing and resourcing capabilities (27 %),
3. Development of the Hazards and Risks database (27%) were the main factors why agencies became involved with the OSEPG.

The Police indicated that OSEPG created an awareness of the staffing and resourcing required in managing emergency events. The development of the resources, risks and hazards databases was useful to the response agencies and some of the Territorial Local Authorities.

Figure 11. OSEPG project interest by agency



The regional councils observed a number of distinct advantages arising from OSEPG, especially in that the hazard database was a starting point for their own work in this area (Figure 11). The hazard database is now incorporated in the Southland local authority CDEM plans. Figure 11 also shows that the emergency services see the OSEPG useful in discussing the staffing and resourcing implications to emergencies. The local authorities and the government agencies felt that the OSEPG created a forum in which there was a greater emphasis for interagency planning. The OSEPG brought agencies together ahead of the legislative need to do so.

MCDEM observed that because the ESCC's were not undertaking proactive planning, the OSEPG arose to fill the gap in response agency operational planning requirements. The project broke down barriers between members but also identified agencies that did not want to be involved. The work of the OSEPG subsequently has been picked up by the CDEM Groups. For example, the Southland CDEM plan mentions the OSEPG and their Response Plan (OSERP) as one part of the supporting documentation and OSEPG is one of the committees that report to the Southland CEG of the CDEM Group and is a member of the working parties of the Otago CDEM Group.

Invercargill City Council also referred to the work of the OSEPG within its Lifelines Project work. In particular, the Hazardscape reported within the hazards database was useful as a base document to its Lifelines Project and the hazards database is part of the local CDEM plans for Southland. The ability of the local authority members of the Invercargill City Council to have a significant input to the development of the databases for the planning group was a positive spin-off. Likewise, the Otago CDEM Group is using the OSEPG hazard register as information within its CDEM plan.

The emergency services found the resources database one of the most useful parts of the planning group work, as for the first time the response agencies knew the available response capability in every community in Otago and Southland. This impacts on local response capability for community emergencies and assists St John in determining alternative response partners under integrated emergency management.

The Southland District Council found the radio communications coverage gaps identified within Otago and Southland an issue in the Catlins. Formation of a sub-project group to look at this addressed the problem by formulating plans to provide radio communications by sharing portable repeaters within the agencies. The OSEPG provided the mechanism for this to occur and is now tasked by the Southland and

Otago CDEM Groups to provide a communications plan to enhance emergency service – CDEM capability by mid 2006.

All plans developed by the planning group members were made available to all participants in the project. A planning gap for cruise liners operating around the South Coast and Fiordland has also been identified and this was addressed by the development of a multiagency strategic/tactical plan by the New Zealand Police.

Question 10.

One OSEPG project output has been the production of the Otago Southland Emergency Response Plan (OSERP)-What aspect of this plan is or has been of most use to your agency?

Synopsis of Responses

73 % of the interview respondents found the Otago Southland Emergency Response Plan useful. Specifically the interest lay primarily in;

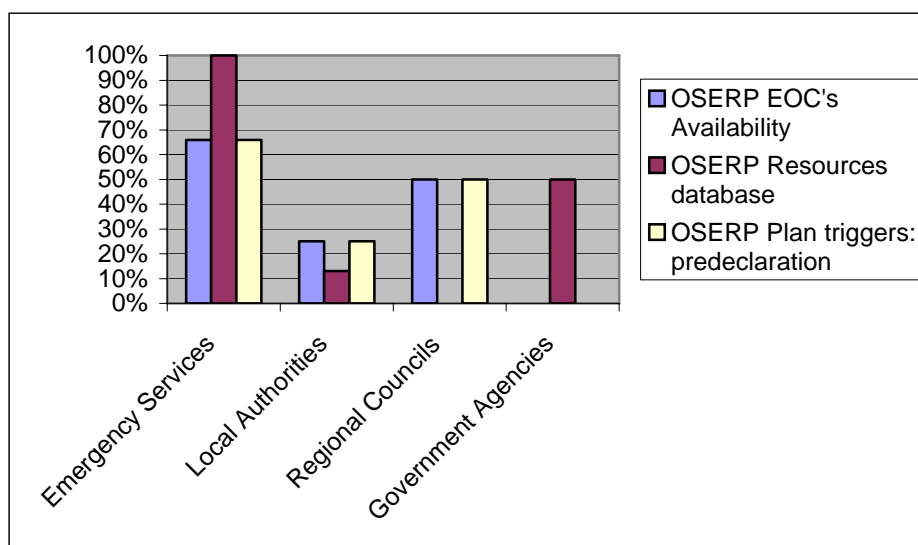
- The availability of EOC's (33%),
- The resources database (33%).
- The plan triggers (33 %).

The availability of the Emergency Operations Centres in Otago and Southland and their locations are identified within the OSERP. There is recognition within the plan that there is support from other agencies and agreement the plan will operate when required. Examples where these concepts have been applied are the Sydney Express and Tai Ping Marine Emergencies in Bluff Harbour. The Lead Agency for this emergency was the Maritime Safety Authority whilst the ships were in the Bluff Harbour channel. The Sydney Express was a chemical emergency with the Fire Service taking the Lead Agency role to manage removal of the contaminated cargo. The response agencies required to deal with the operational tasks were brought together by the Lead Agency to discuss the management plan to facilitate an effective outcome as an initial "heads up "meeting". These emergencies were low level. The initiation of the EOC under the principles of OSERP monitoring activities was along similar lines to those in the CDEM Act requirements where agencies have to be proactive in joint response and coordination in emergencies. The resources database is available to Incident Management Teams to identify resources in a given area. OSERP underpins individual agency plans and requires agencies to talk together and make decisions in a timely

fashion. The trigger levels for emergencies are recorded in Appendix 8. The thresholds for triggering a regional pre-declaration plan are based on;

- The need for further resources, support or assistance; and/or
- When it is necessary to coordinate two or more emergency management operations; and/or
- Where there is a significant potential risk to public safety.

Figure 12. OSERP usefulness: all agencies



Each of the agencies had different views on the benefits of the OSERP (Figure 12). For emergency services (Police, Fire and Ambulance) the resources database was seen as the most useful (100%). This database allowed agencies to recognise response resources available in a given area under ideal conditions and also reflect to the CIMS Incident Management Team the length of time it would take for resources to arrive at an incident. Additionally the OSERP plan triggers were seen useful to the emergency services (66%) for pre-declaration emergencies. Both the emergency services (66%) and regional councils (50%) viewed the locations of the EOC's of importance as well. The Southland District Council felt the OSERP spelt out the protocols for an escalating event where it was more than a routine emergency but not a CDEM declaration. As a result they have indicated they will open their EOC to support a Lead Agency by providing staff resources to support an emergency event. The principles for this are now defined and are listed in appendix 8.

Question 11.

Another project output has been the development of Community First Response Groups. These groups link to the emergency services in a response partnership. What are your views on communities having input into emergency services that meet their needs?

Synopsis of Responses

All fifteen agencies interviewed indicated that Community First Response was a sensible way forward under CEM –Readiness using Integrated Emergency Management as the operational focus to utilise the community in a response partnership, a 100 % acceptance of the Community First Response concept. Community First Response makes communities stronger and allows them to build on capability within their own communities, potentially contributing to build resilience. Agencies, however, need to remember that the amount of support they give these groups will govern the level of response these groups can provide and should avoid creating unrealistic expectations of the level of response in both themselves and the community involved.

In order of response from the agencies interviewed, point one and two are seen as the main benefits of Community First response with point three as a secondary benefit.

- | | |
|--|-----|
| 1. Creates Capability and own well being | 47% |
| 2. Community effort fills gaps & enhances emergency response | 47% |
| 3. Community looking after themselves with external support | 40% |

The Ministry of Health through the Emergency Care Coordination Team (ECCT) had perceived the weaknesses in rural areas part of which is the isolation. Rural communities therefore need to be involved with their own well being.

MCDEM feels that Community First Response creates strengths in communities and builds capability. It also builds Community awareness of its fragility.

The Dunedin City Council feels that once the CFR groups are commissioned in Otago they will also be incorporated in the CDEM response structure with enhanced training to supplement their Ambulance First Response role.

Question 12.

The Otago Southland Emergency Response Plan defined the tasking (relating to the skill sets) of lead and support agencies personnel in a CIMS environment. What advantages or disadvantages do you see with this concept in the plan?

Synopsis of Responses

All respondents interviewed indicated that the tasking list concept (Appendix 4) as developed within the OSERP was a useful addition to the plan. It identifies who is responsible for the tasks implemented by the Incident Management Team (IMT) in a CIMS situation.

The advantages identified by agencies are that the list;

- Identifies who is responsible for tasks.
- Identifies which agencies have the capabilities to support others in tasks.
- Clarifies which agency is best placed to assume the lead agency role for tasks.
- Aids in pooling resources to get the best capability out of the responders for tasking.
- The task list concept removes duplication and confusion.
- Should minimise the possibility of the wrong agency being tasked to carry out a function.
- Provides incident managers with information on the extent and location of the resources available for tasks.
- Organisational intelligence should know who should be leading a task function but OSERP is a guide if doubt occurs.

Disadvantages or concerns expressed;

- The list could contain further detail and be audited to make sure agencies carry out the tasks they are meant to by legislation or local agreement.
- There are concerns that it may eliminate thinking when things are not clear (Reliance on the written guide, rather than judgement for task allocation).

- It may create the perception that all tasks will be activated. There may be possible confusion in the lead agency for the task function against the lead agency for overall incident management e.g. at a Road traffic Crash ambulance will lead the task of pre-hospital emergency care, the lead agency for Incident Control is the Police.

In rural communities where the resources are limited, agencies with similar training could assist others to resolve an incident and the OSERP task list provides means to identify this. Internal agency planning is related to that agency's operational mandate to lead tasks within single agency emergencies. The task list is designed for a multi-agency event when resources are limited and multitasking is required. Support agencies are brought into the tasking analysis in this phase. One point to be aware of is the task function relates to tasking of the agency with the training or qualifications to carry out the task. The skill sets are set within the response agencies' area of expertise. The list also removes confusion of the wrong agency being tasked to carry out a function. The task list does not indicate the overall Lead Agency Incident Controller; that is set by mandate or local agreement i.e. pre-planned, possibly within a tactical planning framework. (See appendix 4)

Question 13.

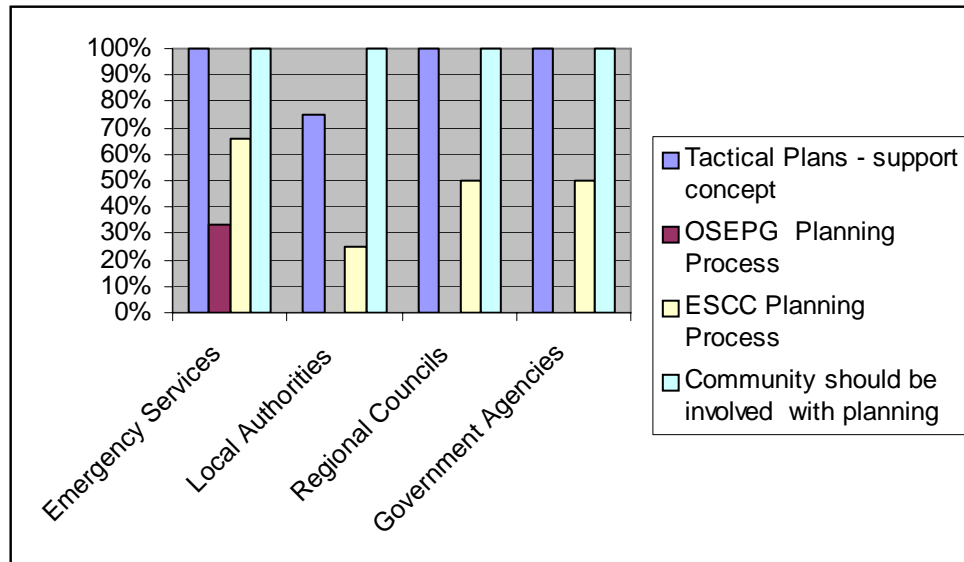
A number of response agencies need to develop tactical plans for special risk sites e.g. where large crowds gather. How do you think agencies could work together to develop integrated tactical plans in pre-event situations? Where do you think the community should fit in with this plan development?

Synopsis of Responses

75 % of the agencies interviewed indicated they would develop tactical plans with other agencies. The local authorities perceive this form of planning as an emergency service domain because the Police, Fire and Ambulance Service are the first responders to special risk sites. The local authorities would however like to have input to be part of the process. Formal planning processes should therefore develop tactical plans between agencies and the lead agency should drive the planning process e.g. Taieri Gorge Railway tactical plan is being developed by the New Zealand Police. Risk analysis of key sites or areas need to occur and preplans prepared for these areas, tested and exercised. Even for small events such as Christmas Parades, plans need to be prepared with all agencies. An integrated risk identification and management plan is

required with all agencies and the local authority where these parades occur. This is not happening yet in Southland.

Figure 13. Tactical plans and community involvement



All agencies believed the community should be involved in developing tactical plans with the emergency services as they are often the key to local knowledge about an area that the emergency service may not know about (Figure 13). The actual role of the community needs further development in the planning process.

The question will be whether the challenge will be taken up by the ESCC's to prepare pre-plans, or the OSEPG or similar planning committee as a sub project tasked by the CEG with a multiagency input from the emergency services and local authorities will carry out this task. The CDEM Group Plan Objective Targets and Actions will identify the need appropriately.

CIMS

Question 14.

Implementation of a multiagency CIMS Incident Management Team at emergency events occurs at a time where complexity of the event management is becoming obvious.

- How does your agency determine when activation of a CIMS Incident Management Team is necessary?

- How do you bring the management resources together?
- Would your agency activate CIMS for routine or single agency emergency events?

Synopsis of Responses

Most agencies interviewed stated they would activate a CIMS-like structure for single agency events, especially the local authorities as Rural Fire emergencies are part of their area of responsibilities and CIMS is applied to these incidents. There is recognition within single agencies that the roles of Controller, Operations, Logistics and Planning and Intelligence need to be shared to ease the workload of individuals. Although CIMS is an incident management tool for multiagency events, the response agencies use aspects of CIMS for single agency events such as managing in a coordinated way the assembly areas, staging areas and the splitting of the management roles. As most incidents tend to encompass other agencies at some point, CIMS principles should be applied early in any incident. Both the Fire and Ambulance Service believe they should activate CIMS for single agency events more often. This became more noticeable in Southland during 2004 -2005 when most emergencies beginning as single agency events evolved to multiagency involvement within a short period of time, requiring interagency sharing of tasks. The Police do not activate CIMS for single agency events except in Search and Rescue (SAR) situations. In the hospital setting, CIMS is activated for single agency events and is part of planning structures.

Although CIMS is specifically designed for multiagency events it has been implemented for single agency events e.g. House Fires or ambulance cardiac arrests. All events that have two or more agencies committed are multiagency in nature. The response agencies tend to get a 'gut' feel based on intuitive reasoning from operational experience when a formalised CIMS Incident Management Team needs to be introduced for a multiagency event, based on the complexity, size and anticipated duration of the incident and the degree of coordination needed across the agencies. Experience of emergencies indicate that emergency managers well versed in CIMS from their training will activate CIMS earlier than emergency service personnel that have had little active experience in using this incident management tool. The respective agency response managers will initially manage multiagency emergency incidents individually for at least 15-30 minutes. Once sufficient agency management resources are on site, CIMS will be activated in a top down manner with the Operations Manager position being delegated away first.

All agencies have indicated to the author that they will activate CIMS for multiagency events. By the time regional councils are involved at CDEM group level, CIMS will be well established at separate incident sites having to be managed by individual Incident Management Teams. A low response of 50 % from the regional councils for activation of CIMS within their organisation may be because of lack of incident management experience when CIMS would be activated.

Some guidelines for CIMS activation trigger points need to be defined. Respondents felt that senior officers should bring the management resources together at an event when the complexity and multiagency input requirement is obvious. The key is that CIMS should be activated early rather than waiting and potentially losing control of management of the incident.

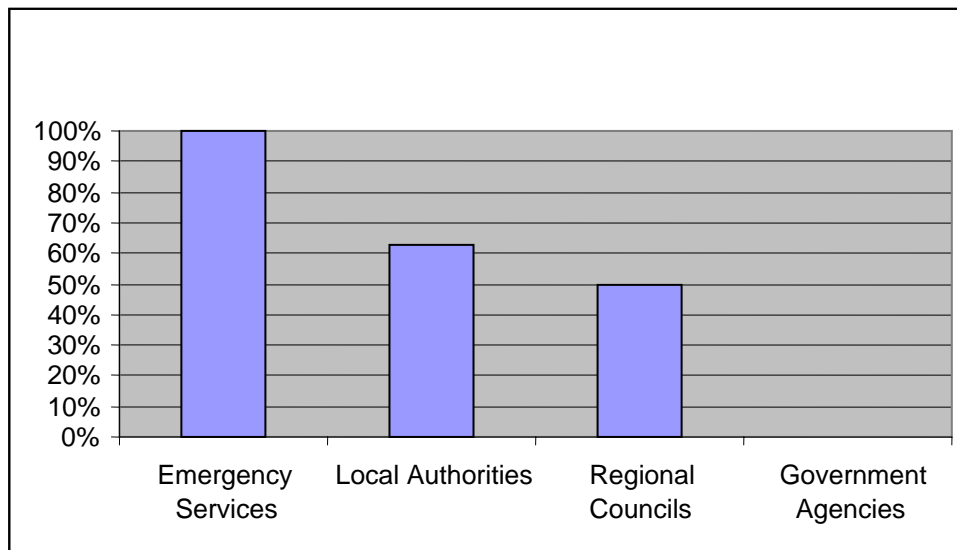
Resource Mobilisation

Question 15.

Emergency service personnel can belong to two or more response agencies especially in rural areas. What advantages or disadvantages do you see in relation to this?

Synopsis of Responses

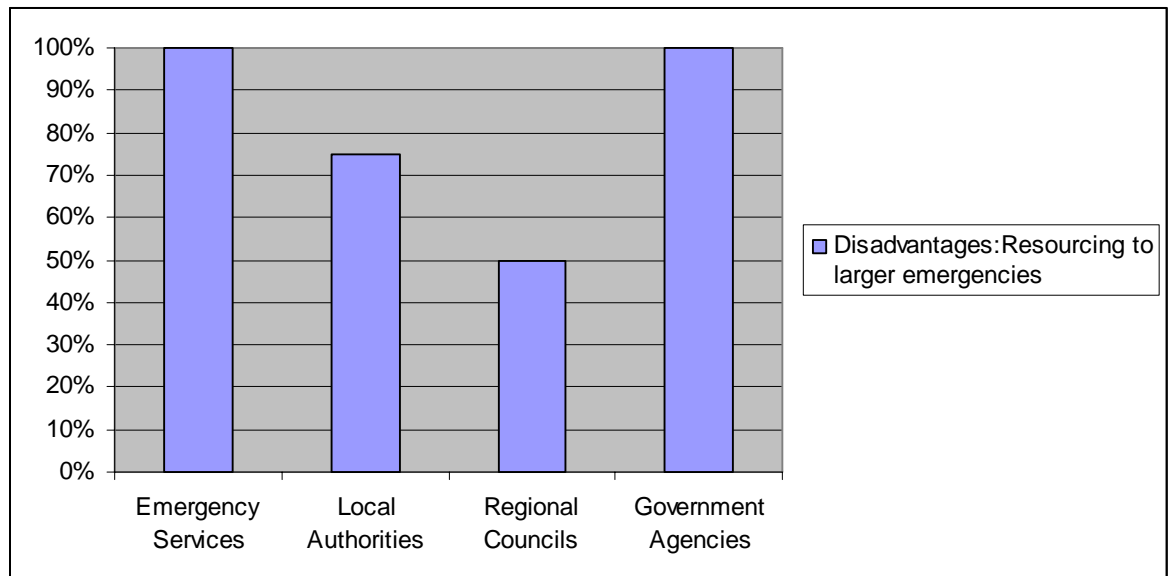
53 % of the agencies respondents felt that cross-training and cross-fertilisation of the skills could be useful to other organisations. In uncomplicated emergencies, multiagency skills can be an advantage and maximize the available response resource. There can be a degree of synergism as ambulance officers who are fire fighters and fire fighters who are Police Officers can enhance the tasking required to resolve an incident. The emergency services believe there are many advantages in having cross-trained personnel to assist at emergencies and all supported this option in communities. Responders that are multidisciplined are useful in small rural communities. They are knowledgeable of organisational structures across two or more emergency services and are also personally known by each of the response agencies.

Figure 14. Multiagency cross training is an advantage

The agency response for cross training is shown in Figure 14. The low percentage response from the government agencies reflects the degree of relevance of cross training to the operations of these agencies and the organisations interviewed interpreted where they would see the benefits of cross training i.e. declaration level.

In figure 15, Most agencies felt that resourcing would be an issue in larger emergencies with concerns expressed by the emergency services and the government agencies that there is an obvious point where advantages of being cross trained turns into a disadvantage. There is a possibility that resources may be spread too thin. In some communities, too many individuals may belong to two agencies thus undermining effective response capability and may cloud command issues. Where multiple agency membership is high, establishment levels do not reflect true response capability; in a given area some personnel may belong to both the Fire and Ambulance service at the same time. Agency levels will therefore overestimate total available personnel. The OSERP resources database recognises this problem and has accurately depicted the true response capability levels for the response agencies in the various rural communities e.g. Balclutha where Ambulance Officers and Police Officers are firefighters. Thus Balclutha Fire personnel resources could be potentially under strength for larger than normal emergencies if the personnel are primarily deployed by their employing agency.

Figure 15. Significance of multi-agency resourcing in large emergencies as an issue.



Responders may not be able to concentrate on tasking to a multiagency incident and impact on effective emergency management in some communities. The time demand on individuals, training costs and callouts could be issues. There may also be conflict of loyalties.

Currently response agencies in Otago and Southland have personnel in two or more emergency services. Most agencies indicate that when a large-scale emergency occurs the employing or parent agency has first call on the individual. The problem may occur when a small incident escalates. Crew changes through CIMS structures will allow a responder to move back to their parent agency after the appropriate stand down period as set out within the organisation SOPS.

In summary, the resourcing of larger emergencies when there are personnel who belong to two or more agencies is of concern to the emergency services. Any model of response capability in New Zealand must reflect local response capability and a multiple agency response capability for larger emergencies. It must also take into account potential problems that will arise from agency establishment numbers in rural operations.

Question 16.

Several specialist response teams have been formed in recent years comprising members of several different agencies; Ambulance, Urban Search and Rescue (USAR) and Specialist Emergency Response teams (SERT's). How should these groups be managed and deployed in CIMS and pre-CIMS responses?

Synopsis of Responses

These teams are deployed by a number of different agencies. USAR teams are a multiagency team deployed by the New Zealand Fire Service with personnel drawn from the Fire Service, the Ambulance Service, NZ Defence Forces and Civil Defence Emergency Management. The SERT Teams are a specialist rescue team that St John deploys to respond to medical and accident emergencies. They often help other response agencies where their specialist paramedical skills are needed.

Twelve of the fifteen agencies interviewed (80%) felt the specialist teams should be deployed under the control of a CIMS Incident Management Team. Local authorities were not sure about specialist tasking of teams and the result could be because they are unfamiliar with specialist teams. Specialist response teams can be deployed prior to a CIMS structure being set up at an incident. Ambulance rescue squads are turned out as a single agency response but as most incidents become multiagency, deployment quickly comes under the control of CIMS Incident Managers when the key agencies come together at the Incident Control Point. The tasks should be allocated by the Lead Agency, whether a CIMS or pre-CIMS situation is occurring.

MOU's are useful as they allow agencies to agree on the way they can mutually contribute to a response in a given area. They may recognize how agencies will contribute in personnel and equipment, cover any financial issues and deal with the degree of cooperation expected. The Southland Community First Response Project has two MOU's. The original MOU between rural communities, the Southland District Health Board and St John are now extended to include NZ Fire Service and the Southern Rural Fire Authority. The development of the Southland Multiagency Response Team project between the emergency services and local authorities has a MOU to allow the response team to deploy equipment that is loaned by the agencies involved in the team to be used without restraint.

Emergency Operations Centres (EOC's)

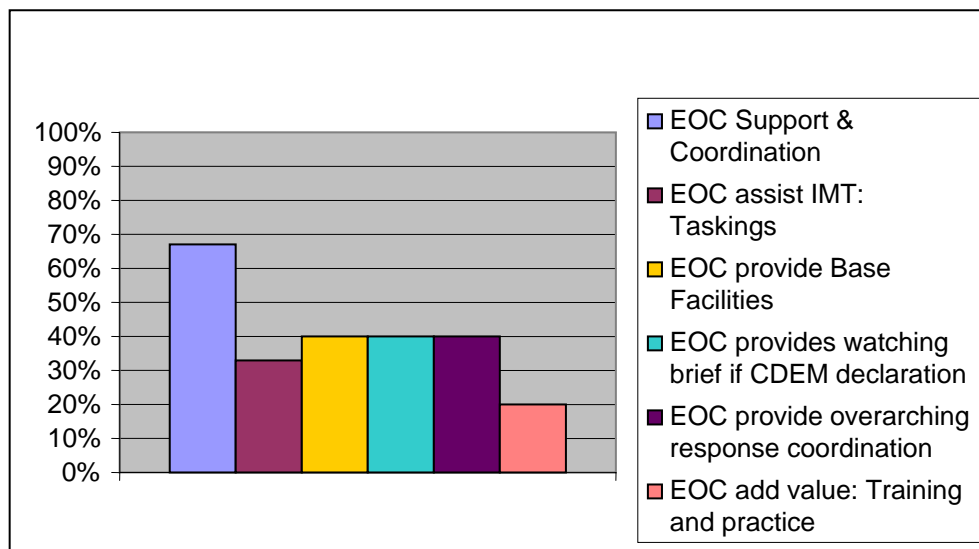
Question 17.

What key roles could an EOC play in a non-declared emergency?

Synopsis of Responses

In figure 16 (67 %) of the agencies interviewed indicated they viewed Emergency Operations Centres (EOC's) as an area for support and coordination of an emergency event.(40 %) of the respondents of the agencies felt the EOC has a role to monitor an event and be available if an event should escalate, i.e. the staff are in-situ working, monitoring the emergency response activity and are on hand should a declaration occur.(40 %) believe EOC's provide base facilities, (20 %) of the agencies believe EOC's can provide training to staff for the larger emergency and (33%) believe the EOC can take the load off the Incident Management Team, especially tasks such as Logistics and Public Information. It was clear from the interview responses from the two provinces that CDEM staff would be monitoring response activities in a pre-declaration phase and the EOC would be activated earlier than was the practice prior to the OSEPG planning.(Appendix 8 is a guide).

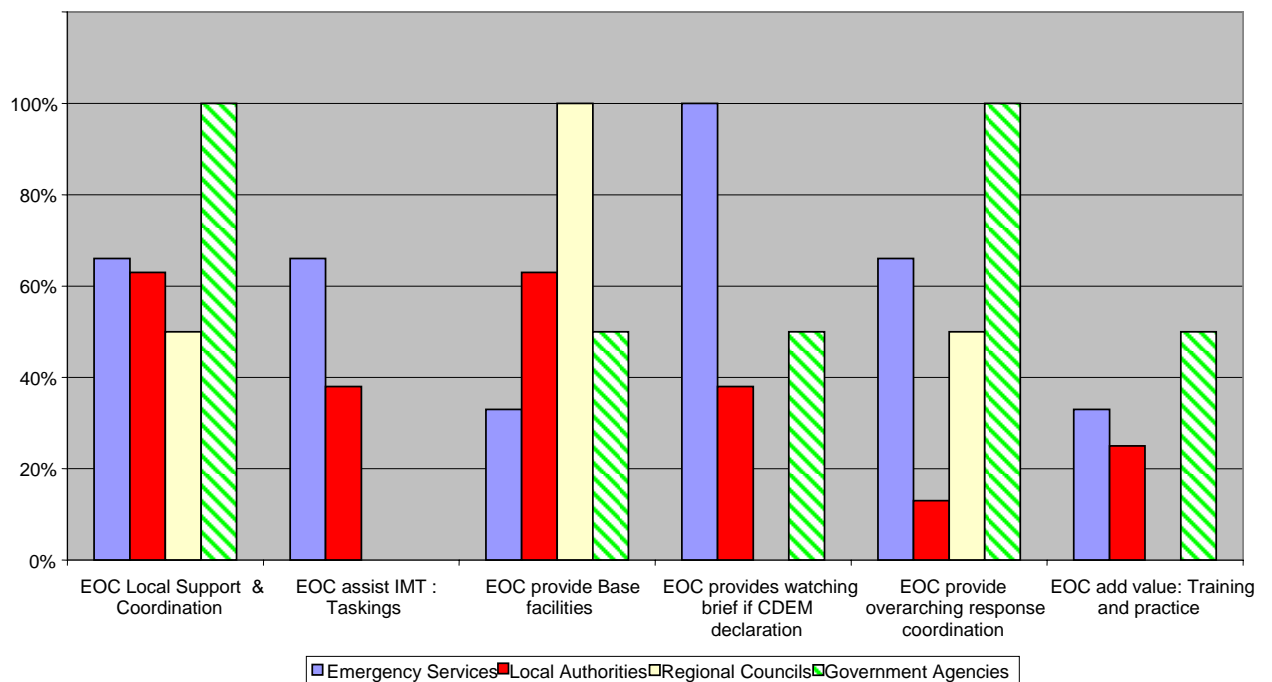
Figure 16. What is the EOC Role: all agencies?



(Figure 17) further demonstrates the split across the agencies interviewed on the key functions of an EOC that agencies find useful when activating an EOC for pre-declaration emergencies. The Emergency Services view is that the watching brief on an emergency where an Incident Management Team is interfacing with the EOC is of prime importance. The two government agencies – MCDEM and the MOH viewed the local support, coordination, and overarching response coordination of prime importance

whereas the local authorities indicate that local support and coordination along with the provision of base facilities, is important to them. Finally the Regional Councils, where the CDEM Group EOC's are located, also view the provision of base facilities important. EOC's will be further discussed in chapter five in relation to where the incident level governs degree of utilisation.

Figure 17. What is the EOC role by agency?



5.0. Discussion

5.1. Introduction

This chapter introduces the background on the Otago Southland Emergency Planning Group, outlines the various emergency service committees within the OSEPG framework currently in operation for pre CDEM integrated emergency planning and discusses how each component was used to get the desired outputs out of the OSEPG project. New concepts were introduced during the planning cycle based on CEM concepts detailed in Britton and Paton (1998). These were evaluated for their operational suitability and then operationalised where practicable in the context of the larger group planning. Integrated Emergency Management examines the strategy of a multi-disciplinary and team based system of response (Britton 1998). This collective approach to creating an integrated response has provided an assurance to communities that medical assistance from ambulance, other response agencies, community responders or medical doctor is part of the continuum of emergency response.

The development of tactical planning for special risk areas or sites and its place in the emergency planning cycle is described. A risk profiling exercise as an adjunct to Lifeline project work as an interagency planning project is also discussed. The discussion moves to the use of specialist multiagency teams as a useful adjunct to emergency management agencies, the concept of residual response capability, integrated multiagency response, Community First Response, multiagency membership and finally to the issues of escalating emergencies, taskforces, incident management systems, the linkage between the OSERP and the CDEM levels of incidents and the CIMS - EOC interface.

5.2. Background and review – The origin of OSEPG

In October 1998 the author was tasked to review the St John Ambulance – Southern Region disaster plan. The ambulance service had developed its response plans in isolation to other response agencies until then. It was suggested that if a “Disaster Plan” was required it was time to explore alternative planning frameworks under a Comprehensive Emergency Management (CEM) planning framework. This would

involve other response agencies working with St John Ambulance to assist in the creation of a new “disaster plan”. Although organisationally St John wanted to update their disaster plan, under emergency management criteria the scope of the planning exercise was to look for an integrated planning model that would deal with “emergencies” under a Comprehensive Emergency Management framework in order to ensure the emergency services would have an integrated planning model that could escalate to a Civil Defence declaration if required.

An offer was made by the (then) Emergency Management and Civil Defence Section of the Ministry of Civil Defence to facilitate the first meeting on the 25th June 1999. To this end this author wrote to all the Civil Defence agencies in Otago and Southland, NZ Police, NZ Fire Service and the Health Funding Authority requesting their input to the first meeting held at Ambulance Headquarters in Dunedin.

The facilitator from the Ministry of Civil Defence spoke on the problem of coordination and issues associated with fragmentation and lack of understanding. There was no confidence that agencies could respond to a large-scale event e.g. a Kobe sized earthquake. From a New Zealand government perspective a more comprehensive view was required in which all stakeholders needed to configure their emergency management thinking to involve the use of risk management processes to develop “the resilient community” Comprehensive Emergency Management was the vehicle to achieve this and was seen to lead to community resilience and sustainability.

A key point from the first meeting was to ascertain the current status of planning in each of the agencies. It was apparent each of the response agencies was undertaking planning in isolation from other response agencies. In their own planning processes they had incorporated other response agencies in their response plans but not actually involved them in the planning process i.e. plans falsely represented actual response capability based on assumptions of other agencies’ capabilities and not on realities.

At the meeting each agency gave their position statement as to where they were placed as of June 1999. St John had a major incident plan that was generic for any form of emergency event but as an organisation its capability to respond to a disaster where there was widespread injury and social disruption was not clearly understood. Current funding models focused on transport services for routine emergencies and not on a contingent capability with resources available to respond to a large scale emergency. Some preliminary work by St John prior to 1999 had been based on a

Comprehensive Emergency framework and looked at risks as they pertained to the ambulance service, as well as hazard assessments and early involvement in lifeline studies. The Health Funding Authority identified the need to coordinate resources to effectively respond to an emergency. Resources would be stretched with a corresponding drop in the level of care.

The Fire Service had a legislative responsibility under the Fire Service Act 1975 and other acts under the direction of Civil Defence when a declaration is made. The Fire Service was governed by Standing Operational Procedures, had an emergency plan and additional local risk plans for various building and institutions. Their plans were well advanced but not necessarily in terms of the 4 R's model (Comprehensive Emergency Management) at this point.

The Police had a national emergency plan based on their policing function as it is the responsibility of Civil Defence and the Police to maintain law and order following the declaration of a Civil Defence Emergency.

Dunedin Civil Defence advised that their communications centre was the back up to St John and had been involved in Lifeline work with St John. Invercargill Civil Defence spoke on their local plans that involved St John in dealing with climactic events and requests of assistance from other Emergency Services and community agencies.

The New Zealand Army representative indicated there were a limited number of regular force army personnel in Otago and Southland and the strength of the army lay with the Territorial Force. This meant during a widespread disaster their immediate response capability would be limited.

It was clear that the agencies were doing emergency planning predominately in isolation of one another. To enable integrated Emergency Management planning of the scope St John was considering something had to change.

The consensus of the 1999 meeting on what the participants wanted to achieve in the long term included the following

- An integrated multiagency Disaster Plan was required.
- A need for cooperation, understanding of each other's roles and mutual aid assistance.

- A need to look at the principles of planning.
- Sharing of knowledge and resources/plans.
- A means of being able to contribute and a vision of what the future indications would be
- Clarifying misconceptions.
- Developing an Emergency Management Group.
- Technology transfer in terms of getting ideas from this meeting to facilitate national system changes e.g. (Sharing radio/IT communications ideas with other agencies).

The meeting participants also wished to pursue a wider planning model rather than just a St John project. The key issue from the first meeting was the need to have confidence in each other and share ideas. A key word was cooperation – having everyone working together. National capability was based on the sum of local capability brought together. Each area would have plans but there had to be organisational continuity that would allow others to understand the plan and that the plan could be activated by others.

There was general agreement from the participants in the first meeting that the response agencies represented at St John Headquarters were prepared to work together. Three key issues were identified;

1. Integration of agency planning across Otago and Southland for Police, Fire and Ambulance.
2. The need to set up a working party to create Terms of References for the integrative planning exercise.
3. The need for agency integration with regional emergency management plans.

Areas identified from the first meeting requiring further analysis were;

- Translating hazards identified in plans into risks and their consequences. (There was a need to explore this issue and create a plan for the consequences of an emergency)

- Provision of project objectives that would provide a template for what needed to be done (It provides an end result but the emergency response plan should detail process)
- The need for timely plan reviews
- Membership of the Advisory Group and responsibilities for the administration of an Emergency Management Operation. Funding issues were not clarified at this point.

A working party was proposed, along with some initial Terms of Reference that were to be expanded by a group to be set up within the following months. The suggested Terms of reference were;

- Understanding Hazardscape and consequences.
- Identifying gaps in current knowledge.
- Developing Memoranda of Understanding with service providers.
- Identifying agencies interdependencies.
- Coordinating reporting structures/timetables.
- Coordination of CIMS training.

For Otago and Southland emergency service managers, there needed to be a global structure/process for dealing with major events to ensure response systems would work. The areas identified as needing to be addressed were;

1. Planning assistance for specific events.
2. The structure for escalating emergency response.
3. Reality testing of assumptions.

At the end of the first meeting in June 1999 the author was tasked with coordinating an ambulance working party to continue the development of an Emergency Management Plan and that other emergency services, local authorities and the Ministry of Civil Defence and Emergency Management would be invited to contribute. St John wanted an operational “disaster plan” for pre-declaration emergencies and to not set policy, recognising as an organisation the need to involve other agencies to achieve an objective with response systems that would work in an integrated manner with other agencies. The activity that became the focus of the Otago Southland Emergency

Planning Group and the subject of this thesis was to address the planning structures that lay between routine emergencies and CDEM declared emergencies.

5.3. CDEM, OSEPG and emergency service committee linkage

According to section 20 of the CDEM Act (2002), Civil Defence Emergency Management Coordinating Executive Groups (CEG's) have to be formed by CDEM Groups. These comprise CEO's from local authorities, Police, Fire Service, Hospital and Health Services or their delegates and other persons who may be co-opted onto the CEG as required. St John in Southland was co-opted onto the Southland CEG during 2003. Each Coordinating Executive Group is charged with providing advice to the CDEM group and subcommittees and also to implement the decisions of the CDEM Group. Under section 20(c) of the Act the CEG has to oversee the implementation, development, maintenance, monitoring and evaluation of the CDEM Group plan. Likewise, under Section 59 of the Act, all agencies whether emergency services, government agency, local authority and lifeline utility, are required (CDEM Act 2002) "to undertake CDEM emergency management or to perform those functions and duties." Further under section 63 (a) of the Act, "emergency services are required to participate in the development of the national CDEM strategy and CDEM plans".

The Act does not prescribe where pre CDEM declaration planning occurs but it is logical that there is a place for planning between emergency service standard response planning, the CDEM group planning process and CDEM declarations. The OSEPG became the forum where pre CDEM declaration planning occurred to providing links between the 'routine' emergency and CDEM declarations. The next few sections discuss how the linkage and integration of planning frameworks resulted from using the resource capabilities of agencies to assist in integrated planning within the OSEPG during the last five years.

By introducing Civil Defence Officers into the emergency planning frameworks of OSEPG, the development of OSERP has become a joint effort with a planning framework and activation system that has buy-in acceptance from the agencies involved in the plan development. This acceptance transfers to emergencies as there is much earlier coordination and communication between response agencies and the CDEM agencies with their CDEM staff and the senior emergency service personnel as incidents develop.

As an example, during a recent flood event in Southland in December 2004 the communication channels between the District Council and emergency services were excellent, with frequent information exchanged on road status. This allowed agencies such as St John to reconfigure their response to district emergencies because of road closures, based on the early information being provided. The personal contacts with personnel who were also members of the OSEPG allowed the collaborative effort to be sustained. If the flooding had escalated local authority EOC's could have been used to assist the overarching incident management processes by using their support staff.

There are also two committees currently functioning within the regional Civil Defence / emergency service framework in Otago and Southland. The first committee is the Emergency Service Coordinating Committees (ESCC) sponsored by the National Manager: Operations, Office of the Commissioner – New Zealand Police (Police general instructions 2004). Some of the functions are;

- To ensure the coordinated control of emergencies of Police - controlled or supported emergencies or disasters. The ESCC will also ensure compliance with national agreements in relation to control or coordination functions for emergencies and disasters.
- ESCC's are the responsibility of the Police District Commander in their area of operation. They will be integrated with the CDEM group structures to promote cross agency coordination.
- The purposes of ESCC's are 'to establish methods of control, organisation and communication and to facilitate the coordinated deployment of resources and services.'

Otago and Southland Emergency Service Coordination Committees (ESCC's) are in operation in Invercargill and Dunedin but are not fully functional in the smaller provincial towns elsewhere in the two provinces. The Queenstown Lakes District Council, at the request of the New Zealand Police chairs the Queenstown committee. The second committee is the Hazardous Substances Technical Liaison Committee (HSTLC) which is an advisory committee to the New Zealand Fire Service and made up of organisations who have placed their services at the disposal of the Fire Service under the Fire Services Act 1975 section 28 Part 4 (a). The HSTLC has four main functions to:

- Provide a specialist advice reference group to advise on the safe and effective management of hazardous substances emergencies.
- Provide a discussion forum of issues relevant to hazardous substances
- Coordinate procedures to be adopted for the identification of chemicals and their removal and disposal.
- Compile and coordinate technical information services to assist the committee.

The HSTLC meet quarterly in Otago and Southland and monitor the planning activities of the OSEPG.

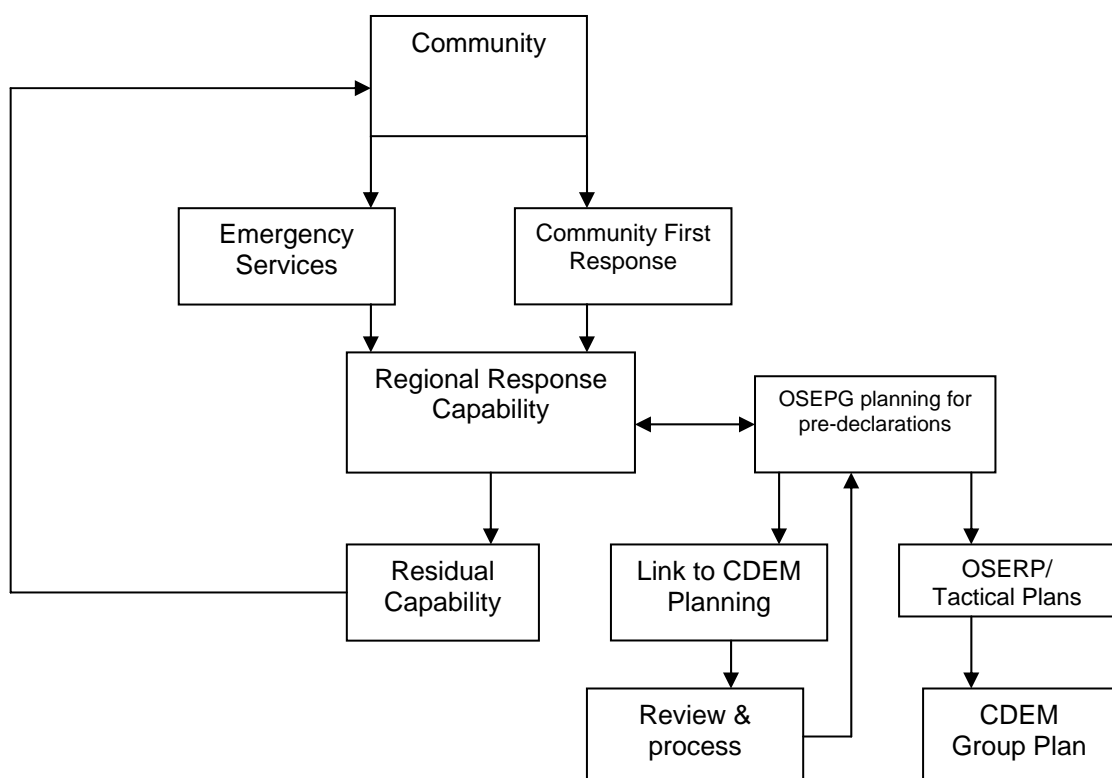
Currently the OSEPG is carrying out planning for potential pre CDEM emergency events in Otago and Southland. The established ESCC's do not have a significant planning role; rather they have a coordination role only. It will become necessary for a CDEM group to develop processes for emergency services and local authorities in order to comply with the CDEM Act, possibly via a regional or local authority CDEM staff advisor or planner. This would be achieved either using existing committees such as the ESCC's or continuing to use the OSEPG or similar planning framework for the tactical and strategic planning required for pre-declaration emergencies. The level of planning needs to be consistent to the size of the committee's area of responsibility. There are differences between the CDEM planning process and the OSEPG planning work as OSEPG planning is from an emergency service perspective. Additional information needs to be brought forward and may need to be considered in the CDEM planning process, presently it does not form part of the CDEM plan. MCDEM feels OSEPG has a future role assisting with the objectives, targets and actions associated with the CDEM Group Plans, along with developing response plans for potential pre-declaration events until the ESCC's are able to take on a planning role. (Pers.comm.J Lovell Emergency Management Advisor MCDEM January 2005) This planning would be led by the lead agency associated with the planning group i.e. Police.

The interviews indicated that the ESCC's were seen as a forum for planning, if they were to take on the role, but some of the emergency services felt the OSEPG was the best forum for this level of planning as their area of responsibility covers both Otago and Southland for regional response planning, whereas the ESCC cover a smaller area of coordination which may be only a district within a province.

OSEPG worked to develop a planning focus that would draw in agency expertise and information by the creation of two working parties. The first comprised representatives from the emergency services and a CDEM representative who looked at the regional response resources, versus a second group comprising CDEM staff with an emergency service representative who was tasked with identifying the risks and hazards in Otago and Southland. The response resource gaps highlighted the need to develop an alternative response capability including incorporating rural communities into a response linkage with the medical response agencies. Integrated planning provides the mechanism for developing a response plan that has triggers, tasks, taskforces and interfaces into EOC operations. Resourcing emergency responses also requires a residual response capability to be left in areas and districts.

Figure 18 depicts the planning interrelationship between the community and the various response agencies and their linkage to the CDEM planning system. The Southland CDEM plan mentions the OSERP in one of the supporting documents to the CDEM Plan, referring to the location of community – emergency response resources and available EOC's. The intention is that tactical plans are developed in Otago and Southland by the emergency services that will form part of the appendices to the main CDEM Plan.

Figure 18. OSEPG link for pre-declaration emergency planning



5.3.1. Emergency Management planning amongst diverse agencies

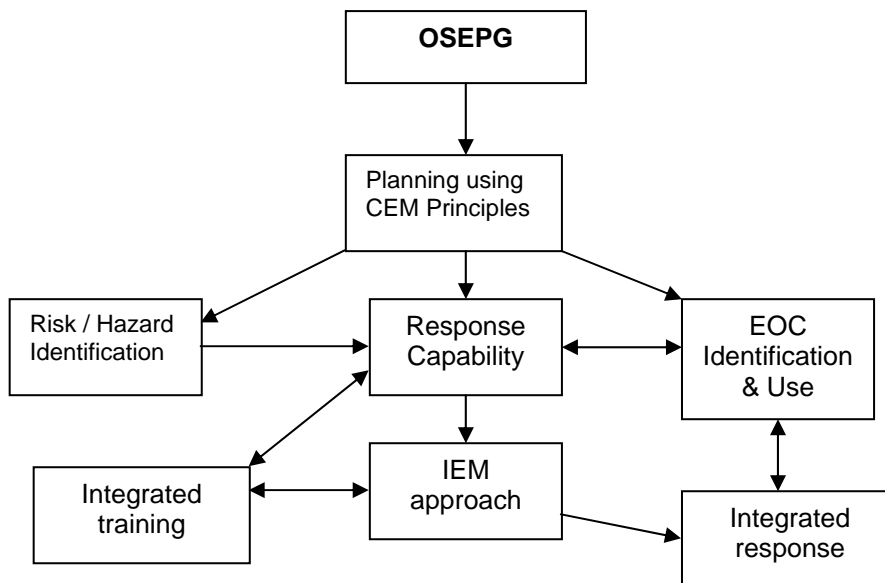
Heath (1995 p 17) states" Strategic management is a sequential process that involves environmental scanning, risk assessment, resource planning and deployment". For pre-declaration planning arrangements, emergency services along with their counterparts in local authorities need to gather basic information to provide a realistic and appropriate managed incident response relative to the potential /adverse events that are occurring. Britton (1998) stated"If an integrated response is not planned for, and the necessary capabilities and competencies developed, the ensuing ad-hoc collaboration will reduce response effectiveness". With this in mind, and using CEM principles for addressing readiness and response issues, the OSEPG was formed at the end of 1999. St John had its own issues that needed addressing in readiness and response, but recognised the need for agency 'buy in' once a project aim and objectives had been set. Once the planning group had determined what its role was and established a direction to follow, it formulated an aim and objectives. To keep personnel focused the group revisited the objectives periodically to ensure the targets were being met.

Some of the issues raised in the agencies' research findings are introduced here and a key one was that prior to the OSEPG development the local authorities and emergency services did not mix in planning forums. OSEPG introduced its membership to CEM as, prior to the formation of the planning group, development agencies dealt with readiness issues but had little other contact than through direct response activities. Another issue was that some agencies were reluctant to become involved in integrated planning. A personal approach by the author outlining the objectives of the planning group and need for better relationships assisted those organisations in deciding to participate. Some suspicion held by local authorities that the emergency services were planning in areas that were the domain of Civil Defence was removed by discussion. The need by the emergency services to utilise the CDEM officers as part of planning frameworks so the EOC's, risks and hazards information could be integrated was a key driver for their involvement. To avoid overlaps, the risks and hazard work was handed back to the EMO office. CIMS training currently remains a domain of the emergency services as the local authorities are under- resourced to deliver training courses.

The flow diagram in figure 19 demonstrates the initial planning process. This diagram was created in 2000 prior to the passing of the CDEM Act (2002).CDEM Groups are required to create a Group Plan. In the Group Plan risks and hazards have to be

identified, EOC's have to be available and work in partnership with the emergency services for response activities and also to have a functional training system that includes ensuring personnel are trained in CIMS. Predominately the risk and hazard identification work has been handed over to the CDEM office to manage but the resourcing capability planning is still a domain of the OSEPG.

Figure 19. OSEPG Project Outputs



There are differences between the CDEM and the OSEPG planning processes because planning is taken from an emergency service perspective in the latter additional information that is not part of the current CDEM plan- objectives, targets and actions needs to be brought forward and may need to be considered in future CDEM planning processes. The additional information elicited by the OSEPG for pre-declaration issues were;

- Determining the regional response capability.
- Identifying response capability gaps and determining acceptable solutions to meet legislative and contractual needs. Additionally, consulting with the community in finding response solutions.
- Risk profiling the key facility lifelines and incorporating the risk analysis outcomes into the utility and engineering componentry of a Lifeline Project.
- Determining key facility interdependencies and co-siting if required.

- The risks and hazards work, although part of the EMO risk analysis function is assessed from an emergency service perspective.
- Developing response plans of a tactical integrated nature.
- Task gap identification.
- Lead agency and support agency task identification
- Creating a response plan that equates to a Level 1 and 2 incident event of a CDEM Plan. The plan has an interface to use a CDEM EOC for monitoring response agency activities.

5.3.2. OSEPG Objectives

These are the aims and objectives of the OSEPG and are still current (2005-06). This work is now being interfaced into the CDEM Group level system in Otago and Southland.

General Objective

“To develop an integrated response amongst all emergency management agencies in Otago and Southland”.

Specific Objectives

1. Risks and Hazards:

- *To identify the risks and hazards externally in the environment and the effects these risks and hazards have on the responder agencies and the potential hazard effects on communities.*

The Otago Southland Emergency Response Plan databases have been passed to the Group Emergency Management Offices in Otago and Southland and are incorporated in the local territorial authority CDEM plans. All agencies associated with the planning group have copies of the risk and hazards databases, including the MCDEM and Ministry of Health. These databases contain information on the nature of the threat, its frequency, duration, effects on a community, effects on response agencies, support required, existence of current plans, and known gaps in response plans and are being incorporated in local authority CDEM standing operation procedures(SOPS).

- *To identify the potential system risk and hazards internally within organisations and the consequences these risks may have on other agencies and overall response.*

An organisational risk study was carried out within the planning group for the agencies involved in 2000. Measures have been taken to address the deficiencies identified, including developing integrated communications frameworks and enhancing integrated training and response.

- *To develop a register for all Hazards and Risks.*

A database was created to manage the risks and hazards identified in the localities in Otago and Southland.

2. Response Agencies

- *To identify the key primary response agencies, their critical linkages, operational gaps, overlaps and interdependencies.*

A resources database has been created that identifies vehicular, personnel and station siting for all response agencies, including CDEM in every community in Otago and Southland. An agency interdependency project has been completed and response gaps identified. An additional Fire First Response Unit was commissioned in Central Southland, along with an Invercargill- based rescue helicopter. All Southland country airstrips were identified with their GPS locations – 106 in total - for emergency management purposes in 1999-2000.

- *To assess contingent capability of these agencies against identified risks and hazards.*

Remote rural communities in Southland were seen to be at risk owing to their isolation from emergency service response agencies so mechanisms were begun in 2002 to enhance the St John Ambulance response activities with community – emergency services partnerships. A lack of a specialist response capability has also been identified for environmental and technological emergencies. This is being addressed with formation of a multiagency integrated response team for Southland.

- *To identify “preferred” contingent capability and methods of achievement.*

A business proposal was prepared for the Southland District Health Board to obtain funding to implement nine Community First Response Groups across Southland. A further business proposal at the beginning of 2005 requested funding successfully to commission 15 additional community first response sites, along with placement of 20 automated defibrillators for rural communities. A collaborative partnership with the New Zealand Fire Service and Southern Rural Fire Authority was activated in 2004-5 to enhance First Response capability to community emergencies, especially time critical

events in Otago and Southland. There has been an expansion and enhancement of the mass casualty stores in the six ambulance districts. Equipment trailers and vehicles have been placed at strategic locations in Otago and Queenstown. Utilisation of CDEM EOC's has been written into the OSERP as a measure of monitoring emergency service response activities. The Southland CDEM plan reflects the work of the OSEPG' and the locations of the EOC's in Southland. Memoranda of Understanding (MOU) give effect to utilisation of this resource within the OSERP.

3. Plans

- *To review agencies' current existing plans.*

All agencies associated with the OSEPG shared their operational plans with each other.

- *To review areas of vulnerability in the planning processes from an organisational and community perspective.*

Gaps in planning were identified e.g. there was no passenger ship emergency plan for the Fiordland area or suitable integrated response plan for the Taieri Gorge Railway.

- *To jointly develop planning to overcome identified areas of vulnerability.*

The Otago Southland Emergency Planning Group, New Zealand Police, Environment Southland and the Maritime Safety Authority worked together to create the Fiordland Coastal Passenger Ship Emergency Plan in 2003. The Taieri Gorge Passenger Train plan has been developed as a multiagency tactical plan in 2004-5. The OSEPG is beginning tactical planning following further identification of potential risk sites and areas across Otago and Southland.

4. Strategic Alliances

- *To develop strategic alliances and memorandums of understanding between the responder agencies.*

Communication between agencies has improved with alliances formed. Community consultation was increased, resulting in working partnerships between the response agencies to achieve the most appropriate response solution, providing a community that is trained to;

- a). look after itself
- b). be able to initially respond to emergencies on behalf of the response agencies.

- *To share interagency technology updates*

Mapping software has been shared interagency, as has paging and radio capability

5. Training

- *To jointly work together operationally utilising the CIMS*

CIMS is activated for emergency events. Emergency events that are developing have CIMS planning meetings activated earlier than in the past. Incident Management Teams are activated to monitor development of response activities for routine emergencies.

- *To ensure that agencies can train and exercise together locally to manage events.*

The OSEPG runs an annual exercise to test activation of its response plan. There is also a joint emergency service CIMS training programme coordinated by the Southern Rural Fire Authority tasked with training every emergency service manager in Otago and Southland. At least two courses are held each year.

5.3.3. Integrated multiagency tactical planning

The difference between strategic and tactical planning is that "Strategic Planning is derived from the Greek words: *strategos*, which means "general," *stratos*, which means "army," *agein*, meaning "to lead (ASQ 2004) ". Therefore strategy by definition refers to a plan for the overall conduct of a war or sector of it and has also come to mean a plan for the skillful overall conduct in a large field of operations, or sector of such operations, to achieve a specific goal or result. It is a statement of the intended plans for accomplishing a broad objective and inherent in its definition is the idea of use of resources to achieve the outcome. It is the central strategy worked out at the top which, like an umbrella, covers the activities of the planning processes below it and is picked up by the next lower level of command and turned into tactical planning.

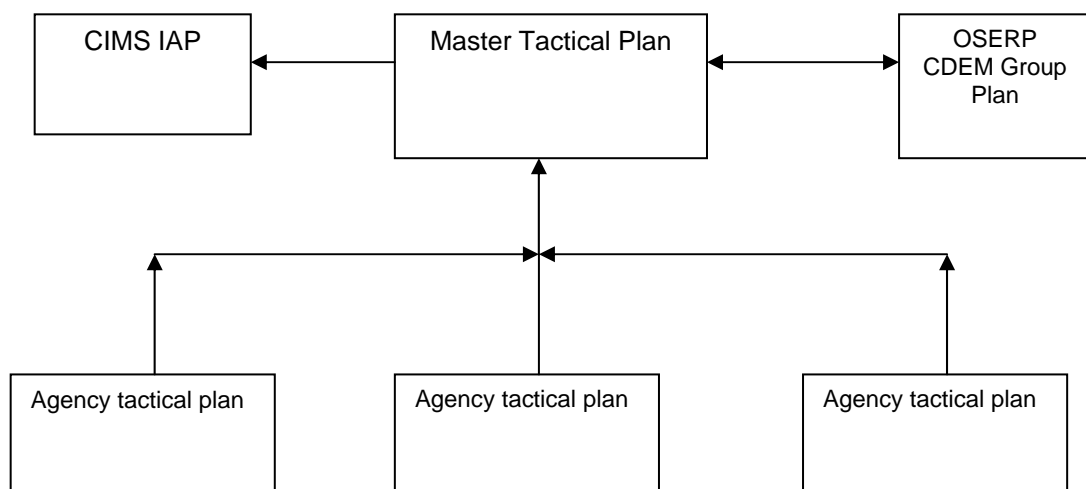
In contrast a tactical plan specifies who to move, what to move where and exactly how. The tactical plan must integrate with as well as accomplish the objectives of the strategic plan, with achievable targets. In essence, CIMS incident action plans achieve this with measurable, attainable goals within realistic timeframes. The OSEPG considers more pre-planning within a tactical planning framework interfacing with the overall strategic planning framework of the higher level OSERP should be done. The

Queenstown area is of concern as there are a number of sites that will necessitate a joint response by agencies to areas that have difficult access with a number of topographical unknowns.

The strategic OSERP has been developed by the emergency services and local authorities (OSERP 2002) “to allow for the regional level mobilisation of all agencies and all resources available within the emergency management structures for the conduct of emergency readiness, and response or initial recovery operations only”. This does not preclude resources being requested from outside the region. The Plan may be activated for any major *accident* or *emergency*, and is likely to be activated prior to the declaration of a Civil Defence Emergency. ”

Some agency response plans are now being brought together into a common planning template so that siting of fire appliances and ambulance triage areas do not clash. The model below is being used for the Taieri Gorge Railway tactical plan.

Figure 20. Master Tactical Plan model



The CDEM Act is designed that group CDEM Plans "should see an integration of strategic/tactical planning into the CDEM Group planning structure" (Van Uden 2004). The OSERP has a database of the location of the response agencies plans' and who administers them. The tactical plans from each agency are further developed in a multiagency environment which can then be attached to the agency's major incident response plans, a regional predeclaration response plan e.g. .OSERP and a CDEM Plan, so that there is access at all levels to the planned tactical response frameworks as known factors to the response agencies.

The Master tactical plan template can be used to develop similar tactical plans for identified sites where the following factors need to be considered.

- Where large numbers of people gather
- Difficult access sites for emergency services
- Specialist resourcing requirements
- High risk and high consequence potential emergencies
- Low risk and high consequence emergencies

St John has a national policy requirement to complete and incorporate tactical plans for the above sites and areas into its regional mass casualty plan which will be extended into an integrated multiagency master -planning template through the OSEPG.

The considerations to be built into any template are:

- The consequence of an event in the identified site or area.
- The factors that may complicate incident resolution.
- Prioritisation of response resources.
- Special resource needs.
- Pre-planned incident facilities.
- Identification of the Lead Agency.
- Integrated communications and contact arrangements.
- Understanding of managerial numbers that may be required to form the IMT.
- Considered liaison with appropriate government and NGO organisations that will act as advisors.
- Liaison with local community members; information gathering and advice.
- Escalation factors e.g. which CDEM EOC may act as monitoring EOC to potential events.

The CIMS Incident Action Plan developed from an Incident Site situation report would thus have, where available, an integrated tactical plan that enhances the CIMS Incident Action Plan. The OSEPG is working towards the development of integrated tactical

plans, where appropriate. A systematic plan development ensures that agencies avoid the duplications and overlaps and that some pre-event issues such as communications, resourcing and incident management planning processes can be developed, including the identification of predesignated incident facilities.

Agencies need to be committed to applying and maintaining CIMS as an incident management process, removing the problem of “paper plans”. Auf De Heide (1989 p 44) points out that “they may have been generated and committed agencies to assist with emergency events without the agencies themselves being involved in the planning process”. Response agencies should develop tactical pre-plans in an integrated multiagency format prior to potential events. These integrated tactical pre-plans can then form the base planning information for CIMS incident management teams if they are deployed and allows planning both to deal with current response issues and written plans which assist resourcing and response capability. For example, a key area where this form of planning is developed is the “Warbirds over Wanaka” air show. Here the integrated operations (tactical) plan develops the scenario of agency activities at the airfield based on task responsibilities should an emergency eventuate, the CIMS Management structure is functioning and can draw on preplanned logistics, communications and operations plans of the agencies. The first 30 minutes of a major incident can be confusing with multiple priority tasks to be completed. CIMS (IMT)’s would be established with their effectiveness enhanced by a pre-planned area tactical plan providing initial assistance to the IMT, enabling common access points, identifying where the IMT may be sited, radio communications networks and agreement of the “lead agency” to manage the event. Although CIMS would address these tasks and issues, prearranged tactical plans enhance the initial decisions for incident management if the pre-planned information is available.

Integrated tactical plans need to be developed where large crowds gather such as rugby stadiums or special risk areas or sites e.g. Taieri Gorge Excursion Railway where up to 600 tourists visit daily, needing tactical plans for access and egress of response resources. The Taieri Gorge Railway tactical plan was developed by response agencies led by the Police, which shift resources onto incident sites in a more predetermined manner. St John in Otago and Southland has determined response priorities in critical areas in this planning process, but has recognised that other response agencies e.g. Fire and Police have operations orders and plans of a similar tactical nature. Rather than create confusion with separate responses or tactical plans

the OSEPG, through the author of this thesis, is now determining areas where integrated interagency tactical plans should be developed.

A visit to the Taieri Gorge train area allows the response agencies to carry out passive reconnaissance and assessment of areas prior to an event. This allows development of rank ordering of tasks and activities that would need to be undertaken, moving from the highest to lowest priorities when an adverse event occurs. This allows response resources, which may be under pressure because of the number of other incidents at the time of the new emergency event, to be allocated systematically and appropriately by the Incident Controller(s) or CDEM Controller. This is effectively active risk profiling and damage assessment carried out to prioritise tasks by response agencies. The maxim should be “Do the best possible for the most people and structures” (Heath 1995).

A large-scale event in the Taieri Gorge will trigger the OSERP as all emergency services heads are in agreement and have ‘signed off’ on the document development and the activation process (Appendix 3). This allows the lead agency Incident Controller to call the resources of the response agencies resources to report to designated assembly areas before moving forward to the staging areas and safe forward points. If following the initial response the incident is protracted, a task force response may be initiated from other provinces near to Otago.

The EOC monitors the response activities from the Dunedin CDEM Headquarters. Moreover, such incidents generate significant media interest especially incidents involving tourists. Therefore the public information section of the CDEM HQ will perform a valuable role. As mentioned earlier, if there is a need for a CDEM declaration, the CDEM staff are in situ to take on this role with information being ‘fed up’ to the national system, the latter providing logistical support where required. Appendix 8 demonstrates the link between CIMS Incident Management Teams, EOC’s and notification processes with OSERP sitting at Level 1 and 2 in the escalation process for emergencies.

The MOU attached to the response plan indicates financial obligations for each agency. Costs remain where they are created, e.g. CDEM officers have agreed to use their Headquarters staff to assist the response agencies and bear associated costs of the predeclaration phase. The OSEPG Civil Defence Emergency Management members have indicated their EOC staff will assist emergency services in providing

operational crewing of the EOC and the linkage back to the CIMS Incident Management Team.

In a another example, as a result of environmental scanning flowing on from the Invercargill City Lifeline project, completed in 2004, Wall (2004) stated that “Southland communities are at risk of severe disruption from a range of natural hazards.....the risk has not been quantified and the potential effects not been assessed”. The Invercargill Lifelines study included a sectional working party for emergency services that carried out a risk assessment of the emergency service utilities and provided a functional input into the engineering aspects identified within the project scope. The Emergency Service facilities, otherwise known as key facilities lifelines, formed part of the general utility lifeline project with each response agency asked to submit their assessment of their site risks and response infrastructure. The following areas were investigated.

- **Communications infrastructure.**
- **Comprehensive risk analysis of natural and technological risk.**
- **Mitigation measures.**
- **Readiness issues.**
- **Response and recovery issues.**

Salter (1995/1996 p 12) states there is “a need to develop a broad risk assessment process to determine the possibility of adverse effects from exposure to hazards. This process should consist of both a vulnerability assessment and hazard identification, which when integrated, lead to qualitative understandings”. Salter thoughts on “qualitative understandings” is that an emergency manager/planner needs an understanding of sites or areas in urban or rural settings that may pose risks to communities and the consequences of “all hazard” events impacting on these risky sites will require integrated interagency planning and response for effective incident resolution. As an example of a passive reconnaissance, a systematic environmental and building scan of Invercargill City’s industrial area over the last four years, which included inner city buildings, key utility sites, rest homes, hospitals, schools, prisons, auditoriums and general service resources, was carried out by the Invercargill Fire

Service. Building owners were met and evacuation routes, rescue aspects and internal risks in buildings that emergency workers would need to be aware of were determined. However, this Fire Service scan did not include the Ambulance Service as a part of a joint exercise, which means St John was not able to gather information peculiar to the Ambulance Service for management of site events and specialist areas. Instead, high priority site specific tactical plans have been identified as needing to be developed. Rather than the project assessing only engineering aspects in the city, the key utilities (emergency services and health) were seen as an integral part of the lifelines with impacts on these agencies affecting operational management of emergencies. The outputs from the Lifelines project are linked into OSEPG work, as are the issues of planning for identified potential emergencies in the Invercargill City area. This can be linked back to the passive reconnaissance requirements to develop tactical plans for special risk sites and thus develop an integrated response and incident management across agencies for those sites.

5.4. An integrated response capability

Britton (1998) states, "All parties, public and private, paid and voluntary, need to recognise that they have joint ownership with respect to emergency management response, irrespective of resource ownership, responsibility or accountability within their communities." Prior to 1999 CIMS was not taught to any great extent in Otago and Southland. Agencies, when brought together in a forum, had a number of issues with non-integrated operational planning and emergency operations being done within but not across agencies. The issue for St John then was to work more closely with agencies, so enhanced capabilities could be realised. From 1999 emergency services and local authorities have collectively planned the contribution of resources and systems that could enhance the continuum of incident response for pre-declaration emergencies. Table 2 below indicates the base ambulance resource in some Southland communities.

Table 2. Ambulance Stations and vehicle resources – Southland

Paid Stations	Ambulances	Volunteer Stations	Ambulances
Invercargill	7	Winton	1
Gore	3	Otautau	1
		Bluff	1
		Tokanui	1
		Tuatapere	1
		Riverton	1
		Te Anau	2
		Lumsden	1

The OSEPG also identified the regional emergency response capability across agencies in Otago and Southland. In 2000 the ambulance service indicated they had response gaps beyond their base resourcing. When plotted on maps and loaded into a database, it became apparent medical was not the only response missing from some rural communities. Garston and Athol communities, for example, had no ambulance or police presence, being serviced from Lumsden. Mokoreta had no emergency response capability at all, including Civil Defence. Further response capability issues for agencies were identified through the OSEPG planning processes. For example St John assessed funding issues in provision of ambulance services for response to land, air and water emergencies and interhospital transfers which were incorporated into the planning process (St John – HFA contract 2002).

In 2000 a study of the location of response agencies stations for the urban and rural communities in the two provinces indicated that emergencies in some areas might require assistance from other neighbouring communities that had a suitable response capability e.g. medical resource to assist the Ambulance Service. There is up to forty minutes travelling for an ambulance to reach some communities as there are fewer ambulance stations in Otago and Southland compared with Fire Stations. As a result, the ambulance service has explored alternative planning and response, in conjunction with other agencies, to find an alternative way of delivering medical response services and therefore greater efficiency.

Not all area and district resources can be committed, as resources have to be left available for other community emergencies i.e. there has to be a residual response capability. Contribution of rural resources to neighbouring emergency events can be achieved through interagency planning mechanisms that will also include the

development of mutual aid agreements with other response agencies e.g. the New Zealand Fire Service First -Responder system. A 2005 project for the OSEPG is to integrate planning across the primary response agencies that have similar task roles e.g. Fire and Ambulance First Response, rural versus urban fire local agreements. St John has MOU's to utilise the expanded roles and areas for other agency response units. Currently the Dipton Fire and Ohai First Response Units have expanded their response zones across Central Southland, working in partnership with the closest volunteer and paid ambulance services. Thus the Dipton Fire First Response unit can operate outside its fire district and has responded to bus crashes close to Te Anau and medical incidents well north of Lumsden in Northern Southland.

As a further example of this operational partnership the Southland Ambulance districts have identified the following ambulance resources that can be released for use elsewhere in emergency events.

Table 3. Spare Ambulance capacity for release (Southland)

Paid Stations	Ambulances	Volunteer Stations	Ambulances
Invercargill	4	Riverton	1
Gore	1	Te Anau	1
		Bluff	1

Thus eight ambulances can be removed from the Southland ambulance response structure. The remaining ambulances, coupled with Fire First Response units, can assist the ambulance service along with the nine Southland Community First Response areas, allowing an expanded area of response. With this concept in mind, the tiered response utilising 'dynamic resource reserves' (Heath 1995 p22) can be determined. Initial response to emergencies is local area resources, supported by neighboring district ambulance resources, keeping in mind the minimum resources required to maintain a residual response capability. Table 4 summarises the ambulances that can be mobilised into Southland as a second tier response if required from the Central, South Otago, Dunedin and North Otago ambulance districts.

Table 4. Spare Ambulance capacity for release (Otago)

Paid Stations	Ambulances	Volunteer Stations	Ambulances
Queenstown	2	Tapanui	1
Alexandra	2	Lawrence	1
Balclutha	1		
Dunedin	4		

First Response cover and MOU's of the Fire First Response programme complement local response capability gaps. The OSEPG resources database indicates e.g. in Central Otago medical support is available from the Omakau Fire Service, twenty minutes to the east of Alexandra and they support the Alexandra ambulance service. Omarama Fire First Response covers the Lindis Pass and the Waitaki Valley to Kurow and Otematata Fire Co-Response Units, and they also support the Twizel and Kurow ambulance services.

St John ensured that Fire First Responders have similar Pre – Hospital Emergency Care (PHEC) qualifications to Ambulance Officers and that fire units have a basic range of ambulance equipment as well as automated external defibrillators. This “all hazards” integrated response framework complements the response to any community emergency and gives flexibility to the ambulance service to resource health emergencies and inter-hospital transfers in a more functional way.

Fire Service appliances In Otago and Southland are split into two levels of response capability to assist ambulance services at medical or accident emergencies. There is a national memorandum of understanding that allows the ambulance service to utilise the Fire Service to assist St John. The split is;

Fire Co-Response –Any Fire appliance vehicle in Otago and Southland is categorised as a Fire Co- Response Unit which may have a range of basic ambulance equipment such as oxygen, entonox, First Aid and resuscitation equipment such as bag mask units. Some fire personnel will be Pre-Hospital Emergency Care (PHEC) trained equivalent to Primary Care 1 – Ambulance. These units will respond to time- critical and life threatening community emergencies e.g. cardiac arrests or anaphylactic reactions. They may or may not have an automated external defibrillator (AED). Fire Co-Response Units respond to medical calls in their fire appliances within their fire districts.

Fire First Response – Specialist vehicles are sited in Omakau, Omarama, Edendale, Dipton and Ohai and are allowed to operate outside their fire district. Ohai can operate in Tuatapere and Winton Fire Districts for calls. They can respond to any type of community emergency, life threatening or not, and will also go to any accident including road traffic crashes. The vehicles are a designated fire unit separate from a pumping appliance. Some have ambulance radios installed and situation reports can be received on patient status directly in the Emergency Ambulance Communications Centre (EACC). The personnel are also PHEC trained but carry a greater range of ambulance equipment including oxygen, entonox, AED, dressings, splints, resuscitation gear such as bag mask units, rescue stretchers etc. Fire First - Responders are all trained to use the equipment, including the AED's.

Prior to 1996, Southland rural communities more than 20 minutes in response time from the closest ambulance station and with no local medical response capability included Edendale, Ohai, Dipton, Orapuki, Kingston, Hedgehope, Athol, Garston, Blackmount, Mokoreta, Waikaia and Riversdale. The development of integrated response partnerships began in 1996 as a joint project with the New Zealand Fire Service and St John. Fire First Response Units were commissioned in Edendale and Ohai to improve the response times for the Ambulance Service and local communities with an enhanced first response capability with Fire First Response Units. St John activated the Riversdale and Kingston St John First Response sites at the same time.

In a new initiative, following determination of response gaps from the OSEPG work, a Fire First Response Unit was commissioned in Dipton in 2004 to enhance response capability in Central Southland. Dipton was a community that determined emergency services based on the community wishes. The Ambulance and Fire Service in Southland worked with the Dipton community to give them an integrated response unit that comprised existing members from the Community First Response Group, along with new members from the community who are PHEC trained and who also joined the Winton Ambulance Service to gain enhanced training and skills. This benefits the neighboring ambulance service and also takes their ambulance skills back into the Dipton Fire First Response Unit and community.

The Fire and Ambulance service are colocated in Invercargill where operational staff work and rest together in the emergency complex. Many incidents attended are responded to simultaneously, i.e. the CIMS tasking brings these two agencies together

to manage the operational outcomes of an emergency. Invercargill Ambulance service attends practically all house fires and the Fire Service attends all motor accidents, rescues and at times unofficially acts in a First Response capability when the ambulance service cannot attend owing to other emergency calls in Invercargill or out of area work e. g. backing up volunteer stations.

Integrated response capability is also realised in the area of Urban Search and Rescue (USAR). USAR involves the location and rescue of people trapped following major structural collapse; from a single building, bridge collapsing or landslide involving buildings to a major earthquake. USAR and Land Search and Rescue (SAR) roles are completely different. SAR refers to searches, often coordinated by the Police in bush or mountainous areas, whereas the New Zealand Fire Service leads USAR dealing with structural collapse of masonry or wooden infrastructure e.g. Tauranga Floods 2005.

In Southland there has been no major structural collapse in recent years. However the nature of potential environmental and technological hazard events and their consequences in the urban environment necessitates planning for enhanced response capability to address structural collapse for both small incidents and larger emergencies, for example, the potential in the Queenstown area of floods and landslides (Hoskin 1999). Raine et al (2003) advised there are benefits in the formation of a multiagency response team for Southland in better utilisation of all agency emergency services' paid and volunteer resources. In their study Raine et al (2003) noted there were other emergency events or situations identified that a Southland based team could respond to in support of the emergency services.

Events where a multiagency response may be required in Southland may vary from small incidents to large emergencies, such as a regional earthquake. The Invercargill Lifelines report (2002) states there is a 35% probability of a Modified Mercalli intensity of VI being felt in the Invercargill city area in the next 50 years from an Alpine Fault earthquake. Such an earthquake is likely to produce strong shaking close to the Fiordland Mountains. Te Anau and Tuatapere will be more affected than places further east.

The Invercargill Lifelines report (2002) also indicates there is a 475-year return period event that can be expected to create ground shaking intensity of MM VII, seriously damaging older buildings, partially damaging newer buildings, dislodging unbraced parapets and ornaments and damaging unreinforced brick chimneys, dependent on the

underlying soil types. Single site structural collapses can also occur from landslide effects. Localities such as Bluff may be at risk owing to old buildings, landslides or other areas where riverine inundation may occur in the Southland area in the flood plains. Recent floods included the 1984, 1987 and 1999 events.

The potential for mass casualty and transportation accidents involving buses or vehicles on the State Highways and Southern Scenic Route or in the Te Anau –Milford Sound area will tax Southland Emergency Services, especially if victims are trapped in the wreckage. Raine (1999 p 10) stated “The road through the Catlins from Owaka to Tokanui through to Te Anau via Blackmount, all part of the Coastal Southland Ambulance catchment, has a high number of buses and campervans travelling through every day. Accidents have occurred and will continue to occur as tourists unfamiliar with the difficult road conditions crash their vehicles off the road. These accidents are occurring in remote parts of Southland far away from paramedical or medical assistance. “

Therefore a multiagency integrated response team could assist Southland response agencies at the emergencies listed below;

- **Structural Collapse**
- **Landslide**
- **Floods**
- **Earthquakes**
- **To support the national USAR Taskforce deployed into Southland**
- **Support and backup to the emergency service at major incidents**
- **Assistance to CDEM; welfare and localised EOC operation**
- **Transportation accidents**
- **Mass casualty accidents**

It is recognised the members of a response team may, as part of core agency activities, respond to all of the emergencies mentioned above. Those emergency service responders with specialist skill sets can determine if any additional specialist skill capability needs to be activated locally from within Southland or latterly by requesting the USAR Task Force from Christchurch or the North Island dependent on the size of the incident, after initial on site reconnaissance. Response agencies having

members in the Southland Multiagency Team and therefore with staff committed at an emergency can draw on off duty resources where required to assist their on –duty colleagues in much the same way as ambulance helicopter missions have specialist Paramedic crews recalled to duty.

At the time of writing this thesis (2005), the response to structural collapse and other emergencies in Southland utilising an integrated multiagency response base with additional skill sets was being realised. The Coordinating Executive Group (CEG) of the Southland CDEM Group allowed the response team to be established in December 2004 by drawing together Civil Defence volunteers and paid professional Fire and Ambulance staff resources. An interagency MOU has been developed for the loaning of agency equipment and personnel to train and work in partnership with each other to realise the objective of the Southland Multiagency Response Team,” *To Enhance the capability of the emergency services and local authorities to jointly respond to a major incident by formalising agency contributions to personnel and equipment*” (Southland Multiagency Team MOU 2004)

The Southland project is a first in New Zealand, having a mix of multiagency paid and volunteer emergency service and CDEM personnel as members. Teams dispatched to an emergency event come under the control of the CIMS Incident Management Team, as described by respondents from the research questions and deployed according to specialist skill sets required to deal with the tasking that may be beyond the standard skill sets of general responders.

5.4.1. Community First Response

“Integrated Emergency Management provides a strategic and operational focus to implement the theoretical concepts of CEM” (Britton 1993). In 2002 the rural Community First Response system was created in Southland with community consultation as an innovative project after identifying the St John response gaps as a result of compiling the OSERP resources database. Kendra and Wachtendorf (2003) state that the “conception of creativity involves both success as well as newness: it is both positive and adaptive” and “planning and creativity work in concert to produce effective improvisation”. The Ottawa charter (1986) has a number of prerequisites for Health, with the key prerequisite related to Community First Response, strengthening community action by empowering communities with ownership and control over their own endeavours and destinies, as well as development of personal skills. By

developing personal skills to cope with illness and injuries, health services can be integrated more fully with other disciplines and members of the community.

Britton (1992 p 234) stated that "CEM has to be firmly embedded in comprehensive hazard analyses that are grounded in extensive community risk and vulnerability assessments". St John used the CEM principles of identifying environmental and technological hazards, risks and their consequences conjointly with remote communities, from the perspective of the community's needs for emergency medical services. This consultation created community awareness and the potential to gain additional support personnel in rural communities in the form of nurses and people with the interest and availability to assist the ambulance service to respond to community emergencies. St John, through the Community First Response programme, advised rural communities on potential natural and technological hazards using both risk communication principles and community consultation. While Community First Response cannot mitigate identified risks, it provides community understanding of issues and an enhanced response capability. Britton (1998) stated "A strong sense of community represents a significant coping resource." From an ambulance position, knowing that there are nine rural communities with over 100 personnel trained in First Aid that can look after themselves and other members of isolated local communities until Paramedics and technology arrives to provide the greater medical support underpins the medical response system in a disaster.

Nine Community First Response Units containing 100 responders trained in First Aid across the communities of Dipton, Orapuki, Mokoreta, Athol, Garston, Kingston, Waikaia, Blackmount and Hedgehope have been activated through 2001-2004. As Dynes (1994 p 155) states "volunteers can contribute significantly to the overall emergency system. The effective use of volunteers, however, is dependent on considerations being built into planning for their utilisation". With this in mind, the Community First Responders are linked into the ambulance operational system in order to get the best integration of response with the ambulance service to 111 emergency calls. Community First responders can be self activated by other community members to assess the ill or injured and call an ambulance if required. Some calls do not necessitate an ambulance but monthly call logs are received from these areas that provide a record of local calls for help occurring in these isolated communities. The Community First Response system now allows ambulance responses to be adjusted based on the information received from the first responders. The number of

ambulances responding from stations up to fifty kilometers from the incident site can be upgraded or downgraded, dependent on the information received.

Some fundamentals under CEM are applied to the Community First Response system so that in each area where the groups are set up, Community First Responders are resourced by St John who provides the initial training, ongoing support training and including peer support. The Community First Responders are not members of St John but operate by way of a MOU that allows the community personnel to be used in a three-way partnership between the communities, the local district health board and St John Ambulance. For this concept to work there needs to be a lead agency, which is St John, although St John does not own Community First Response. Community First Response does the following.

- Strengthens the emergency management capabilities of areas and individuals,
- Strengthens the partner relationships to other agencies,

St John has adopted the following principles pertaining to rural response and ambulance services in Southland.

- *“Resilience:* the way a community plans to lessen the impact of emergencies and strengthening the emergency management capabilities of each sector.
- *Holistic community management and partnerships-* involvement of all key stakeholders and accountability in decision –making in the community, managing the risk at the most appropriate level.
- *Using the Integrated Emergency Management Systems (IEMS)* model to ensure that readiness, response and recovery functions by the various emergency response agencies are co-ordinated and consistent. ” Britton (1998)

Extension of these principles to an integrated emergency response by agencies to rural community emergencies ensures that planning processes are linked and complementary for the purpose of emergency management response. For the above principles to work, strong links to CDEM agencies is required and effectively the CDEM Group CEG’s help to facilitate this.

Community First Response builds resilience. Britton (1998) describes resilience as a “measure of the ability of systems to absorb change and to bounce back or to shift to

new points of stability”. Resilient communities provide the context in which organisations become more resilient” and “organisations provide the infrastructure for a community’s resilience, in that organisational resources, networks and overall capacity are what make coordinated community –wide response possible”. As a result of the linkage with rural communities the concept of resilience, with the following fundamentals was applied by St John in activating Community First Response Groups.

- In Emergency Management a focus on the effort to reducing vulnerability of a community to ‘extraordinary events’.
- An emphasis on planning for events and post event recovery, to lessen vulnerability to future potential events.

Rural communities enhanced with partnerships to the wider emergency management sector can, with consultation, understand environmental and technological risks in their ‘patch’, and how all aspects between community and response agencies interlink. This is reiterated in Kendra and Wachtendorf (2003) “for example, resilient communities provide the context in which organisations themselves become more resilient”. This linkage in emergency response between communities and St John to enhance resilience forms the basis of the medical first response model that underpins the Otago Southland Emergency Planning Group CEM planning and response framework. The concept of base resilience can be shown to exist by the capability of isolated rural community people to look after themselves and to recover from events in this part of Southland. Dynes (1994 p 150) states” regardless of how extensive the emergency, social systems will still be relatively intact”. This quote is dependent on how much of the community survives.

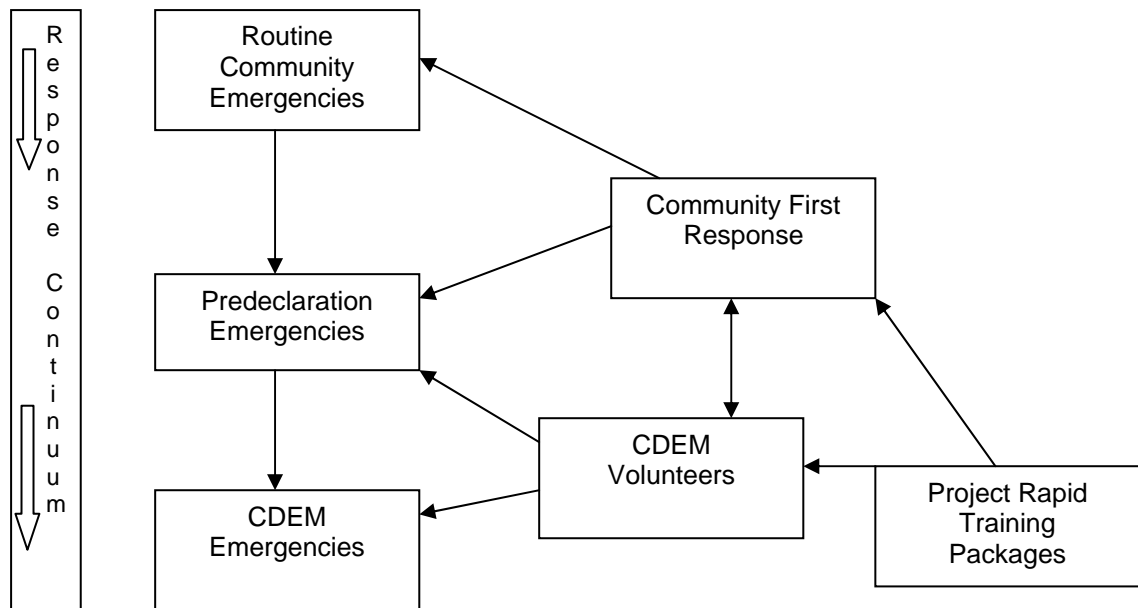
An example of Community First Response is in the isolated Blackmount Valley in Western Southland, which is about 30 minutes north of Tuatapere on the road to Lake Manapouri, every household (37 in total), undertook First Aid training. Additionally, thirteen personnel are Community First Responders on the activation list in the Ambulance Regional Communications Centre based in Dunedin. Community First Responders are now available through the Blackmount Valley who function from caring for others in the community and visitors, to responding to emergency calls or being part of the recovery mechanism following any event from a collapse or accident. This may range from one or two injured through a 40 seater bus smash to a “disaster” where social and administrative infrastructure may be destroyed.

Other response agencies are involved with Community First Responders to provide support for medical emergencies or accidents. The Blackmount Rural Fire Party can support the Blackmount Community First Responders along with the Ohai First Response unit, the nearest ambulance providing support being from Tuatapere, 20 minutes away. St John recognises that the Community First Response project has great potential in building a base resilience in relation to community medical impacts. This is now being enhanced by St John in Southland; receipt of funding in 2005 for automated external defibrillators (AED's) for the nine original Community First Response areas, as well as for 15 new sites, allows them to respond to time-critical life threatening medical emergencies. Appendix 7 details the availability of defibrillators in all communities in Otago and Southland. This will extend Community First Response by adding the Fire Service and Southern Rural Fire Authority, together with community members, into the St John medical response system.

In the United Kingdom the Cumbria Ambulance Service similarly utilises community members to respond to sudden collapses by people where the ambulance response is longer than 8 minutes (NHS Trust 2004). These responders are trained in Basic Life Support and early defibrillation. The Southland Community First Response programme is a similar model to that used in Cumbria. Under an "all hazards" CEM approach, the community ability to link medical first responders into the CDEM system enhances the response continuum. MCDEM has applauded the latest initiative of developing an enhanced "all hazards" response framework across Southland (pers. comm. J Lovell Emergency Management Advisor MCDEM November 2004).

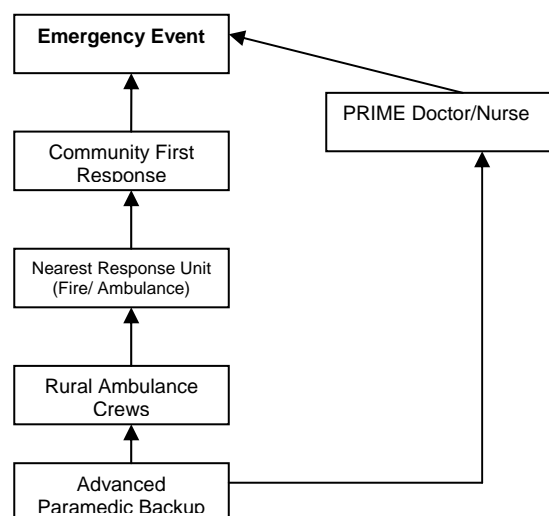
Discussions between St John, CDEM in Southland and the MCDEM demonstrate how the continuum of integrated linkage between community members used by St John could be an asset to CDEM (Figure 21). Training in CDEM skills will provide enhanced local provision of care not only to the local community but also providing reconnaissance, setting up welfare centers and activating an emergency operations centre. MCDEM suggests that Project RAPID (Response and Preparedness in Disasters) has training packages that can be integrated into existing emergency service response arrangements. For St John in Southland, Project RAPID is an opportunity to involve Community First Responders with additional training in dealing with larger than normal emergencies that require a response resource not only from the ambulance service, but also CDEM and enhances resilience in rural communities as well as provide the response continuum linkage.

Figure 21. Linkage model between Community First Response and Project RAPID



The integration of the community within the emergency services for standard emergency response enhances the initial response capability for an accident or medical event. Raine (2002) states “First Response is built on by Fire or St John First Response Units, volunteer ambulance services, rural doctors that are part of the Primary Response in Medical Emergencies (PRIME) system, backed up by rural ambulance responses with the final response resource being the Advanced Paramedic availability arriving by road or air. ”

Figure 22. Tiered integrated emergency medical response model



The format shown in Figure 22 has been adopted by St John for its national operations response plan as part of the Ambulance Communications Project (ACP) and is based on the Southland resources and response model. The Advanced Paramedic crew is responded by road or air to assist with in-transit patient care, taking over the treatment regime begun by the tasked doctor and/or nurse, as well as providing support to lesser qualified rural ambulance crews.

5.4.2. The issues of responders belonging to two or more response agencies

The OSEPG recognises there are volunteer and paid personnel who belong to several emergency service agencies and therefore the true personnel resource response capability within local communities. Under a CIMS structure it is therefore possible that agencies contributing resources to emergencies could overestimate the available human resource response capability. The planning group in Otago and Southland has begun identifying staff belonging to both the Fire and Police and Fire and Ambulance services in order to identify the true extent of the response resource.

Planning for potential community emergencies has to consider who will be available on any one day for events. Some response agencies have had to apply membership restrictions to ensure they can maintain a response capability for incidents in their local areas. An incident management team needs to be aware of this factor when calling in response resources.

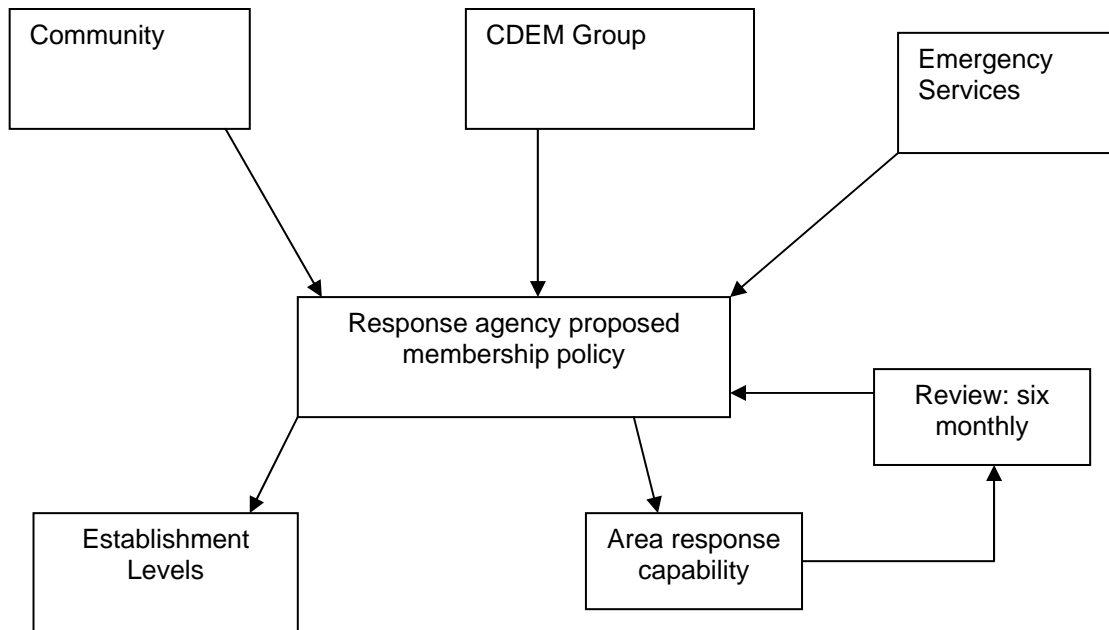
The primary response agencies interviewed for this thesis study reported some advantages as well as disadvantages in having emergency workers belonging to two or more agencies. Cross training and awareness of multiple agency procedures and structure means personnel have additional training and skill sets that will enhance their abilities and extra skills can be passed onto other personnel. Rural Fire Service volunteers are utilised for additional skills e.g. a Fire Officer who is also a Police Officer can exercise his powers if needed, albeit this may reduce crewing of a Fire Appliance for a period of time.

Concern arises when an incident escalates or is a large incident requiring substantial personnel. Personnel agency conflicts may diminish response resources. For example, a responder in a primary agency in some communities may possibly make an agency unavailable if the responder is with his/her “hobby” response agency, delaying the

engagement of CIMS until other lead agency resources arrive from another location. Unless carefully notated, establishment levels for response agencies in a community do not therefore reflect actual response capability. Police Officers who are (Chief) Fire Officers can also confuse legislative mandates when enacting CIMS, especially if a fire becomes a crime scene with areas of potential evidence needing preserving while still extinguishing the fire. MCDEM recommend that community planning and management processes need to consider how duplication or diminution of local response capability may impact on emergency management.

The CDEM EMO group, as part of CDEM planning processes, should determine personnel that individual response agencies can safely allow to belong to another agency. Some agencies e. g. St John, have indicated they will not allow their volunteers to belong to another primary response agency. It may be impractical to limit community personnel from belonging to more than one response agency but a broad policy could be developed that defines community numbers of multiple membership. The policy model suggested includes the following (Figure 23).

1. Personnel who are prime lead agency representatives in communities should not hold a senior rank in another response organisation.
2. Communities determine their local response capability in conjunction with emergency services and /or EMO planning input.
3. Community response agencies jointly establish which personnel can belong to other response agencies.
4. Incumbent personnel already members of multiple response organisations when the proposed policy is enacted will be noted in the establishment levels. If multiple agency membership levels are beyond agreed limits, these will be reduced by attrition. Monitoring and review will occur every six months.

Figure 23. Policy process to determine limits of multiagency membership

5.5. Training and responding to larger than normal emergencies

There are various incident management models available around the world. Britain uses a gold, silver and bronze level of incident management. Australia uses the Australian Interservice Incident Management System (AIIMS), North America the National Incident Management System (NIMS), Hospital and Health Agencies the Hospital Emergency Incident Command System (HEICS), which is used across a number of countries including New Zealand. These systems share similarities such as modular organisations and span of control and integrated communications and control structures. The model of incident management now being used in New Zealand is CIMS. As discussed in chapter two, this was developed using planning and management aspects from both North American and Australian incident management models. CIMS is continually evolving since the initial publication of the “Teamwork in Emergency Management” CIMS handbook in 1998. The CIMS training programme unit standards have been rewritten to reflect best practice for programme delivery through the various levels of workplace emergency risk management, from general orientation to controlling multi-agency emergency incidents as a lead agency incident controller.

In the last three years the emergency services in Otago and Southland have collaborated to deliver a joint venture multiagency training programme to address the

integrated management of emergency events. Prior to 2001, response agencies in Otago and Southland were rarely applying CIMS operationally which meant incidents were being managed but with gaps and issues about the failure of interagency communication noted during debriefs. Therefore a concerted multiagency training programme was developed to train all CDEM / emergency service personnel in the “Apply CIMS as a team member” course from Southern Region. Students undertake simulations to learn to work together and explore the best options to deal with problems. Teaching emphasises the following points;

- Communication is the key exchange for ideas between agencies
- Emergency Managers will use intuitive reasoning to resolve incidents based on their training, prior experience and knowledge at the “Forward Command Point”.
- The need to understand the level of victims’ needs during an emergency event and the needs and nature of the rescue teams involved. The Logistics section of an IMT can assist in the welfare task for victims by using the CDEM EOC support system pre-declaration.
- Dealing with special risk areas e.g. Taieri Gorge with pre planned CIMS structures and predetermined incident control points and EOC’s assisting incident operations.
- Lead and Support agencies are trained to deal with tasks; options for event resolution which are dependent on available resources requested resources on site, complexity of task completion and sharing of functional tasks, some response plans such as OSERP can assist with this incident planning (Appendix 4).

Operational planning analysis is where several courses of action are explored. These deal with issues around resolving emergency events with the “appreciation” planning model being useful during this part of the planning process. This brings together facts, “what ifs” and “what can go wrong with the decision’s “we make” at an incident” This leads to incident tasking in the planning period until the next Incident Action Plan is developed and activated.

Cooperation is an important component of CIMS planning. Drabek (1986) comments, “Command and Control are simply the wrong concepts for the system of shared governance that comprises the emergency management system. Coordination and

supervision are more appropriate". Dyne (1994) observes that "the military command and control structure, if used in emergency response organisations, will be a destroyer of flexibility and innovation." CIMS management structures have to avoid introducing rigidity into planning arrangements and need to be thinking laterally in applying their planning methodology.

By using a team approach, flexibility can be introduced into multiagency incident management team membership. In CIMS, overarching control operates horizontally. The Incident Controller directs agency tasking but governance is shared with the Incident Management Team. Once tasks are allocated a more direct form of command and control occurs vertically within agencies as response managers issue the orders for the task completion. These tasks can be issued rapidly with available staff allocated to sector positions to complete the immediate priority tasking.

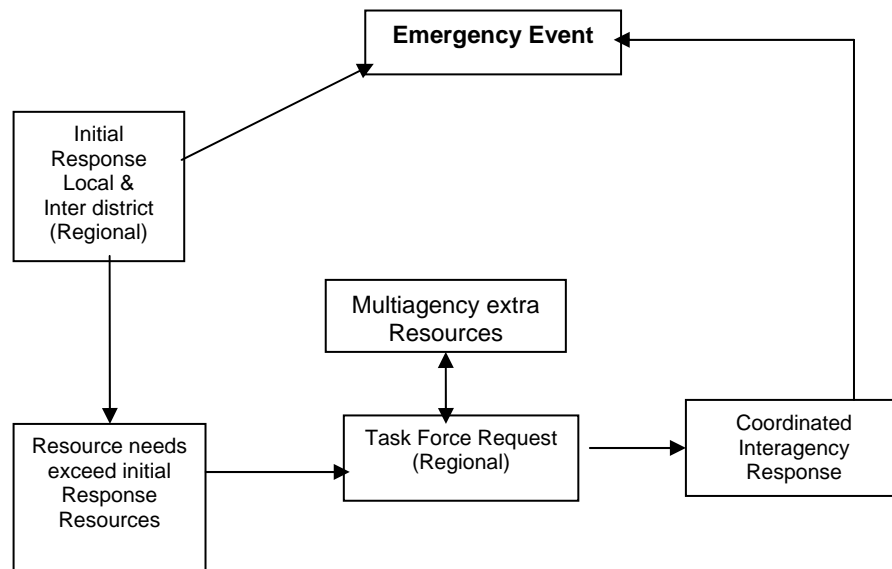
Managers of Emergency Services need to be aware that organisational boundaries in a structured response may become blurred during an emergency and informal organisations may need to form to deal with the site emergency, especially where multiple tasking for event resolution may be required. This was exemplified during the Hyatt Hotel Collapse in Kansas City in 1981 where "a smoothly functioning high performance organisation developed on the spot" (Stout 1981 p 45) and "new organisations may evolve spontaneously to fill the gap" Auf de Heide (1989 p 72). Often, they are very informal in nature and may quickly disband when the immediate crises is over". CIMS can also have informal structures. Training has to allow for flexibility with incident management structures and also actual management of the emergency. Sarna (2002) states that "the ability to perceive, understand and focus on a few key aspects of an unfolding incident is the key to performance as an incident commander".

The OSEPG considered within the planning process whether the emergency services and CDEM staff involved would find it hard to link with non emergency service staff and community volunteers and scale up to full CIMS structures. Two exercises were held to prove the link can happen with a smooth transition. Appendix 9 shows the management structure for Operation Waitepeka in 2001 that tested the OSERP plan functionality and use of the Balclutha CDEM EOC following a serious fire and fumes leak at the Finegand Freezing Works. The other OSEPG exercise held in Gore in 2002 tested the EOC – Emergency services CIMS interface with community volunteers as part of a scenario that evacuated part of Gore during a chemical fumes emergency.

The key to OSERP functionality for the Incident Controller is the trigger to recognise the capabilities of a CDEM EOC who can provide valuable assistance to the Logistics function of the Emergency Services CIMS IMT. The EOC can deal with the Logistic tasks of Public Information and Welfare along with other secondary incident tasks to move to a satisfactory incident resolution.

Following winter snowstorms in Dunedin (August 2004) the Otago District Health Board activated their emergency plan to manage the snow event and put in place processes to transport staff into and out of the hospital. Unfortunately the CIMS Incident Management Team in the hospital did not carry out effective shift changes, leading to very tired Incident Management Team Managers by the end of the third day (Lucas 2004). The lesson to be learned is that there needs to be experienced managers across emergency services that can operate within key roles with the Incident Management structure to relieve an Incident Management Team on a shift by shift basis, especially for any protracted event. For this to occur, IMT's need to be multiagency in order to achieve the effective number of management resources required and they must be able to train together and work together at emergency events so they can gain experience of each others' organisational idiosyncrasies.

In 2003 an OSEPG project was begun by the emergency services and some local authority CDEM officers to assess the use of taskforces within OSERP. Task forces are used where additional response resources are required at emergency events to provide sustained support when local response resourcing is inadequate to deal with the demands of the incident(s). In the context of OSERP it is likely Incident Controller(s) will have activated plans to request deployment of extra taskforce resources within Otago and Southland for sustained events; both the New Zealand Fire Service and St John utilise taskforces to shift large numbers of response resources. As a result of the OSEPG project work it is now recognised that a degree of commonality exists in the two response organisations in that both need to shift resources en-masse. Under CIMS, Lead Agency Incident Controllers using the OSERP resources database will have available to them information on any communities' response resources that could be utilised to provide assistance to an incident management team. In an ideal situation the Planning and Intelligence section and Logistics section will have an indicator as to how long resources may take to arrive.

Figure 24. Taskforce request and response diagram

Thus an Incident Action Plan could be based on both site resources and resources still to arrive. OSEPG determined what resources could be shifted individually to an emergency event but not arrival times. Coordination would be useful in that response agencies could meet at specified regional locations and travel to the incident in a controlled manner with distinct advantages to an Incident Management Team. Generalised Response times however would be a known factor to the Planning and Intelligence section of the IMT who were planning the continued resourcing and resolution of an incident. Response agencies base open road speeds at 100 kilometres an hour.

The emergency taskforce protocols are;

- **Initial response-** (intraregional) using district resources (normally short term events)
- **Task force response** – intra/inter region: predetermined response to provide sustained support for a period of time (may be 1-4 days). Resources released are extra to normal or near normal district response requirements.
- **Operates** to a response protocol
- **Common communications** where feasible
- **Logistical** support backup
- **Requesting** organisation **bears costs** of responding resources

Agency taskforce assembly points are located at the following areas in the Southern Region.

Table 5. Taskforce Assembly Points

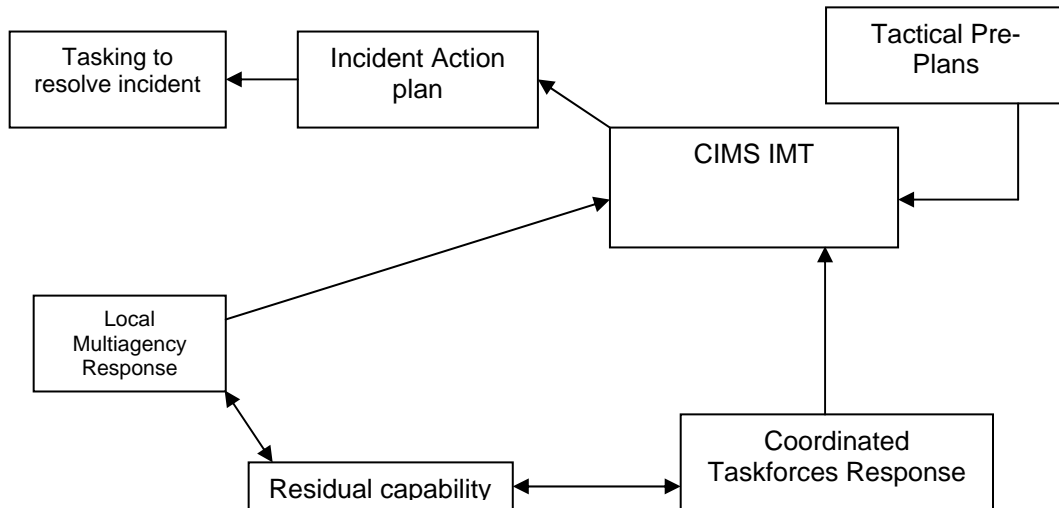
Location	Assembly Point
Coastal Southland	Invercargill Fire/ Ambulance Station
Upper Southland	Gore Fire Station
Dunedin	Central Fire Station
Central Otago	Alexandra Fire Station
North Otago	Oamaru Fire Station
South Otago	Balclutha Fire Station

The Task Force Commander identifies the suitable assembly and rendezvous points on the day with paid staff reporting to Invercargill or Dunedin Central Fire stations. Volunteer personnel report to their respective stations to await instruction from the Task Force Commander before reporting to assembly/rendezvous points. The Task Force procedure also states "Prior to the departure of the Task Force, consideration should be given to making contact with other Emergency Service agencies to determine if any of those agencies wish to accompany/combine with the Fire Service Task Force" (NZ Fire Service 2004). St John coordinates taskforce response when attending an emergency with the Fire Service, including staff resources required and back up equipment. Task force radio communications /radio frequencies can be shared as Fire and Ambulance both use a common Emergency Services band liaison radio channel. Incident Management Teams can be informed of significant known factors of response rather than haphazard guesses. When provincial responses agencies commit to an extraordinary resource release e.g. the Southland Fire and Ambulance service, the CDEM Group Emergency Management office could be informed that numerous response resources have left the province out of courtesy. The number of response units released is determined by the residual response capability needed to deal with other community emergencies.

Incident Management Teams use resource information in initial planning for incident resolution, using any available pre-plans and ascertaining where additional standard or specialist resources are required. These may arrive as a contained multiagency taskforce e.g. Fire/Ambulance task group from another province or separate agency

e.g. 15 ambulances from Northern Region South Island. Figure 25 demonstrates the base consideration.

Figure 25. Considerations for Incident Management Teams



A hypothetical scenario based on a train verses bus accident involving sixty casualties in 2000 near a South Otago town without a residential medical response capability was explored by the planning group. Tasks associated with dealing with such an incident are summarised in Table 6.

Table 6. Task gap analysis

POLICE	FIRE	AMBULANCE	CDEM VOLUNTEERS
❖ SAFETY	❖ SAFETY	❖ SAFETY	❖ SAFETY
❖ Control the scene ❖ CIMS Incident Controller	❖ Command Post	❖ Scene Assessment	❖ Assist with cordon
❖ Cordon the area 1 km radius	❖ Cordon the area	❖ Triage	❖ Undirected efforts from locals
❖ Identify safe assembly point	❖ Size up the scene for hazards	❖ Treat	❖ First Aid
❖ Move walking casualties	❖ Determine assistance needs and communicate	❖ Transport	
❖ Look after evidential requirements	❖ Evacuation of personnel	❖ Notification to hospitals	
	❖ Eliminate ignition source		
	❖ Extrication of injured		

Each agency identified what they felt were key tasks independent of other agencies. The exercise also determined where cross tasking may have been occurring. The ambulance service relied on the Fire Service for extrication of patients and rescue. The Police were required to assist with traffic control to allow for access and egress of vehicles. Incident Management Teams need to be aware that there were sufficient resources available to complete tasks when allocating them. This is important where the severity of injuries means urgent removal to treatment centres but there are insufficient resources to do this.

A model for Operational Management Triage (OMT) (Heath 1995 p 19) was used for this exercise. It utilises a score system for each category. Decisions are then based on the total score, removing the emotional toll of who is rescued first or last based on specific criteria i.e.

- Resources required for extrication.
- Effort and difficulty involved: light or heavy rescue.
- Number of people requiring attention.
- Medical triage.

For this exercise the critical system linkages were explored according to the objectives of the planning group. These are detailed as follows

- Health Coordination Centre Liaison

The Health Coordination Centre based in Christchurch coordinates which hospital patients are transported to, dependent on the nature of their injuries. Some patients may be transported to local medical centres as well. Transport options include road or helicopters.

- Communications (Inter -and Intra- agency)

Each response agency uses simplex communications within the incident site. As long as CIMS Incident Control Points are set up effectively, communications inter / intra agency work satisfactorily.

- CIMS

All multiagency incidents need an overarching incident management system, to effectively resolve the incident with resources to deal with the tasks. Management

numbers may be limited until resources can be drawn from large provincial or metropolitan areas.

- Territorial and Local Authorities – Emergency Operations Centres (EOC;'s)

CDEM members advised they had EOC's available to monitor and support response activities. Primary response agencies were not in a position to activate their own EOC's owing to demands for task resolution at the incident.

- Resource knowledge- Database, and beyond regional response boundaries.

The OSEPG database provided ready information regarding closest response resources to the incident exercise. This allowed the Incident Management Team to determine how long resources would take to arrive and to resolve priority tasks; scene evacuation, saving lives, and evacuations of injured etc. The biggest delay was the ambulance service response owing to limited available response capacity, capability and travel times.

- Inter-agency relationships

Were enhanced with the use of an incident management system ensuring agencies communicated with each other for incident task resolution.

- Replacement of medical consumables

St John had difficulties in replacing incident consumables, which necessitated supplies being obtained from stations 60-100 kilometres away. Major incident supply trailers were not available at the time this exercise was held.

- Linkage with Armed Forces

The response agencies felt that Defence Forces engineering support would be useful as well as the use of territorial forces to help with some incident taskings e.g. management of logistical tasks.

- Linkage with volunteer agencies

The OSEPG indicated that support from welfare organisations, e.g. WINZ, IRD, Victim Support, Red Cross and other voluntary agencies is necessary and that linkages with Memoranda of Understanding should be developed so processes for activation of this support can be formulated. This factor was both seen as a response and recovery point in that Red Cross assists response agencies with volunteer First Aiders and support personnel, but this agency as well as others have a role in the recovery area as well.

- Mutual aid agreements

Mutual aid from other St John regional response agencies are formalised so resources can be obtained through agreed response arrangements e.g. taskforce movements to bring in resources from the Northern Region South Island (NRSI) Ambulance Service.

This exercise indicated that where CIMS Incident Management Teams are set up the methodical approach to task completion is undermined if key response agencies are either not on site or under- resourced to deal with the task. The response agency that identified with the greatest difficulty of resourcing during this exercise was the ambulance service. The incident location was 30 minutes from the closest ambulance station and there was no First Response medical capability within the immediate area. Ambulance resources would need to be obtained from 100 kilometres away for a second tier of response to support the local response of two ambulances. The ambulance service would have asked the Fire Service to assist with patient care and to drive ambulances to hospital as each Fire appliance has double the numbers of responders arriving at an incident compared to an ambulance. At any given time there are more fire appliances in Otago and Southland for emergency response than ambulances. Ambulance resources not only have to be available for the initial emergency but also for other community emergencies, as well as interhospital transfer demands.

Underestimating true response capability has a downstream effect with tasks not able to be completed within the current Incident Action Plan framework. Tasking becomes dysfunctional due to lack of on site resource capability. A methodical, systematic approach will ensure tasks are completed in the IAP time frame. There is a legislative mandate requiring an overall Lead Agency to manage an incident. Tasks will be led by some agencies and supported by others, e.g. pre-hospital emergency care is led by ambulance and supported by the Fire Service and medical personnel where necessary.

For example in July 2004 an unannounced exercise in Invercargill involving a 40 seater bus and truck was activated on the outskirts of the city, testing the primary response agencies in relation to;

- The capability of local services to manage an incident.
- The effectiveness of recent CIMS training.
- Application of CIMS principles to a practical multi agency response situation.

- Test communications between services.
- Test overall management of such an incident.

The scenario outcome was known only to agency event planners (four persons), with no one from the response agencies knowing that the exercise was to occur. The planning team did not know if response agencies could respond with resources required on the day to manage what was effectively an “emergency event” with 36 potential casualties, included 15 critically “injured” bus passengers and three dead victims, as well as standard daily work demands.

St John was under resourced with its two operational rostered ambulance crews and four ambulance officers dealing with 36 casualties and triaging of victims, some who were trapped. Additional crews were called from the co-located Invercargill Fire/Ambulance Station seven kilometres away but had only three off duty ambulance staff available, requiring a double crewing arrangement. The three backup ambulances were double crewed with recalled fire-fighters providing support to the ambulance officers.

Using the OSERP tasking list, based on a CIMS response, Ambulance was the lead agency for Pre-Hospital Emergency Care, with support agency for this exercise being the New Zealand Fire Service. The fire fighter to ambulance staff ratio was 3:1. Transporting ambulance crews were reconstituted with each crew made up of a fireman driver and a Paramedic to care for the “injured” to be transported to hospital, thus allowing ambulance staff to remain at the incident to carry out further triaging and treatment without delays to the transport of patients to hospital. Table 7 identifies all support agencies drawn from the OSERP tasking list found in appendix 4 that can assist the ambulance service.

Table 7. Prehospital Emergency Care: lead and support agency tasking

Task	Lead Agency	Support Agencies
Pre-Hospital Emergency Care	Ambulance	<ul style="list-style-type: none"> • NZ Fire Service • General Practitioners • Order of St John • NZ Red Cross • Civil Defence • Community First Response

During this exercise two real emergency calls occurred for both the ambulance and fire service. The Invercargill CDEM Response Unit was requested and assisted with moving patients from the bus to the triage area, allowing patient care tasking to continue while fire personnel were released to attend other emergency calls. The Police exercised their legal responsibility and took the role of Incident Controller, putting in place a multiagency Incident Management team of Operations, Planning and Intelligence led by the Fire Service so that the rescue and tasking of the ambulance and fire service would occur efficiently. As the combined scenarios with “real events” finished, Operations, Planning and Intelligence roles reverted back to the New Zealand Police to carry out the tasking required for the scene investigation of the “fatal crash”.

Diversifying resources allows better utilisation of potentially scarce personnel so that highly trained response personnel are available for more potentially serious emergencies, effectively allowing response partners to share tasks and safely achieve an outcome suitable to the emergency. As Auf de Heide (1989 p 56) states “various urgent tasks have to be divided up by various organisations.” “Cross trained teams is more effective in terms of performance” Volpe et al (1996) and this demonstrated by response agencies moving away from traditional task boundaries and thinking laterally, event resolution can therefore occur in a more functional way.

In order for this level of cooperation to work, emergency response agencies need to build links and relationships with CDEM agencies for the management of emergencies. During emergency events, response managers are faced with numerous initial tasks needing prioritising to save lives and property. Training within CIMS courses in Otago and Southland teaches emergency managers to recognise limitations and think laterally about dealing with complex and difficult tasks, e.g. who to rescue first with available resources, and to leave badly trapped and critically injured to the later part of the rescue mission. This exercise proved that diversification of resources by utilising other agencies as response partners creates efficient event resolution. This enhancement allows response agencies to also be available for other community emergencies. Partnering within CDEM agencies for planning and response is an asset, and therefore needs to be continually developed.

Sequential interdependencies occur where one response agency relies on another to complete a task. This becomes apparent during complex rescue operations. For example, during difficult extrications, task roles may change from Ambulance to Fire

Fighters who have specialist rescue skills that an ambulance officer will not have. The Ambulance Officer assists the Fire fighter through the most awkward part of a rescue. Once the patient is accessible the task reverts back to the ambulance service. Where trained personnel belong to both rural fire and ambulance services the combined skill sets of individuals are an asset with tasking to resolve incidents enhanced by integration of the skill sets of the responders.

The emergency response agencies in Otago and Southland collectively acknowledge that a high level of practical resourcing is required to manage emergencies. The financial costs of recalling unbudgeted operational staff can cause considerable financial strain. In addition, obtaining supplies, equipment and material for an emergency can be costly, especially areas where “just in time” stock levels are maintained. Equipment resources may need to be brought from over 200 kilometres away. During the Waipahi train crash, east of Gore, the heavy lift cranes came from Invercargill delaying the rescue of the trapped train driver and delaying the tasking to deal with the chemical spill (Dickie 1999).

OSEPG identified that, unless agencies collaborate and exercise together, confusion may arise during a real event as agency representatives will be unknown to each other. Expectations of agency roles and the impact of hazard consequences have an impact on event outcomes. The OSEPG, although planning for events sitting between a normal accident and a disaster i.e. planning emphasis on “pre CDEM emergencies”, has also taken an interorganisational perspective for planning and response issues over a wider range of events.

As Drabek (1980) in Auf de Heide (1989) states “coordination among the various responding agencies needs to be based on negotiation and cooperation” This is how emergency planning in Otago and Southland has evolved over the last four years.

Paton states (Paton 1998 p 64-66) that” training needs analysis will identify the demands, competencies and constraints that need to be built into exercise simulations. ” Training for an emergency using CIMS requires that personnel understand each other’s roles, capabilities and organisational cultures. In OSERP the tasks that agencies undertake, either by mandate or contract, are all itemised (see appendix 4). The task list includes the agencies supporting the agency that leads the task function. As Heath (1995 p 11) states” unrealistic goals and task allocations mean that response

management slows as resources diminish without a corresponding goal and achievement rate”.

Response agencies operate in a systemised structured framework of Standing Operations Procedures (SOP's) using available equipment and supplies, intact buildings and duty crews that can be relieved by others. Introducing a disaster scenario into an exercise simulation requires atypical operational demands to be built into simulations, testing response agency capability e.g. infrastructure damage, systems failure – communications, complex multiagency environments and emergency roles changing to meet the demands of the widespread destructive event.” Good planning is based on “more likely” rather than “worse case” scenarios” Quarentelli (1988). Planning for the events most likely to cause problems in the Otago and Southland regions are flooding and technological hazards such as mass transportation accidents, bus accidents on the Milford Road (an isolated part of New Zealand) and a chemical hazmat event from the transportation accident scenario.

Planning cannot anticipate all types of possible events, but various CIMS related exercises with Otago and Southland emergency managers were run to test agency participation and interaction. This led to strategic sharing of knowledge, skills, and alignment of some procedures so that an integrated response can occur between the agencies. The basic principle in the Otago Southland Emergency Planning Group is the global sharing of management skills and knowledge between Police, Fire, Ambulance, Civil Defence, Ministry of Health and the Ministry of Civil Defence and Emergency Management to plan and exercise for pre-declaration emergencies. The planning has tried to identify atypical demands and issues that fall outside the usual agency operating demands. As Paton (1999 p 129) states” plans should be linked to training programmes, resource allocation and disaster simulation exercises. ” Thus a range of analytical techniques beyond what is required for routine response activities and extending beyond normal organisational response boundaries is required.

Paton (1998 p 62) also states “Effective communication between organisations is essential for integrated emergency management and for the quality of decision making in an environment characterised by multiorganisational involvement, conflicting and diverse demands”. Successful incident resolution is therefore most likely to occur when integrated planning directs effective integrated agency response prior to potential events under an “all hazards approach”. Simulated exercises offer Emergency Managers the opportunity to critique exercise shortcomings and openly share after

multiagency exercises, identify mistakes and weaknesses, develop and evaluate cross agency solutions. Positive comments are frequently made about such approaches to exercises highlighting the shortcomings prevents repetition of past mistakes.

5.6. Escalating Emergencies

OSEPG recognises that pre-declaration emergencies may escalate and trigger involvement with Civil Defence Emergency Management due to an increased requirement for people involved with joint interagency planning; cooperation, training and utilisation of CIMS. Incident Management Teams need to be aware that resource limitations and task complexities may belie the belief that all aspects of response have been covered and accounted for. The OSEPG examined the task role verses agency responsibility (Lead Agency) model. This exercise in Table 8 showed how an earthquake which began as a pre- CDEM declaration tasked the various agencies for incident roles and identified the agency interaction required to resolve emergencies. The identifiers for agency roles are delineated:

Table 8. Task role verses agency responsibility

SCENARIO – EARTHQUAKE (pre -CD Declaration)

<i>Function</i>	<i>Police</i>	<i>Fire</i>	<i>Amb</i>	<i>TLA/ CD</i>	<i>Relief Agencies</i>	<i>Defence Forces</i>	<i>HCC</i>	<i>Red Cross ERT</i>	<i>Other</i>
Impact assessment – pre CD Declaration	L	S	S	S			S		
Communications									Joint
Registration & Inquiry – pre CD Declaration	L		S	S	S		S	S	
Fire		L (U)		L (R)					
Urban Search & Rescue	S	L	S	S				S	
First Aid	S	S	L	S		S		S	
Casualty Transport			L	S		S		S	
Perimeter Control	L	S		S		S			
Clothing					L			L	
Food					L	S		S	
Shelter	L			S	S				
Volunteers (to multiple agencies?)	L								IMT (Tasking)
Scene Control									Depends on Lead Agency

<i>Function</i>	<i>Police</i>	<i>Fire</i>	<i>Amb</i>	<i>TLA / CD</i>	<i>Relief Agencies</i>	<i>Defence Forces</i>	<i>HCC</i>	<i>Red Cross ERT</i>	<i>Other</i>
Evacuation	L	S		S	S	S			
Hazard Control		?L		S		S			Public Health Agency Depends on Hazard
Warning and communicating with the public	L								
Coordinating volunteers	L								
Acquiring and allocating unusual resources	L								
Dealing with mass animal carcasses							Public Health		MAF, L Fisheries
Dealing with livestock or family pets that are left behind	S			L					SPCA L
Procedures for condemning damaged buildings				L					
Disposing of unclaimed valuables and merchandise found in the rubble at the scene	L								
Control of air traffic	S								CAA L
Disposing of large amounts of donations	L								
Controlling emergency vehicle traffic. Ensure access routes are not blocked by emergency vehicles	L								
Checking on hospitals, nursing homes and day care centres that may need assistance but are without communications to call for help	L	S	S						
Deciding where and in which areas utilities should be cut off									Owner of utilities
Dealing with local and international news media	L								

- L = Lead agency - prime responsibility
- S = Support agency - supporting role to lead agency
- U = Urban
- R = Rural

As a result of this exercise, OSEPG found that CIMS Incident Management Teams needed some guidance in order to determine the lead and support agency for task roles from those agencies available at an incident site. OSEPG therefore met, identified and agreed on the agencies responsible for specific tasks at emergencies in Southern Region, (Appendix 4) and who would assist any IMT that was activated to deal with a multiagency emergency.

As emergencies begin, initial response resources are limited with tasks being shared across agencies. Tasks to be completed are identified by the Incident Controller who has flexibility to prioritise tasking e.g. perimeter control, scene safety, saving life and evacuations etc, against resources available on site and resources still to arrive. This exercise underscored the complexity of tasks that occur during events and showed why event resolution can take some time.

Declaration triggers occur where emergency response requirements outweighs resources available for task resolution, financial constraints to manage an emergency or legislative enactment to attain a task outcome e.g. forcing people to evacuate an area - Queenstown 1999 using the power of the then Civil Defence Act(1983). The timing of a “declaration” is predicated, by for example, an adverse event escalating, or, warning of a major event is received that is not able to be managed without the adopting of emergency powers, or is immediately recognised as an event that requires adoption of emergency powers. Work in 2004 associated with Southland CDEM planning to determining trigger points for declarations showed that “Emergency response is a continuum with a range of agencies (emergency services and local authorities) gathering information and taking action. A declaration is one point in the continuum that is reached when an increased range of tools is necessary or more resources are required. Agencies need to be sharing information and consulting at all stages in the continuum” (Bradley & Miller, 2004).The Southland CDEM plan uses OSERP documentation as it contains valuable resource community information and (Appendix 8) defines where OSERP sits relative to routine (Level 1), pre-declaration emergency (Level 2) and the EOC monitoring and activation function. The Otago Southland Emergency Response Plan resources database also confirms the maximum available vehicular and personnel resources in any area and distance needed to travel to reach the emergency event.

Southland emergency managers expressed the opinion that CIMS Incident Management Teams should be staffed with the appropriate number of personnel

relative to the number of operational staff available for incident tasking. This issue will dominate in areas where initial response resources may be needed to form part of a CIMS Incident Management Team but owing to priority task demands i.e. limited response capability in some rural areas of Otago and Southland, may not be available. CIMS management team formation can be delayed until there are sufficient resources at the incident location.

There had been a reluctance to apply CIMS to some routine, let alone larger emergencies prior to 2001 and the joint interagency training programme. Currently (December -2005) CIMS is applied at road traffic crashes and house fires so that personnel get used to routinely applying it, allowing personnel to understand how CIMS is applied from a multiagency perspective. Emergency Services in Southland and Otago are considering forming specialist multiagency Incident Management Teams to respond to emergencies in the two provinces having well trained and rehearsed emergency services managers thus overcomes the potential difficulty of protracted emergencies and allows for shift changes of trained experienced field staff and management personnel as well. The New Zealand Fire Service and Rural Fire Authority are developing Incident Management Teams that can travel around the Otago and Southland provinces. It is recognised that for some emergencies, rapid situation changes, particularly in the initial stages of incident management, mean that shift changes may have to be delayed. Planning is therefore needed to ensure that processes are put in place to optimise staff utilisation.

The OSEPG type planning for pre-declaration emergencies builds intersectorial relationships including use of CDEM EOC's when required. The relationships that have been built assist with coordination and task functionality if an emergency should become a CDEM declaration. In 2001, before implementation of the CDEM Act (2002) the OSERP used EOC's in a support activity, for pre-CDEM emergencies. The role of a CDEM EOC is seen as useful for integration between Emergency Services and Civil Defence Emergency Management staff thus should be seen as a support adjunct to the emergency services and the CDEM system. In section 3.1.5 of the Southland CDEM Group plan it lists the EOC's available in Southland, OSERP lists the identified EOC's within the OSEPG plan as well. These EOC's are the same for both plans and are used for pre-declaration emergencies as well as declared events. (Appendix 8) demonstrates the linkage for escalating levels of emergency incidents and the agencies linkages that occur as each emergency level increases.

The EOC responsibilities within the Otago/Southland Emergency Response Plan (OSERP) plan are:

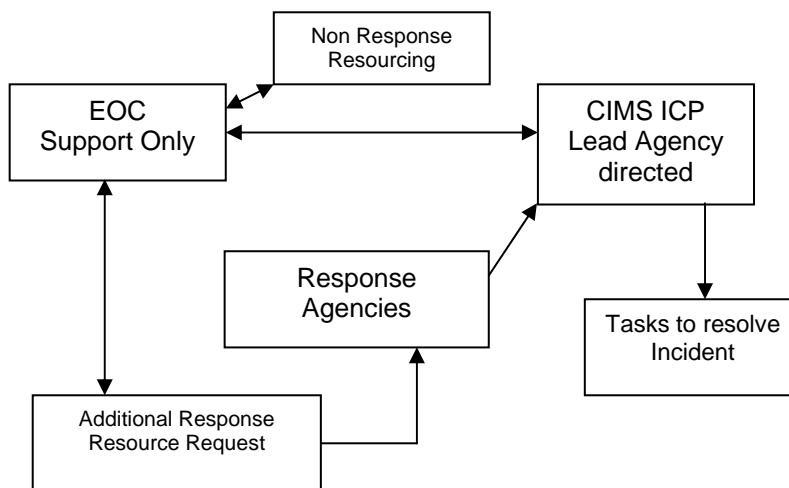
- Intelligence collection, collation, interpretation and dissemination;
- Operational planning in support of the response operation; including the provision of staff resources within the EOC to assist the lead and support agency response functions.
- Co-coordinating the provision of any additional resources (other than own Agency resources) requested by a responding agency.
- Welfare assistance and support to the affected members of the community, if requested by the Lead Agency
- Logistical support.
- Communications support
- Other related tasks as agreed to.

Activating EOC's earlier for monitoring purposes for emergency events is more effective than waiting for a declaration to occur. Pre-declaration phase costs lie with the agency requesting the assistance of the CDEM staff unless local arrangements are in place such as an MOU drawn up between emergency services and the local authority. As an example, OSEPG have undertaken to facilitate the CDEM – EOC – Emergency Service linkage by drawing up an MOU that can be used between local authorities and emergency services. Gore District Council signed an MOU with OSEPG Emergency Operations Centres and emergency services in 2003 (Appendix 5). The MOU attached to the response plan indicates the financial obligations for each agency, costs were to lie where they fall, e.g. CDEM officers agreed to use Headquarters staff to assist response agencies and bear the costs in the predeclaration phase. OSEPG Civil Defence Emergency Management membership also indicated their EOC staff will assist the emergency services in providing operational crewing of the EOC and the linkage back to the CIMS Incident Management Team (Appendix 9).

Whilst there may be several Emergency Operations Centres in a region, one EOC needs to assume the lead role for predeclaration emergencies. In Southland four CDEM EOC's are available as well as EOC's that could be used at Emergency Service locations. The Southland CDEM Group EOC is recommended as 'lead' EOC to provide

overarching support and coordination to emergency services as required for pre-declaration events as in any declared event. A group EOC will monitor and support activities of a local EOC and providing information to MCDEM and other agencies. For example, the Fiordland Passenger Ship Emergency Plan is activated for a cruise liner pre-declaration emergency with the local EOC at Invercargill City Council and the Group EOC at Environment Southland. Whether a declaration is required is based on the impact of casualty numbers and resource commitment to effect a rescue. Figure 26 charts EOC monitoring response activities to provide the support necessary to enhance emergency operations by activating non emergency service resources e.g. cranes or the opening of a welfare centre.

Figure 26. EOC resourcing and interface to Incident Management Teams



In 2004 New Zealand experienced a major disaster in the form of the Manawatu – Wanganui floods where the CIMS system was tested on a multi-incident basis in which numerous Incident Management Teams were overseen by a high-level response coordinator e.g. professional emergency management controllers from Civil Defence. In the CDEM Act section 64 (2002) it states “local authorities are to provide emergency management within their district” and Section 18 states (1) (e) “Civil Defence Emergency Management Groups are to provide communications, accommodation and facilities for the exercise of its functions and powers during an emergency.” Coordination was lost for this emergency where some agencies responded to local events in isolation rather than to the regional demands that were being tasked by the overarching CDEM Response Coordinator as part of the CDEM declaration. Response agencies endeavoured to handle all local emergencies themselves, staff became

exhausted and this led to a lack of response resources in other areas, as well as reluctance to utilise a taskforce arrangement to provide intra-agency assistance (MCDEM 2004). An overarching Group EOC can coordinate local EOC's taskings in large scale operations by providing higher level support which in turn receives higher support from MCDEM.

5.7. Summary

This chapter discussed how the Otago Southland Emergency Planning Group came into being and the need for a planning framework between the emergency services and the CDEM Group planning system. The Emergency Service Coordinating Committees and Hazardous Substances Technical Liaison Committees managed by the Police and Fire Service respectively are discussed. How the OSEPG or a similar planning committee could assist with potential pre-declaration CDEM emergencies is explored. The chapter also outlined the OSEPG and its aims, objectives, outputs as well as its relationship to CEM and operationalisation of the components of CEM through IEMS that have occurred in the last five years.

Tactical planning is introduced and how OSEPG is shifting its planning emphasis from strategic, with an overarching plan, to a more tactical nature with the development of site or area specific integrated response plans is discussed. The Taieri Gorge Railway plan is cited as an example. Although CIMS is the management tool for incidents, tactical plans already prewritten can enhance the early stages of incident management as incident facilities communication arrangements and the EOC are determined within the plan. A planning template for developing tactical plans is described. Risk profiling is introduced that is interlinked to tactical planning and Lifeline project work.

Response agencies worked together through the OSEPG to find solutions to identified weaknesses and gaps. One solution for the ambulance service was to work with other response agencies and the community to create more effective medical response partnerships. Also discussed is the concept of residual response capability, resourcing emergencies, recognising that some response resources have to be left in reserve for other emergencies. This created greater efficiency, allowing St John to release a realistic number of resources to larger than normal emergencies. The new joint venture multiagency multitasking response team in Southland with its integrated response capability interface into the USAR task forces that are set up elsewhere in New Zealand is discussed.

Community First Response is an innovative partnership that is working well and advancing in New Zealand. It is a bottom up project that uses simple risk communication methodology to work with remote rural communities on risks, with an “all hazards” approach. The expansion of the Community First Response system across an additional number of sites to create a substantive extra resource for time critical community emergencies is also discussed. Community First Response, can, with enhanced skills and learning, provide a useful resource to the CDEM Group within the response continuum from routine emergencies through larger predeclaration events, to full scale CDEM emergencies. St John and MCDEM are working together in Southland through Project RAPID to integrate the Community First Response system into the CDEM response system. A model for a tiered integrated response is shown (Figure 22) that has been adopted by St John and will form the basis of determining the national response capability. A discussion on the issues of personnel who belong to multiple response agencies is included evaluating the benefits and disadvantages for response agencies personnel if emergencies are large or escalating.

The New Zealand Coordinated Incident Management System is discussed with key training issues detailed as they can affect incident management practices. Integrated multiagency training and exercising enhances agencies capability to work together operationally. The concept of using integrated task forces is introduced as a result of an OSEPG project of 2003. Both the Fire and Ambulance Service now use task forces and utilise a taskforce- response protocol. An integrated response will enhance incident management for large- scale emergencies because resources can be managed as a joint response. This will assist an incident management team to carry out task planning based on sufficient resources known to be available at pre-determined times.

The OSEPG has determined the tasks agencies have to deal with in managing some emergencies. The chapter also explored the lead and support agencies responsibilities deal with at events and determination of the task gaps that hindered agencies' in task resolution, diversifying resources for task resolution are considered by sharing resources and using personnel with similar skill sets to manage incident tasks in a more productive manner. Escalating emergencies are explored and timing for CDEM declarations, along with their trigger factors. The idea of regional Incident Management Teams and training is introduced as a means to lower the declaration threshold; interagency sharing of information is crucial for valid judgements to be made for a declaration. The outputs of the OSEPG are compared to the requirements of the

CDEM Act, bearing in mind that the OSEPG started at least three years prior to the passing of the Act in 2002. Also described are the linkages of the CIMS management team to an EOC and the use of the EOC in a predeclaration mode. It also discusses the linkage of the OSERP to the CDEM levels of incident activation.

6.0. Conclusion

6.1. Thesis Summary

This thesis determines that OSEPG type planning has a vital role to play in successful management for pre-declaration emergencies by incorporating the emergency services and CDEM agencies in a planning forum. This planning will elicit better functionality for developing integrated response frameworks as well as developing relationships with communities that may allow medical first response programmes as an example to be developed to meet a community-emergency service need in a district or region. The OSEPG type planning and response frameworks can build effective relationships between all participating parties and as parties are known to each other can plan and exercise together in pre-declaration frameworks using CIMS to develop best practice solutions. As the same personnel will be involved during CDEM declarations, the response continuum that links routine emergencies with CDEM declarations will be enhanced by these personnel relationships.

6.2. Significance of the research

This thesis has demonstrated a successful mechanism for developing a multiagency response framework for pre-declaration emergencies and the linkages between routine emergency events (accidents) and CDEM declarations. Typical incidents could be emergencies such as environmental events that are pre- CDEM declarations e.g. a developing flood or storm event or even technological emergencies e.g. aircraft, transportation and marine accidents that necessitates the development of interagency integrated planning and response and follows the Coordinated Incident Management system within the event resolution management processes. Since there are more pre-CDEM type emergencies than actual CDEM declarations, response agencies should be practicing using CIMS on a regular basis. The OSEPG provided a forum to facilitate this with annual exercises for its membership. It is a necessity to instil in emergency managers' minds the need to apply CIMS as a normal routine, not as an extra to be only implemented once an emergency has escalated.

OSEPG has provided a planning forum for the Otago and Southland emergency services, local authorities and regional councils for the last five years. The group

members have shared strategic operational information with each other that has assisted other agencies at little cost. The planning group is a cluster of personnel drawn from all the response agencies, local authorities, regional councils and two government ministries. Analysis by the Otago and Southland CDEM Groups' indicate the OSEPG has a special planning expertise that needs to remain, and can be integrated into CDEM work plans if the ESCC's do not carry out this work.

Three significant plans have been developed by the OSEPG, firstly the main plan, the Otago Southland Emergency Response Plan which is an overarching strategic document that allows the regional mobilisation of resources; the requirements to use the CIMS when the plan is declared; and the utilisation of Emergency Operations Centres from support agencies (e.g. CDEM, with MOU's to allow this to happen). The second is the Fiordland Passenger Coastal Ship Emergency Plan, managed on behalf of the OSEPG by the New Zealand Police. The third plan of a tactical nature completed in the first half of 2005 is the Taieri Gorge Railway Emergency Response Plan, also managed by the Police that include an arrangement to use the Dunedin CDEM EOC if an emergency occurs.

In conjunction with Lifeline Project work, risk profiling of areas assists in developing plans and also provides valuable information to local authorities for pre-declaration emergencies that may assist Lifeline projects. Sequential interdependencies, where response agencies require the assistance of other agencies to complete tasks, have been identified within the OSEPG planning work. As a result of these studies, the OSEPG is shifting its planning focus from its overarching strategic response plan (OSERP) to a more district and area focus in the development of integrated tactical pre-plans for specific risk areas. It is the intention of the OSEPG that the tactical plans are shared not only within its own membership, but are also attached to the CDEM Group plans in Otago and Southland. In a similar manner, the response agencies require tactical plans to be attached to their own major incident response plans. Thus an integrated tactical plan can interface at a number of levels to assist the CDEM EMO office, the OSEPG itself and the primary first response emergency services – Police, Fire and Ambulance. The OSEPG work has shown the need for communication of identified hazards and risks for potential pre-declaration emergencies in communities. The planning group has identified the risks within its own agencies according to where their stations are sited. It has also identified all the response resources across all the communities for the primary emergency response and CDEM agencies.

Response gaps have been identified and funding secured to address some of the issues in relation to medical response. Collaborative response partnerships between the Fire and Ambulance Service have allowed rationalisation of spare capacity to be released by St John to other district emergencies. Work is in progress to consider taskforce movements. If taskforce movements can be synchronised between agencies for large, ongoing emergencies, the CIMS Incident Management Team can plan the incident tasking based on the resources arriving with timings as known factors. Available resources to manage the emergency and deal with the frontline response, rescue and transport efforts will limit CIMS incident management capability. Diversification of response resources using similarly trained responders from different agencies can free up response personnel, as demonstrated in Invercargill in 2004 during Operation Mill – bus crash.

Another key factor is to develop community resilience. This can be enhanced by response agencies and the CDEM agencies working collaboratively in consultation with communities and educating them about the localised risks, hazards and their consequences in any particular area. St John has consulted with a number of rural communities in the development of the Community First Response programme in Southland. This process broadly identified the risks, hazards and their potential consequences in each area where Community First Response is operational e. g. some sites will become isolated if flooding occurs.

Communities can mitigate some risks simply by putting in place measures to ensure there is a neighbourhood safety plan, trained First Aiders and the capacity to be self sufficient for a period of time. Enhancement with CDEM skills will provide a greater degree of capability for larger emergencies as well. The launch of Project RAPID will enhance the knowledge of the Community First Responders to allow them to provide a higher level of expertise to their own community. Additionally, the responders will be able to operate across various multiple levels of emergency and be able to assist partner response and support agencies. MOUs' with CDEM agencies, St John and communities can assist by providing the linkages that will allow an integrated response philosophy to arise in a similar way the current MOU for Community First Response operates between St John, the District Health Board and the communities of Southland. St John intends to roll out Community First Response elsewhere in New Zealand.

The OSEPG is now interfacing its work with the CDEM Groups in Otago and Southland. Currently the OSEPG is seen as a working party of the Southland CDEM group tasked to carry out work from the identified Objectives, Targets and Actions (OTA's) that sit within the CDEM plan. A communication strategy between emergency services and the CDEM system has to be developed by June 2006. OSEPG is tasked to do this for both CDEM groups. CDEM in Central Otago see the OSEPG as pivotal in developing tactical plans that will be attached to the CDEM plan for high risk sites or areas that will need pre-declaration multiagency response plans. The Queenstown area has a number of sites that are low risk and high consequence, as well as high risk and high consequence, with difficult access that necessitates development of these response plans.

6.3. Recommendations

This thesis has evaluated a multiagency integrated planning group for pre-declaration emergencies and examined the partnership of the various agencies involved in the OSEPG project. The thesis is not about any criticisms of emergency management practices within individual agencies; rather it suggests ways in which emergency management practices can be improved. The recommendations for future research are split between the CDEM Group planning system and the emergency service planners. A collaborative approach will be required in both instances.

6.2.1. Recommendations to CDEM Groups

Integrated rural community emergency/risk planning requires further development. Processes should be developed so there is a seamless system that escalates the level of response with escalating hazard. A collaborative project between the CDEM agencies and emergency services should occur to pursue a long-term objective of developing greater community resilience and sustainability in the community – emergency service – local government – government linkage.

Emergency Services need to be involved with CDEM to develop risk communication frameworks so that communities can be informed to manage their risks in an area or region. By mitigating the risks, over time the potential impacts of hazards on communities may be reduced. This area of integrated emergency service – local authority readiness planning requires further research. For escalating pre-declaration emergencies leading to CDEM declarations, the triggers need research and

development as well as the post CDEM declaration of integrated agency responses and residual capability across response agencies. The Southland CDEM plan goes some way towards this with the objectives, targets and actions indicating that joint interagency planning will be promoted through the Emergency Service Coordinating Committees (ESCC's). As mentioned at the beginning of this thesis, more proactive realisation of the tasks required must occur if the ESCC's are to take on this role with defined objectives, targets and actions.

Lifelines projects that have identified risks need these managed in a similar way, so that the overarching risk management processes can interface to the emergency management system in any given area. Some research methodology needs to occur to determine these processes. Community plans and their management process may need to reflect how risks will be handled, along with endeavoring not just to replicate the local response capability, but to enhance it.

The work of the Otago Southland Emergency Planning Group could be seen as a cluster approach in the new CDEM environment. Although the cluster collective is drawn from the emergency services, local authorities, Ministry of CDEM and Ministry of Health, the tasking relates to pre CDEM declaration emergency planning and response. OSEPG is now proactively working on request by CDEM addressing delegated OTA's. The key is to create a response continuum. It is communicating through the OSEPG forum to the CDEM staff providing the process by which Community First Response and Project RAPID interrelate, working with communities jointly in a CDEM – Emergency Services consultancy forum to create understanding how the response continuum works. The ESCC forum requires a planning committee arrangement similar to the OSEPG, but needs to alter its meeting format to provide a functional multiagency planning base. Planning needs to be regionally based for the legislative or contractual responsibilities of the primary emergency response organisations. The correct forum to develop a cluster approach for predeclaration integrated planning linkages is required.

CDEM is more than Civil Defence. It is about the partnership between the local authorities, regional councils, emergency services and other support agencies. The contribution from these agencies to the emergency management mix needs to be led to provide strength in management of emergencies within a CDEM area. More research in planning and testing a multiagency integrated operational incident management model is required. Some response agencies have incident management teams, but

they are intraagency. Interagency CIMS is taught and the response agencies need to use integrated interagency incident management teams as a routine rather than use single agency management systems. A best practice guide should be developed that promotes that CIMS is a tool that can be adapted to suit different operational circumstances whether strategic or tactical in the management plan.

6.7.2. Recommendations to Emergency Services

The recommendations in the sections below, although part of an emergency service domain, could be dealt with by part of an emergency management planning function within a collaborative emergency service/ CDEM planning structure. This planning structure will work as long as the interested drivers for planning change are part of this collaboration.

Various incident management systems are in use around the world. New Zealand is currently using CIMS. The British model of incident management uses the bronze, silver and gold level of operational management where the emphasis on management remains within the emergency service domain. The Police act as the Lead Agency for overall management, liaising with government departments depending on the nature of the emergency. The British model does not use an equivalent CDEM structure with management of emergencies predominately remaining with the Emergency Services. This means that experienced response agency practitioners manage emergencies no matter what the scale is i.e. at disaster level the Police lead the incident management. The principles of CIMS work but agencies adopt the principles at times to suit their agency response and also delay using the principles owing to lack of confidence in this management system area. For CDEM, operational experience in CIMS can be limited as declarations are not a frequent occurrence. Alternative incident management models should be researched. Incident management systems are evolving as response agencies seek best practice in applying incident management practices and this best practice can be brought forward into incident management training systems. Whether alternative incident management models such as the British model could be used in the New Zealand CIMS environment is not yet determined and needs to be explored further and would be subject to a significant analysis in this area.

A collaborative interagency project is required to determine the residual response capabilities for areas or districts. These resources, where it is feasible, should be integrated to create greater efficiencies for response. Extra resources can be

determined as spare capacity and form the basis of agency resources to send elsewhere during other local or CDEM group emergencies.

The lesson that is being learnt by response agencies is that no agency can plan in isolation. Difficult areas for accessing emergency events need a combined and integrated approach in planning and response whether urban or rural. A template for tactical planning has been developed for the OSEPG. Integrated planning with other emergency services and allied support agencies could also research and identify areas or sites that need an integrated response approach for access and site management and the community interaction with emergency services in the involvement of emergency service – community emergency planning. This area needs further research to find the best way to obtain community buy in and involvement.

Research into the potential difficulties that may be associated with key utility failures need to be addressed because interdependencies that exist between the emergency services and the Lifeline Utilities can cripple the response effort. Risk management measures need to be built into any planning arrangements to ensure there is a supporting response capability if standard response measures are unavailable e.g. power and communication failures at the time of event impact or staff unavailability from a pandemic.

6.8. Concluding statement

The outcomes of this thesis may be of use to other CDEM groups to improve emergency management thinking or government agencies to enhance relationships across a diverse group of agencies. There is a place for additional planning work between the ESCC committees and the CDEM planning process. This author has documented an audit trail of the research process, which should allow a clear representation of the comparative results disclosed from the interview content analysis.

The research for this thesis was undertaken to evaluate the planning activities of the Otago Southland Emergency Planning Group from the last five years and test the hypothesis there is a place for planning for an integrated response through an emergency service / CDEM collective rather than through the formal planning of the EMO office attached to a CDEM Group. The research proves that integrated emergency planning improves the resourcing, readiness and response to emergencies and creates greater efficiencies. The factors of working through a cluster approach with

other agencies responsible for emergency management has improved the communication linkages to ensure there is early discussion before events escalate.

The enhanced partnerships are the key to why emergency management collectives should be formed. Although there is a need to conduct further research in the emergency service- emergency management domain, this thesis has provided a starting point. During this study some of the conceptual projects contained within this thesis have been funded and made operational. Conjointly St John has already picked up on the capability issues relating to the community – ambulance service interface and is endeavoring to set a national policy on this. Effective emergency management is about having good working relationships with all partners in the emergency management continuum. This philosophy underpins the research of this thesis study.

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Appendix 1: Ambulance Service Contracts

St John (Southern Region) Ambulance Service operates under two principal contracts:

- a. *The Ministry of Health*, for the provision of MoH specified ambulance services in medical emergencies. The contract covers the whole of the South Island, with the exception of Marlborough, and is jointly held with the Order of St John (Northern Region South Island), which is based in Christchurch. In Otago and Southland this contract accounts for 66% of the emergency patient workload and contributes 43% of the operational revenue, which is paid monthly through bulk funding.

(Note the discrepancy between workload and funding). This limited funding requires using volunteers to operate emergency ambulance services and there is no funding for reserve contingent capability.

The Ministry of Health contract is let on a preferred provider basis with inter-party negotiation setting the funding level.

- b. *The ACC*, for the provision of ACC-specified ambulance services in accident emergencies. This is a national contract with a regional payment schedule covering services in Otago and Southland. The contract accounts for 34% of the emergency patient workload and contributes 34% of the operational revenue, which is paid on a fee-for-service basis.

St John also contracts with all the public hospitals and community hospital trusts in Otago and Southland for patient transfer services, and to private organisations and individuals for various other ambulance services. These services, together with donations and patient partial charges for emergency medical ambulance responses, make up the balance of the operational revenue.

All capital funding is acquired by St John through community based fund-raising. This funding contributes significantly to the ambulance replacement programme and provides all ambulance equipment and buildings. It also contributes significantly to the uniforming, training and support of volunteers in their respective communities.

St John also contracts with the Otago Emergency Air Ambulance Trust to provide it with communications and paramedic aircrew for ACC air ambulance operations in Otago and Southland. In a counter contract, St John contracts the same resources to provide medical air ambulance services, while providing its own communications and crews. ”

Appendix 2: Interviews questions findings

Planning: General

1. Which agencies did you work with during emergencies prior to the development of integrated planning across agencies and CIMS?

New Zealand Police

- There was interaction between services and councils, but it was more fragmented. There was contact during emergencies, but we were forced to work with them.
- Contact between Police and other agencies were limited.
- Non operationally we did not coordinate plans and developed plans in isolation.
- There was some contact with Civil Defence but it was pretty ineffectual.

New Zealand Fire Service

- We worked with Police and Ministry of Civil Defence. Nothing with Ambulance or Territorial Local Authorities at regional level but at district level there was some contact with local authorities and ambulance.
- Some additional work was done with Regional Councils and Rural Fire through National Office.

St John

- We liaised with Hospitals, Fire, Police and Civil Defence.

Ministry of Health

- We worked with the same agencies we do now but it was individual rather than a group approach.

Ministry of CDEM

- All agencies, closely involved with Police, Fire Service and Health, MAF, Public Health and Defence Forces. Also involved with Lifelines key utility providers, Telecom, Electricorp and Railways.
- CIMS has put name and framework around existing practice.

Clutha District Council

- All services and agencies.

Gore District Council

- We interacted with Fire and Police at emergencies. Ambulance was involved later on. St John was seen as response and a link but on a casual basis.

Dunedin City Council

- All agencies-Emergency Services, Government agencies, voluntary agencies and business groups.

Waitaki District Council

- All the standard agencies.

Otago Regional Council

- We worked with emergency services, other local authorities and Hospital Boards.

Queenstown Lakes District Council

- We worked heavily with the Police, less with the Fire Service. Some work with the ambulance. Nothing with the Hospital Board. Some work with Public Health during an emergency but not afterwards. There was no planning.

Central Otago District Council

- We worked with Police, Fire Service, St John and business contractors' e. g. Fulton Hogan.

Invercargill City Council

- We worked with the Police. There were relationships with the New Zealand Fire Service. The 'old boy' network was the key. It was not structured as now. More of a social footing.

Southland District Council

- Fire, Police, Ambulance, Victim Support and volunteers.
- We also worked with construction agencies in 1984 and 1999 floods. At an engineering level we tended to gather information than actually responded.

Environment Southland

- There has always been an integrated approach since the early 1980's.
- CDEM has not changed planning but has created more structures.

2. How was the contact with other agencies initiated?New Zealand Police

- There was a forced contact. We had functions to perform. Some Emergency Service Coordination Committees (ESCC's) met on an informal basis in a non emergency environment.
- We came together when an incident happened. There was no external email capability prior to 2000 which limited communication with external agencies.
- At incidents there was confusion as to who was in charge.
- Non operationally we met with Civil Defence yearly and with the Airport company two yearly to run the annual exercise.
- There was little interaction with Fire and Ambulance.

New Zealand Fire Service

- Two way through the Operations Division at National Office.
- Predominately we liaised with Fire Services 60 % and Civil Defence 40 % of the time.
- Dependent on the type of the event either by requesting or just being present at an incident.
- Contact was based on local experience and knowledge.

St John

- We met through the ESCC or Technical Liaison Committees. This was the only contact other than meeting other agencies at emergencies.

Ministry of Health

- The emergency planner made the contact and explaining the role.

Ministry of CDEM

- Initiated by the Christchurch office. The role of the Ministry is to co-ordinate and support the whole of South Island approach.
- There is a legislative responsibility to assist any territorial authority that was impacted by an event.
- We provide support during an emergency.

Clutha District Council

- By correspondence, phone prior to an event. There was also personal contact or radio.

Gore District Council

- Fire and Police approached Civil Defence.
- During a flooding event the Police took Civil Defence around and showed them the risk areas. They responded to the communities needs. In fact it should have been the other way round with Civil Defence advising the Police about the flooding risk during the event.

Dunedin City Council

- Civil Defence approached the agencies personally.
- Targeted the agencies that had the skills that needed to be integrated into Civil Defence structures.

Waitaki District Council

- Through standard meeting procedures and training.

Otago Regional Council

- By phone call and a contact list. There was involvement with MAF during the 1980 floods.

Queenstown Lakes District Council

- We got to know the agencies, but it was limited. There was no contact with the Fire Service, nothing with the hospital board in the early days.

Central Otago District Council

- By phone calls and meetings during the emergency period.

Invercargill City Council

- The 'old boy network'. Friends in social circles.
- Carried on from earlier arrangements where a need for a resource or activity was identified.
- It was initiated by that person or agency and worked both ways.

Southland District Council

- We went and met the people on a three month basis.
- Personally and also through the council.

Environment Southland

- It took one party to be proactive about engaging with the other. Civil Defence met through the Emergency Service Coordination Committees and Hazardous Substances Committees but these were driven by the Emergency Services.

3. Rate in general the level of nature of contact – close, -peripheral?New Zealand Police

- Peripheral with agencies.
- Operational response – close.
- Non operational minimal meetings other than dealing with a specific need.
- The contact was minimal prior to the Coordinated Incident Management System (CIMS).
- We only used to look at ourselves, now we look at other agencies as well.

New Zealand Fire Service

- Dependent on the outcome and degree of integration required. Sometimes it was close or peripheral.
- It was close when need to be contact with agencies to resolve incidents.

St John

- Close with Fire and Police.
- Peripheral with local government and Civil Defence.

Ministry of Health

- The level of contact was close. In some cases it varied. There was a degree of suspicion.

Ministry of CDEM

- For some agencies it was close. Some were peripheral. In the liaison role we contacted agencies twice a year, so we knew what was available with resources on a first name basis.

Clutha District Council

- Peripheral.

Gore District Council

- Reasonably close.
- Kept in reasonable contact with each other.

Dunedin City Council

- The contact was close.
- Provided the administrative support so the time commitment of those involved was not onerous.

Waitaki District Council

- Close with everyone except the Police.

Otago Regional Council

- Cannot comment.

Queenstown Lakes District Council

- Peripheral.

Central Otago District Council

- Close contact.

Invercargill City Council

- It was close , a social origin especially during training.
- Once training was over it became more peripheral.

Southland District Council

- The contact was some where in between. Some areas it was quite close e.g. Otautau whereas Te Anau it was more peripheral.

Environment Southland

- Contact was peripheral with government agencies such as WINZ and CYFS but was close with the Emergency Services.

4. What were the advantages to your organisation being involved in multiagency “all hazards” emergency planning?

New Zealand Police

- Coordination. Awareness of other agencies capabilities and procedures.
- In Search and Rescue, there had been lots of coordination with many groups. In the Marine and land environment things were multiagency with meetings and debriefs.
- You got to know people personally.
- It was easy to become blinkered in your own agency.
- It exposes organisations to other agencies capabilities
- How to work with each other.
- There was a better understanding of roles and powers of agencies, where they fitted in and how we did business.
- It allowed a view of situations from different angles and other ways of doing the business.
- There was a realization that other people could carry out management roles rather than people from your own agency (CIMS).

New Zealand Fire Service

- We could put names to faces.
- Common approach.
- Wider understanding of issues.
- Building networks, getting to know each other.

- The identification of the risks and hazards or issues were not always obvious to the Fire Service.
- There was clearer focus on the objectives and outcomes.
- There was an ability to coordinate effort and avoid duplication of tasks.
- Also an ability to identify the resourcing gaps.

St John

- There was a better understanding of each other's cultures.
- Being included in the team.
- Joint decision making and buy in.
- A better overall capability.
- We could create and exercise potential problems.
- Preplanning of resources. Knowing people involved who to talk to.
- Better understanding of all groups that led to the OSEPG work.
- More combined clout with government agencies.

Ministry of Health

- Consistent and coordinated approach.
- Good to bring health issues to the OSEPG.

Ministry of CDEM

- This is the only way to go. Common sense, Concentrated on natural hazards, awareness that Civil Defence was not just natural hazards.
- Technological hazards would have impact.
- Planning led to involved 'all hazards'.
- In some cases involved in writing generic plans and also particular hazard plans.
- Became involved in training exercises and processes.

Clutha District Council

- All services were present in the same room.
- We knew who to contact and understood the lines of management and control.

Gore District Council

- In predeclaration emergencies Civil Defence was not involved until it was dangerous. Now responding earlier to incidents. Everyone is winning.

Dunedin City Council

- Confidence that we would have the experts and resources in a properly planned way.
- More effective.
- Do not need to recruit individuals as skills are already in existence. Individuals still belong to their parent organisation.

Waitaki District Council

- Commonality, understanding each other and how organisations worked.
- There was an more personal relationship.

Otago Regional Council

- Better coordination. Process of getting everyone working along the same lines. CIMS structure, one management system –same ‘song sheet’.

Queenstown Lakes District Council

- We got the contacts sorted out. We could put names to faces at community level. We got to understand how people worked. We understood that everyone had a role and that silo mentality had to disappear. In some ways we were forced into planning.

Central Otago District Council

- Greater understanding and cooperation rather than working in isolation.
- Pulling together.

Invercargill City Council

- Awareness for some years that the government drift was towards an ‘all hazards’ approach.
- There is an increased professionalism.
- Civil Defence organisation needed to be a team with the Emergency Services.
- It added value to the work activities.
- The job is easier. The community is better off.
- Agencies involved are all aware of their role and expectations of them.

Southland District Council

- We were not planning in isolation. Became aware of other organisations and aware of their capabilities.
- Better understanding of other organisations needs and the hazards to improve planning.

Environment Southland

- We became familiar with partners and stake holders.
- There was a range of perspectives to table. All were considered rather than separate processes.

5. Were there any particular organisational issues that caused concerns or were perceived as disadvantages to this planning process?

New Zealand Police

- The Police are twenty four hour paid professionals. The Fire and Ambulance service have volunteers and their ability to respond to emergencies and capability to do so cause problems.
- There were no disadvantages, developing personal relationships was a plus.
- Greater input from other agencies should have occurred. Some did not embrace ‘all hazards’ multiagency planning. Paid lip service which was unacceptable.
- Volunteers were restricted in their organisations therefore they could not contribute to the planning.

New Zealand Fire Service

- The Fire Service had a narrow focus for emergency planning.
- How much did we commit, mandate and to this capability
- There was the possibility we were duplicating the effort of others.
- There was some lack of communication with other agencies.

St John

- There were some local authorities that were reluctant to participate until forced by legislation to do something.

Ministry of Health

- No, It advanced things.
- Greater appreciation of each other's problems.

Ministry of CDEM

- Whole process of restructure of New Zealand resourcing Civil Defence and other agencies.
- Who is responsible for what.
- Co-ordination of rural aspect. There can be little capability for government agencies.
- Commercialisation can cause concerns and disadvantages of process.
- In the early days emergency services did not want to be involved, now changing with joint planning underway.
- Silo agency planning slowly being overcome.

Clutha District Council

- None that was serious. The change of staff in the records, people moved on and names were lost in the system.

Gore District Council

- There were no issues.

Dunedin City Council

- We do not have direct control of who is involved with Civil Defence.
- The providing organisation takes this responsibility. A minor downside.

Waitaki District Council

- Trying to get Police on board. Not as committed to the process.

Otago Regional Council

- There were personality issues, old ideologies to overcome with the Civil Defence organization.

Queenstown Lakes District Council

- There were some issues with the Fire Service, They have Fire Districts and were planning for their district and not the big picture.—silo planning.

Central Otago District Council

- Some commercial businesses were a closed shop. We could not obtain information.

Invercargill City Council

- There was a difficulty with the geographic spread for the meetings held around Otago and Southland. It was OK if the personnel could travel together as often discussion prior and after meetings can be beneficial.
- Organisational cultures sometimes impeded progress.

Southland District Council

- No there were no perceived disadvantages, apart from the time commitment.
- One issue was the council boundaries do not agree with the emergency services, thus we deal with different contacts across agencies.

Environment Southland

- There weren't the structures in place to compel it to occur.
- Executive oversight with emergency planning through the CEG is the best thing of the CDEM Act.
- There is a level of intellect through the CEG now brought into emergency planning.

6. What does the new integrated planning process actually mean in terms of changes in actions by your agency?

New Zealand Police

- It is more of a priority with planning and readiness. There is more coordination.
- The Police know they are the lead agency.
- We still perform our core function. We are aware of the linkages.
- CIMS is the operating system to be used.
- We cannot operate in isolation.
- There is a more coordinated approach.
- Better Liaison.
- Better opportunity for a wider range of ideas to be exchanged.

New Zealand Fire Service

- Stops us operating in isolation.
- Stops thinking its someone else's problem.
- Prepares the organisation for wider emergencies and other peoples emergencies.
- The fire-fighter skills are enhanced with emergency management and the new direction.
- There is more focus by the New Zealand Fire Service devoted to coordinated planning.
- There is more recognition value, what they can do for other agencies, resources etc.

St John

- There is a more planned approach.
- There are regional consistencies.

- Definite advantage involving other ambulance managers in the planning process.
- It does not change the responsibility and the role. We are now integrated as part of the team rather than being called on a needs basis especially with preplanning.

Ministry of Health

- Acceptance of each other's role and understanding how the role's interconnect.
- Everybody realises they cannot handle situations on their own and need to pull together.

Ministry of CDEM

- We were the key agency driving integrated planning process.
- Set the standard with National CDEM plan.
- Look at structure and review how things are done.
- Silo activity needs to be broken down.
- MCDEM needs proactive and aggressive stance to emergency management planning process. Are we resourced to do that?

Clutha District Council

- Very little, nothing major.

Gore District Council

- All responders are in the picture. Involved in planning and response.
- There is a joint approach.
- There are still some issues with Police and Fire wanting to do things within their operational procedures, but CIMS assists in resolving this issue and this incident management process assists the community.

Dunedin City Council

- Bringing the rest of the world closer to our philosophy.

Waitaki District Council

- Highlighting and interlocking services together.
- Working for the common good.
- All embracing.

Otago Regional Council

- Its part of the big picture. Cog in the wheel.
- There is a change of actions with an overseeing role.
- Involved with writing the CDEM group plan.

Queenstown Lakes District Council

- It's more inclusive. There has to be planning. Need to involve people from the community and the contribution to the plan. Need to show responsibility.

Central Otago District Council

- Strengthens our role.

Invercargill City Council

- Placed in better position for 'All hazards' approach for planning and to meet the requirements of the CDEM Act.

- Better position for interdependencies.
- How much help can we expect and give to our neighbours?
- Involvement in a support role at an earlier stage.
- Heads up, know that things are happening.
- Closer working relationships , skills and abilities now being utilized more.

Southland District Council

- There is not too much difference. There is a closer working relationship with the ambulance service and lesser extent with the Fire Service. The Police are about the same.
- We are talking to services much earlier.
- There is increased consultation and better understanding.

Environment Southland

- Now have an Emergency Management Office (EMO) role.
- There is a more active coordination role implementing the general direction of the CDEM Act.
- Preparing CDEM agenda and reports.
- More responsibility.

7. What further modifications to your operations are required now that the new CDEM act has been passed?

New Zealand Police

- The local plans need to be put alongside the CDEM plans.
- CIMS is creeping in. It is being acknowledged in formal planning.
- We need CIMS jenkins in cars. The basics need doing.
- There is a constant effort to educate people in CIMS and understand the role of the EOC.
- Additional effort required for training and resourcing needs.
- Greater interaction is required between emergency services in the co-ordinated environment.
- Required to have a CEG representative at CDEM Group meetings. Need to be involved in working groups.
- The Emergency Services have got their act together. Operations are part of the particular element. It is important the Territorial Local Authorities (TLA's) must do things together.

New Zealand Fire Service

- There needs to be a lot more work in preparedness in areas staffed by volunteers especially at protracted incidents. There are personal issues – duty hours etc.
- Mitigation and recovery are not well understood, needs clarifying.
- Recovery needs to start at the beginning of the emergency.

- Business continuity and recovery planning. What will happen if the Fire Service is impacted by event(s) as a key utility?
- The CDEM Act has set out where the New Zealand Fire Service relationship to CDEM planning and place in structure should be. This place is now prescribed.
- We are participating at a different level.

St John

- As a result of CDEM changes we have to do better planning.
- Ambulance happy to be involved but not always invited.
- Organizational planning and review will become more important.
- There needs to be a realization by all parties that medical capabilities are under resourced, under funded and in any large scale emergency will tax medical capability at the present time. We funded and established for routine business. Bulk supplies are minimal. These need to be placed in strategic locations and processes but in place to shift them.

Ministry of Health

- Not a great deal. Each DHB now have to do their own emergency plans.

Ministry of CDEM

- There is a need for further resourcing. Aware that change will take up to 10 years to implement.
- First round of group plans are the first step.
- National strategy sets the direction for the targets and actions for 3-5 years for MCDEM.

Clutha District Council

- Some fine tuning with communities.
- Business as usual at ground level.
- The local Civil Defence plans are rewritten to reflect the CDEM organisation.

Gore District Council

- Very little needs to be changed. Gore District Council was proactive and put the spirit of what was required into place prior to the passing of the CDEM Act.

Dunedin City Council

- No significant modifications. The new CDEM environment supports fully integrated emergency management.
- Working in partnership with other participants for the last 15 years.

Waitaki District Council

- Doing more CIMS training with all agencies utilising CIMS.

Otago Regional Council

- Tasked to write the group plan.
- Representative to implement the changes.

Central Otago District Council

- Require greater liaison with Otago Regional Council.

Queenstown Lakes District Council

- Ongoing planning. Need to have a clear operational structure. Dealing with transient issues – population. We have some number of resources and will need backup when an emergency occurs. We can be on duty for a long time. Need to acknowledge dealing with the public.
- For a large scale emergency the may be limited capability and structure in place. At least gaps will be uncovered.

Invercargill City Council

- CDEM and CEG structure. Making sense of this new structure, along with the social, political and physical geography of the Southland CDEM Group.
- A continuing refinement of activities.

Southland District Council

- There is additional liaison with services including MAF.
- Also involved with WINZ, Inland Revenue and DOC.
- We need to put finance into reality action plans.

Environment Southland

- We will need more resourcing. There are budgetary issues. More has been spent than planned.
- Assistant has been brought in to help with planning arrangements.
- The CDEM Act and its processes have led to Environmental Southland staff having a wider discretionary role in CDEM.
- The Group Controller comes from Environment Southland.
- It is now professional with more coordination at higher level. It was there with the Civil Defence Officer Group but the coordination is there through the CEO level as well now.

8. What has changed in your emergency management methodology for integrated planning?

New Zealand Police

- Coordination with other agencies.
- Following CIMS principles.
- During the 1990's emergency management was done in isolation and the technical ability was limited.
- In the 21st century documentation can be easily passed between the agencies, thus planning document drafts can be passed for comment faster.
- We are more conscious of taking a coordinated approach.
- Bringing in agency heads at preplanning level.

New Zealand Fire Service

- Our involvement has changed at the planning level.
- There is far more input into the 4 R's at CEG and CDEM level.

- A far greater professionalism is required by the Fire Service.
- There is a awareness of the need to consider other agencies when developing plans.

St John

- Recognising the importance by appointing an emergency planner within St John.
- Thinking Emergency Management more than we used to.
- There is a realisation we are no longer stand alone. We rely on combined cohesiveness.

Ministry of Health

- The health and hospital system have accepted CIMS.
- Picking up the responsibilities for the community.

Ministry of CDEM

- More aggressively promoting emergency management.
- Seen as leaders and drivers.
- Whole philosophy is that no one agency can work alone.
- Changing culture of silo planning to integrated planning.
- The issue of slow information flow from head office down to regions and districts still needs to be addressed.

Clutha District Council

- Similar planning we feel.

Gore District Council

- Nothing has changed. Working collegially. Strengthening initial steps we took. Now working with Fire and Police to embrace the new environment.

Dunedin City Council

- Nothing. Integrated planning has been occurring for years.

Waitaki District Council

- Not a lot. There is an emphasis on CIMS.
- Integration of CIMS into emergency response.
- Understanding the hierarchical system.

Otago Regional Council

- Cannot comment at this stage.

Queenstown Lakes District Council

- The ESCC has been non-existent, but has now restarted. We identified we were on a limb and there was uncertainty of what had to be done. We are working with Wanaka.
- Training is exposing people to the roles expected.

Central Otago District Council

- Nothing apparent.

Invercargill City Council

- Emphasis on CIMS. May lessen number of declared events.

- Awareness of CDEM in non – declared event. This is a substantial benefit. We are less introverted.
- There is now a group plan rather than individual plans.
- We will refine existing arrangements.
- The SOP's will be hardened up.

Southland District Council

- Talking to organisations, rather than writing plans involving organisations and hoping it works.
- We are doing greater work with radio communications.
- We expect more will happen once the CDEM plan is done.

Environment Southland

- There is more structure especially at CEG level as well as more structure involving other agencies who are involved in CDEM planning rather than ESCC planning.

Otago Southland Emergency Planning Group (OSEPG)

9. What part of the project or its outputs from the Otago Southland Emergency Planning Group (OSEPG) work has specifically interested your agency?

New Zealand Police

- We had to be involved. The emergency planner was the District Commander's voice.
- The OSEPG created an awareness of staffing and resourcing to emergency events.
- The Communications weaknesses that were identified and needed improving.
- Taskforces for major incidents.
- EOC's role and taking responsibility.
- The risks and hazards database.
- Identified the weak areas for resourcing within the Emergency Services.

New Zealand Fire Service

- Brought agencies together, we knew each of the other emergency planners by name.
- No one agency was more important than the other –a level playing field.
- There was the opportunity to develop interagency relationships with networking.

St John

- The gaps analysis that led to the development of the resources database.
- Documented proof of the regional response capability.
- The use of an EOC predeclaration.
- Buy in of other emergency services into an organized group.

Ministry of Health

- There was a co-ordinated approach, looking at adverse events and the impact on communities.

Ministry of CDEM

- The whole concept started prior to the start of the CDEM legislation.
- The key response agencies were working together and taking an integrated planning approach away from the ESCC which could be deemed superficial as far as planning was concerned.
- It broke down barriers and also showed the reluctance of some agencies to participate.
- The creation of the Otago Southland Emergency Response Plan (OSERP).
- The project was chaired by MCDEM on behalf of St John.

Clutha District Council

- The aims are similar to Civil Defence.
- An annual exercise would be beneficial.
- The resources available in the community contained within the plan.

Gore District Council

- All aspects. Have enjoyed being involved in joint planning with the emergency services.

Dunedin City Council

- Raising the level of some neighbouring regions.

Waitaki District Council

- The OSEPG has underpinned the emergency response structure.
- Given energy and life to the project and is never asleep.

Otago Regional Council

- The development of the hazard register as it now forms the basis of the hazard development work within the CDEM plan.

Queenstown Lakes District Council

- This project is a good example about working together.
- In the CDEM development we plan to follow the OSEPG planning format.

Central Otago District Council

- No comment.

Invercargill City Council

- The OSEPG was referred to in the Invercargill City Lifelines Project.
- Understanding of the Hazardscape reported within the scope of the planning group work.
- Being involved with other agencies.
- More informed and aware.
- Opportunity to promote our skills and abilities.

Southland District Council

- The communications group looking at coverage.
- Closer working relationships with organisations.

- We can talk with people in regional positions.

Environment Southland

- Transportation hazards did not cater for cruise ships.
- The work led to the Cruise Ship Response plan for Fiordland through an identified plans gap which the membership felt it needed a plan to address the issue.

10. One OSEPG project output has been the production of the Otago Southland Emergency Response Plan (OSERP)-What aspect of this plan is or has been of most use to your agency?

New Zealand Police

- Availability of Emergency Operations Centres and their location.
- Reassurance that support is there from other agencies and agreement that the plan will operate when required.
- Availability of the resources database for use by Incident Management Teams.
- The OSERP underpinned individual agency's plans.
- Forces agencies to talk and make decisions at the right time.
- Stops isolationist issues developing.

New Zealand Fire Service

- The response agencies database has the potential to be useful.
- Knowing about the local authority EOC's and that they can be used for pre-declaration events.

St John

- The information held in the plan.
- The resources database in the plan.
- Recognising the thresholds for triggering the pre-declaration plan.
- Agencies are better prepared during emergencies.
- This is a valuable resource document of what equipment is available in neighbouring areas. Stops duplication.

Ministry of Health

- Identification of resources.
- Acceptance of day to day and emergency situations between the agencies.

Ministry of CDEM

- Minimal to MCDEM.
- The plan was an example however that could have been put in place elsewhere in New Zealand.
- The work of the OSEPG has been picked up by the CDEM groups.
- The work filled an emergency planning hole in Otago and Southland.

Clutha District Council

- Not used as yet.

Gore District Council

- Better appreciation of the predeclaration response approach.
- In 1999 the OSEPG was beginning its work. Agencies were beginning not to work in silos and had begun the preliminaries of talking to each other about issues.

Dunedin City Council

- No specific aspect.

Waitaki District Council

- Not used yet.
- The plan is comfort blanket knowing there is a team ready to move.
- Plan is well respected by Police.

Otago Regional Council

- The hazard register contained in the plan.

Queenstown Lakes District Council

- No specific aspect to this point.

Central Otago District Council

- Not used at this point.

Invercargill City Council

- The list that defines the EOC's in Otago and Southland. These are resources that other organisations may wish to use e.g. Sydney Express and Tai Ping emergencies.
- The design and building of the plan itself.

Southland District Council

- Spells out the protocols for an escalating event, more than a routine emergency but not a CDEM declaration.
- We will open the EOC earlier in support of the Lead Agency that is managing a major event.
- The resources list.

Environment Southland

- The general arrangements of how agencies will get together.
- Where the EOC's are located.
- How the plan is activated.

11. Another project output has been the development of Community First Response Groups. These groups link to the emergency services in a response partnership. What are your views on communities having input into emergency services that meet their needs?

New Zealand Police

- Makes communities much stronger.
- You need to listen to community's want and needs.
- In the big event communities should be able to build on capability.

- Need to be careful to balance support to groups so that unrealistic expectations cannot be realised.
- Positive idea. Communities looking after themselves. They will be self sufficient in an emergency.
- They will be encouraged to do things for themselves.
- May be perceived to fill gaps. Services need to accept community efforts and lend support.

New Zealand Fire Service

- Need a community that is self reliant to be fostered.
- Communities need to look after their own well – being.
- The Emergency Services still need to be the first port of call.
- It is also fundamental that communities should have input.
- The agency resourcing may not be able to meet the community wants, but working with communities that knows the resourcing and constraints, alternative solutions can be developed. .Thus agencies can understand community expectations.

St John

- Vital part of the project.
- Emergency services responding to community needs rather than telling them what they will have.
- There is better buy in from communities.
- Totally support communities being self sufficient in the immediate stage of an emergency. The system cannot guarantee large volumes of help responded immediately.
- Gives community ownership. Realisation of distance from medical resources.

Ministry of Health

- Yes, these groups are required.
- The Emergency Care Co-ordination Team (ECCT) see the weaknesses in rural areas. There are isolation factors.
- Communities need to be involved for their own well being in rural communities.

Ministry of CDEM

- Yes, the communities need these groups.
- Creates strength in communities and an input into response capability.
- Need to determine response capability and potential emergency events in their patch.
- Communities need to be aware how fragile they are.

Clutha District Council

- These groups should be encouraged.
- There is limited funding so community people need to find the solution to their problems.

Gore District Council

- Supports the concept. The community accepts the responsibility to look after themselves.
- Does the volunteer effort wane?

Dunedin City Council

- Once Community First Response is established in Otago the groups will be integrated into the CDEM response structure.
- These groups fill a need without Civil Defence having to recruit , train and retain their own groups, but we will add in the training for the CDEM skills.

Otago Regional Council

- Communities should have input to their local response needs.

Waitaki District Council

- Very positive.

Queenstown Lakes District Council

- This is a good idea. The concept is advantageous for communities. They know each other and are key people within communities.

Central Otago District Council

- Excellent idea. Very supportive.

Invercargill City Council

- Different communities have different needs. There are fundamental models. Identify the problem. The community comes up with the solution.
- Communities should have input. There are unique aspects in areas identified.
- They have 'ownership". Recognise they have a problem and repair it.

Southland District Council

- Communities can look after themselves. There is a resource out there.
- In a major event community first response groups will give a good back up where established.
- CDEM needs a closer relationship with these groups.
- This is an excellent idea, raises community awareness, feeds back into our own operations.
- There is a better awareness of being prepared.

Environment Southland

- Has to be healthy. Leads to more community support and response.
- Rural areas rely on volunteers for fire response and emergency first aid.

12. The Otago Southland Emergency Response Plan defined the tasking (relating to the skill sets) of lead and support agencies personnel in a CIMS environment. What advantages or disadvantages do you see with this concept in the plan?

New Zealand Police

- Identifies who is responsible for the tasks.

- Organisations know where they fit in.
- Needs further detail and audit to make sure the agencies carry out the tasks they are meant to by legislation or local agreement.
- There is a risk that it may eliminate thinking when things are not clear.

New Zealand Fire Service

- Identifies the capabilities of which agencies can support others with tasks.
- Agree with the concept of the tasking list.
- There is an opportunity for agencies to claim they are the lead agency for tasks, thus potentially shows who should be in charge to lead the incident management (legislative responsibility).
- Organisational intelligence should know this with referring to OSERP but the plan is a guide.

St John

- Knowing each others roles and knowing where they fit in.
- Know roles and responsibilities where they lie operationally and legally.
- Everyone is aware of their tasks for larger emergencies. Efforts may not be duplicated. There is cohesion.

Ministry of Health

- See the advantages. Limited resources in communities.
- There is no fat so have to pool resources to get best utilization of the responders to deal with the tasks.

Ministry of CDEM

- It clarifies roles and expectations of people.
- Removes duplication and confusion.
- Eliminates pre-conceived ideas and false perception of response.
- Makes Incident Managers aware of what resources they have available for the tasks.

Clutha District Council

- The lead agency is legislation based. The skill sets are set within lead agencies area of expertise.

Gore District Council

- Reinforces what is statutory responsibilities of lead and support agencies.
- Should remove confusion of the wrong agency being tasked to carry out a function.
- Also shows how agencies interlink with each other.

Dunedin City Council

- In terms of greater certainty of organisations integrated into the overall structure of how they will manage their response in the field. By default becomes part of CDEM structure.

Waitaki District Council

- Critical, good idea.

Otago Regional Council

- No disadvantages. Assists in the management of an event.
- May will determine who should be in control of event.

Queenstown Lakes District Council

- Great idea to allocate responsibilities. It is a useful resource tool for setting up capabilities – check list.

Central Otago District Council

- Good reference.

Invercargill City Council

- Easier to determine roles during an event. A common sense approach.
- Useful especially in CIMS situations.
- Have to be aware that it may be perceived to be all things done. There may be possible confusion in the lead agency for the task function against the lead agency for overall incident management.

Southland District Council

- Spells out who is likely to do what given the type of event.
- Makes it clear who is responsible as lead agency in dealing with the tasks within the response.

Environment Southland

- Provides certainty, removes uncertainty who does what- mandate.

13. A number of response agencies need to develop tactical plans for special risk sites e. g. where large crowds gather. How do you think agencies could work together to develop integrated tactical plans in pre-event situations? Where do you think the community should fit in with this plan development?

New Zealand Police

- Tactical plans should be developed by formal planning processes. Preplans along with a risk analysis of sites. They should be exercised and further developed.
- The community should be involved at the first draft stage.
- How do you define community? It is problematic identify the right community representation.
- The ESCC could be used to develop tactical plans. This form of planning will create linkages between agencies.
- Representatives from councils and support organisations should be part of a planning committee.

New Zealand Fire Service

- Need to determine the trigger why such plans should be developed and who should be involved.
- A forum such as the Otago Southland Emergency Planning Group should develop tactical plans if the ESCC's do not undertake this role.

- The community should be involved if there is a community issue. How do they contribute?

St John

- The ESCC could be used to develop tactical plans. Lead agencies could develop smaller working parties to further develop the plans.
- The community should form part of the consultation process.

Ministry of Health

- Identify what the risks are for events. Need to understand the roles and capabilities of agencies. Some people are too protective but need to share.
- Communities need to be aware of the risks around them so education within planning processes could be useful. They also need to realise that some self help will be necessary.

Ministry of CDEM

- Plans should be developed driven by the lead organisation. e. g. Police.
- Project management basis. Australian Community Risk Management process, formalises the process and put it in writing.
- Agencies need to work together.
- In the community these plans have to be consulted at some point during development of the plan. It should remove fish hooks, but slow the planning process down, however there should be a better product.

Clutha District Council

- Need to meet and discuss to set up pre-plans in advance of an event.
- Where the community fits in needs to be discussed.

Gore District Council

- Not part of a CDEM role. These plans are emergency service domain.
- The community should have input.

Dunedin City Council

- The ESCC's have the initial role in field level response planning applicable in sub declared emergencies and part of the response in declared emergencies.
- Other than normal consultation and how the plan affects them the community input is low. The plans need acknowledgement by the public however.

Waitaki District Council

- This is an area that is not being addressed. Agencies are planning in isolation. Preplanning is the key.
- The community will want to be involved but need to be asked.

Otago Regional Council

- Need to get together before an event look at hazards and risks.
- Need to identify maximum credible event for the sites and know how to resource it.
- The public could have some input somehow.

Queenstown Lakes District Council

- Like the idea to get together and plan pre-event.
- Community may become involved in planning and need to be engaged. Unless they know why, they may worry about agencies working in their neighbourhood.

Central Otago District Council

- Need pre-planning. Set objectives and determine resources.
- There needs to be community dialogue and/ or with community boards.

Invercargill City Council

- Role to develop a template. There should be a check list.
- Does not appear to be a planning process involving emergency services and event organiser currently e. g. Xmas Parade.
- The community needs to know there is a plan. They are entitled to reassurance and a role in the plan.
- Use tools such as CIMS templates as a basis.

Southland District Council

- It is not a matter of could but agencies can work together to develop tactical plans. CDEM has an interest to be involved with this.
- Communities need to have input. It could be inconvenient but they should have buy into the potential events that could happen around them.
- Need to identify the big risk sites and, create a priority action list and plan accordingly.
- Need to look at community inputs and determine from there and gauge the degree of community consultation.

Environment Southland

- There needs to be a specific issue and concern in mind. The agencies concerned need to be brought together for a special meeting. The ESCC could be part of the process of planning to work through the sub issues, options and selecting the best solution.
- Depends on reliance on community resources outside the emergency services where the community is needed as part of the response.

CIMS

- 14. Implementation of a multiagency CIMS Incident Management Team at emergency events occurs at a time where complexity of the event management is becoming obvious. How does your agency determine when activation of a CIMS Incident Management Team is necessary? How do you bring the management resources together? Would your agency activate CIMS for routine or single agency emergency events?**

New Zealand Police

- Standing Operational Procedures and the rank structure defines event management. Police know when to take control and who is in charge.

- Staff follow the CIMS model.
- The Police know they are the lead agency for numerous events.
- Discussion at the scene determines with other agencies that a management structure needs to be brought together.
- The Communications Centres divest control and hand this down to a local level.
- The Police tend to run single agency events without CIMS except in SAR situations.

New Zealand Fire Service

- CIMS is triggered by the complexity, size, anticipated duration of the incident and is co-ordinated across the agencies.
- We bring people in. There are 25 Level 4 CIMS trained managers in Southern Region now and call them out via group pagers and cell phones.
- The CIMS structure is there for all operational incidents, but we do not activate for most routine or single agency events but we should.

St John

- Should be practised day to day involving other agencies-routine emergencies.
- It should be second nature for bigger events. The triggers are in OSERP. Agencies becoming overwhelmed will activate the triggers. CIMS should occur naturally and formalising it more.
- Somebody needs to take command to bring the management resources together i.e. lead agency.
- We should activate for single agency events and need to think about this more.

Ministry of Health

- Hospitals are going through a learning process, buying into the CIMS structure, seeing advantages to CIMS in relation to an event. There has been a shift in mindsets.
- There is a willingness to bring the management resources together. CIMS training is doing this. It is building confidence.
- CIMS is activated for single agency events within hospitals and is part of planning structures.

Ministry of CDEM

- Does not apply to Ministry of CDEM generally, but the principles of CIMS is used in the National Crises Centre.
- CIMS would be applied for routine or single agency events applying the principles.

Clutha District Council

- The Lead Agency determines the level of activation. We would not activate CIMS but may have a role in logistics.
- We would ring the people up that need to be involved.
- No we would not activate for single agency events.

Gore District Council

- We activate CIMS for Level 1 event when two or more agencies are involved.
- Resources are brought into an EOC to get an incident management team operational.
- For single agency events we still use CIMS.

Dunedin City Council

- The Dunedin City Council has operated a CIMS system for a long time. We expect most elements of response is done with CIMS principles.
- Full activation for key people in an Incident Management Team is done through the EOC via the contact lists.
- We use CIMS for single agency events e. g. Rural Fires.

Waitaki District Council

- Escalation of an event triggers CIMS. Use all the time.
- We physically bring the resources together.
- Yes we would activate for single agency events.

Otago Regional Council

- The Lead Agency determines that an Incident Management Team needs to be established.
- We do not bring the management team resources together.
- No we would not activate for single agency events.

Central Otago District Council

- As an event builds , activate CIMS early to get a team together.
- Communication – verbally or by telephone.
- Yes we would activate for single agency events – rural fire.

Queenstown Lakes District Council

- We pre plan when we should activate CIMS – triggers.
- There is an activation process by using the SOPS.
- Yes we activate for single agency events – rural fires etc.

Invercargill City Council

- CIMS should be applied from the beginning of the emergency. A single agency will be applying CIMS whether they realise it or not.
- Initiative would come from CDEM pre-declaration consultation – Heads up meeting This will determine who should be on the CIMS management team.
- Yes we would CIMS for single agency events. It is a good model.
- CIMS is activated when services ask for help or advise of possible need.

Southland District Council

- We operate the EOC on a CIMS model. It is a gut feeling when CIMS needs to be activated. It is a matter of trying to establish the trigger points to bring the team together.

- Through the OSERP planning as to who can do what and who is around at the time determines how we bring the team together.
- Sector level is based on CIMS and operates on a CIMS format. We offer support to agencies.
- The SOPS determine when a CIMS Incident management Team is brought together.

Environment Southland

- Based on realisation and consequences of the situation to be of interest to other organisations along with importation of specialist advice to the IMT. The core IMT will come from with Environment Southland.
- We ask the agencies to come to the EOC.
- For single agency events we manage ourselves without input from anyone else we still use CIMS e. g. Drought Response.

Resource Mobilisation

15. **Emergency service personnel can belong to two or more response agencies especially in rural areas. What advantages or disadvantages do you see in relation to this?**

New Zealand Police

- **Advantages:** Cross training, awareness and availability, capability of staff understanding, multiskill and experience. Emergency services have better liaison. Consistency of training. There is better interaction and feedback.
- **Disadvantages:** Cannot solve all problems. There could be agency conflicts. May become too reliant on the individual. May spread resources too thin. Possible agency unavailability. May be compelled to perform functions in one organization to detriment of the other.

St John

- **Advantages;** In day to day small event uncomplicated emergencies multiagency skills can be useful. Cross training is an advantage.
- **Disadvantages;** In bigger events with resourcing issues who do you work for? Too many personnel may belong to two agencies thus undermines response agency capability to respond effectively and can cloud command issues.
- Can give a false impression of response capability.

New Zealand Fire Service

- **Advantages:** Cross trained personnel are useful to other organisations as they can pass on their training and skills to others.
- Volunteers from other agencies who are in the Fire Service are utilised to make best use of the personnel at incidents.

- **Disadvantages** There are 10 Police in the Fire Service in Southern Region. It can cause difficulties if the CFO is a Police Officer with agency conflict at calls, better if he/she is a Deputy Chief Fire Officer (DCFO).
- There can be difficulties for resourcing as establishment levels for an area appear incorrect.
- There is problem with using people at incident and management roles.
- There is the issue of the span of control.

Ministry of Health

- **Advantages;** There is a greater perception recognizing who to call and control response.
- **Disadvantages;** Cannot concentrate on one task. Who do the responders work for?

Ministry of CDEM

- **Advantages;** In a single agency incident it may maximise the available resource.
- **Disadvantages;** In a multiagency incident it may reduce the capability of one or more agencies. This is quite common in rural communities. Community plans and their management process may need to reflect how risks will be handled along with the duplication of the local response capability and the impact on emergency management.

Clutha District Council

- **Advantages** There can be cross training and enhanced skill sets.
- **Disadvantages.** There are more disadvantages. Personnel can be long to two organisations .

Gore District Council

- **Advantages;** Responders are multidisciplined in small rural communities.
- **Disadvantages** Could outweigh advantages.

Dunedin City Council

- Resources should be listed in databases so that it is clear that duplication of the resource is not happening as it falsifies availability of personnel for an event.

Waitaki District Council

- There are no issues being in two agencies. More perceived than real.

Otago Regional Council

- **Advantages;** Extra work force that could be utilized.
- **Disadvantages;** communication between agencies and coordination may not be good.

Queenstown Lakes District Council

- **Advantages;** Responders are multi skilled. They know two structures for more than one organization and they know each other across agencies.
- **Disadvantages;** Who do they respond with for larger multiagency responses. There may be problems resourcing emergencies.

Central Otago District Council

- **Advantage;** There is a better overall picture. Not working in a silo.
- **Disadvantage** Being involved in too many roles and too many issues.

Invercargill City Council

- **Advantages;** Each know the aspects of agencies.
- Cross fertilization of skill sets of knowledge along with contacts.
- **Disadvantages:** What hat do you wear?
- Who grabs the person first? With resource levels there may be a confusion of boundaries.

Southland District Council

- **Advantages;** There is a wider perspective of what is going on in the community. We can use as team leaders to build up the response capability.
- Cross training is useful.
- **Disadvantages;** There is a limited resource trying to do half a dozen different things.
- The time demand, training costs and callouts all could be issues.

Environment Southland

- **Advantages;** Wider range of skills. Better appreciation of how different agencies operate. Synergism's with multiagency response.
- **Disadvantages;** May be conflict in loyalties. Who do responders go with?

16. **Several specialist response teams have been formed in recent years comprising members of several different agencies; Ambulance, Urban Search and Rescue (USAR) and Specialist Emergency Response teams (SERT's).How should these groups be managed and deployed in CIMS and pre-CIMS responses?**

New Zealand Police

- Some of these specialist resources may not be available in parts of Otago and Southland.
- With CIMS specialist teams come into operation and are tasked by the IMT.
- These teams fit under the command structures of organisations or could be stand alone entities.
- USAR could come under Fire Service or be stand alone.

New Zealand Fire Service

- There should be no difference in operation and should be by using CIMS.

St John

- Agencies should know where the resources are using the OSERP resources database. The CIMS IMT should ask for the specialist resources to be dispatched. Then they will be deployed to carry out the specialist task they are trained for.
- Each organisation brings skills. Personnel with specific talents. You will need a MOU so a team can be tasked by the Lead Agency.

Ministry of Health

- There should be a joint approach with specialist skills in teams. The teams are likely to be multiagency.
- No problems with the management. The teams will be tasked to carry out their specialist tasks.

Ministry of CDEM

- Given the new environment there should be few pre-CIMS responses.
- Whether single or multiagency response –USAR or SERTS the personnel will be trained in CIMS.
- CIMS needs to come in automatically at low level.

Clutha District Council

- As per lead agency requirements and instruction.

Gore District Council

- Civil Defence is not involved and cannot form a valued judgment about specialist teams. Civil Defence has a response team for initial response situations only.

Dunedin City Council

- Specialist teams need to be integrated into CIMS structure of a Civil Defence organization.

Waitaki District Council

- You need a MOU with multiagency teams deployed tactically. All should be one. The Lead Agency has the tactical responsibility to run the incident.

Otago Regional Council

- These teams are managed by the lead agency and deployed.

Queenstown Lakes District Council

- Advanced parties should reconnoiter the emergency event. Supported by other agencies.
- These teams should be deployed through CIMS structures.

Central Otago District Council

- Managed by the Lead Agency.

Invercargill City Council

- CIMS is an appropriate model to utilize these teams. They come under the command of the host agency and control of the Incident Controller who assumes responsibility.
- There is a joint agency responsibility to ensure safety of staff.

Southland District Council

- These teams should be deployed under the lead agency and will need a Memoranda of Understanding.

Environment Southland

- It should not matter whether it is CIMS or pre-CIMS if these teams are deployed.

- They are known as resources to emergency managers. The knowledge of the emergency manager will determine if they will use these teams.

Emergency Operations Centres (EOC's)

17. What key roles could an EOC play in a non declared emergency?

New Zealand Police

- Support and training.
- Practice for the little events.
- Can enhance communications.
- In non –declared emergencies can build relationships.
- Can play a watching role on an emergency.
- Be ready for an event escalation.
- Reduce pressure on an Incident Management Team determining where evacuees may go for instance.
- Useful to signal the wider role of EOC's.
- In a multi-incident situation can co-ordinate resources and appropriately dispatch to incidents.

New Zealand Fire Service

- Preparedness and prealertness.
- Readiness if an event escalates.
- EOC's provider support, particular for tasks that may not be the key tasks of the lead agency e. g. welfare needs.

St John

- EOC's have the staff resources and communications networks and linkages.
- They have an ability to use the resources if an event escalates.
- When a large event occurs the Communications Centers will give the coordination away to the local area of the event. i.e. an EOC. .With localized communications and resource lists, staffed by people who are exercised and trained e.g. TLA personnel.

Ministry of Health

- EOC's have a coordination role. They bring people together just in case an event gets out of hand.
- They provide training for the big event.
- For smaller events, it is good practice and systems are in place.

Ministry of CDEM

- Co-ordination across the agencies.
- Acquisition and management of resources across the agencies e.g. Canterbury rural fires. This was an excellent example of an EOC resource which provided logistical and technical support monitoring fire behaviour.

- Provides an overview of what could be more than one incident. Response agencies focus on their one incident whereas the EOC has a global view.

Clutha District Council

- They give support to the lead agency.
- Includes staff from the District Council.

Gore District Council

- Opportunity for responding agencies to work from one centre in predeclaration emergencies with emergency management staff. If declaration occurs resources are on hand. It is a win/win situation.
- There is a smooth changeover as an event escalates.

Dunedin City Council

- Agreed roles to supply resource, logistics and Communications.
- Provide support to other agencies and benefit if the situation escalates and transfers to the Civil Defence structure.
- Best training for their staff.
- Proves EOC systems and equipment.
- Saves money for community and does not duplicate facilities.

Waitaki District Council

- EOC have a watching brief.
- They are established to manage an event if it escalates.

Otago Regional Council

- Where identified in TLA's and the region can be used as Headquarters. A contact system can be set up with communications and staffing. It depends where the event is.
- Look at it on a case by case basis. Staff come in from the agencies where involved.

Queenstown Lakes District Council

- We can provide resource for public information. There is a structure and a base, communications and backup power supply.
- We can assist the emergency services.
- We also have the capacity to call in the community infrastructure to assist agencies.

Central Otago District Council

- Provides support services and facilities.

Invercargill City Council

- EOC's provide support and add value to an agency, valuable in organising resources. Assists in building up the bigger picture.
- Provide information.
- Takes the heat of the Incident management Team so they are not doing all the work.
- Requires planning, communications, training etc for it to work OK.

Southland District Council

- We can do the coordination with provision of additional resources to assist the Lead Agency at the incident site.
- Some of our capability in these circumstances is providing information gathering, communications and public information.

Environment Southland

- An EOC is a facility to provide advice with key management personnel to develop a coordinated response.

Appendix 3: OSERP Plan Activation Checklist

To be completed as part of the official Log

Date: _____

Threat caused by:

Are the Agencies coping?

• **Police** Yes / No **Fire** Yes / No **Ambulance** Yes / No **Other** Yes / No

(Please state) _____

Are the Agencies expected to continue coping with the situation?

• **Police** Yes / No **Fire** Yes / No **Ambulance** Yes / No **Other** Yes / No

State views of:

Police:

Name:

Position:

Time:

Fire:

Name:

Position:

Time:

Ambulance:

Name:

Position:

Time:

Other Agency/ies:

Name:

Position:

Time:

Will the activation of this Plan improve the situation?:

Yes / No

Has the IPOC been contacted?:

Yes / No

Name:

Phone:

Time:

Is the IPOC able to assist

Yes / No

IPOC Details – Phone:

Fax:

Mobile:

Name of Plan Activator:

Position:

Date:

Time:

Actions taken:

Do you think that a declaration of a CD Emergency should be considered?.

Yes / No

Contact Name:

Phone:

Time:

Appendix 4: OSERP Task List

GENERAL

This Part describes the primary roles of the various agencies involved. Unless otherwise stated, the tasks listed apply equally to the management of both accidents and emergencies.

Lead Agencies and Support Agencies have been grouped together on the basis of the most efficient provision of resources to support emergency operations.

This does not preclude the flexibility to adjust tasks, if circumstances demand.

Task	Lead Agency	Support Agencies
Communications	Varies, depending on situation	<ul style="list-style-type: none"> • Police • NZ Fire Service • Ambulance • Civil Defence • Amateur Radio Emergency Communications • Private Networks • Defence
Emergency Shelter	Police	<ul style="list-style-type: none"> • Civil Defence • Salvation Army • Red Cross • Accommodation Providers • Defence
EOC Operations (pre-declaration)	Various (for financial accountability)	<ul style="list-style-type: none"> • Civil Defence • Utility Liaison Officers • Police • Fire • Ambulance • Council

Task	Lead Agency	Support Agencies
EOC Operations (during declared CD emergency)	Civil Defence	<ul style="list-style-type: none"> • Various, includes list as in pre-declaration activity.
Evacuation	Police	<ul style="list-style-type: none"> • NZ Fire Service • Civil Defence • Ambulance • Defence
Fire Fighting (Urban)	NZ Fire service	<ul style="list-style-type: none"> • Industrial Brigades • Rural Fire Authority • Airport Crash Fire • NZ Defence Forces
Fire Fighting (Rural)	Rural Fire Authority	<ul style="list-style-type: none"> • NZ Fire Service • Contractors • Civil Defence • NZ Defence Forces
Hazardous Substance Incident	NZ Fire Service (usually – but subject to HSNO Act requirements)	<ul style="list-style-type: none"> • Police • Ambulance • Council <ul style="list-style-type: none"> ○ Dangerous Goods ○ Environmental Health • Public Health Agency • Civil Defence
Law & Order	Police	<ul style="list-style-type: none"> • Licensed Security Operators • Maori Wardens • NZ Defence Forces
Liaison with Utilities	Varies, depending on situation	<ul style="list-style-type: none"> • Various

Task	Lead Agency	Support Agencies
Logistics	Varies, depending on situation	<ul style="list-style-type: none"> • CARD Centers • Agency Communications Centers • Civil Defence (EOC) • NZ Defence Forces
Mortuary facilities	Police	<ul style="list-style-type: none"> • Hospital • Private Contractors
Perimeter Control	Police	<ul style="list-style-type: none"> • NZ Fire Service (Operational Support) • Civil Defence • NZ Defence Forces
Pre-Hospital Emergency Care	Ambulance	<ul style="list-style-type: none"> • NZ Fire Service • General Practitioners • Order of St John • NZ Red Cross • Civil Defence
Public Information (Pre-Declaration)	Police, plus various, depending on situation. (until an emergency has been declared, then CD)	<ul style="list-style-type: none"> • Civil Defence • Agency Media Liaison
Reconnaissance / Assessment	Police	<ul style="list-style-type: none"> • NZ Fire Service • Civil Defence
Rescue (not Search & Rescue) (not mines)	NZ Fire Service	<ul style="list-style-type: none"> • Specialist Teams • Industry Teams • Police SAR • Civil Defence • Ambulance

Task	Lead Agency	Support Agencies
Rescue – Mines	Mines Rescue	<ul style="list-style-type: none"> • NZ Fire Service • NZ Land SAR • Cavers, etc.
Scene Recovery	Police	<ul style="list-style-type: none"> • Affected Parties
Search & Rescue (Land SAR)	Police	<ul style="list-style-type: none"> • NZ Land SAR • NZ Fire Service • Ambulance • Civil Defence • NZ Defence Forces
Search & Rescue (Marine SAR) (Classes 1 & 2) <i>(Class 3 Marine SAR is managed by RCC)</i>	Police	<ul style="list-style-type: none"> • Coastguard • Volunteers • Maritime Safety Authority • Surf Life Saving Clubs • NZ Fire Service • Commercial Fishing Boats • Aero Clubs • Helicopter Companies • Specialist Water Rescue • Harbour Boards • Navy • Divers • Ambulance • Civil Defence
Secondary Threats (e. g. Hazardous Substance incident following accident)	Police	<ul style="list-style-type: none"> • NZ Fire Service • Regional Council • Civil Defence • Ambulance • Met Service • NZ Defence Forces

Task	Lead Agency	Support Agencies
Transport	Police	<ul style="list-style-type: none"> • Civil Defence • Transport Providers • Ambulance • Regional Councils
Waste / Storm Water removal	Council	<ul style="list-style-type: none"> • Contractors • Environmental Health • Public Health • Civil Defence
Water supply	Council	<ul style="list-style-type: none"> • Contractors • Environmental Health • Public Health • Civil Defence
Warnings to Public	Police, plus various others, depending on situation - (until an emergency has been declared, then CD)	<ul style="list-style-type: none"> • Police • NZ Fire Service • Rural Fire Authority • Civil Defence • Regional Council • Agency media liaison staff • Media Groups
Welfare <ul style="list-style-type: none"> • Catering • Clothing • Personal Services • Registration 	Police (until an emergency has been declared, then CD)	<ul style="list-style-type: none"> • Civil Defence • Salvation Army • Red Cross • Victim Support • Vets • SPCA • Other relevant agencies

Appendix 5: Otago/Southland

Emergency Response Plan

MEMORANDUM OF UNDERSTANDING

Parties

This agreement is between the Emergency Services (Police, Fire and Ambulance) and Territorial Authorities in the Otago and Southland regions.

Purpose

The purpose of the Memorandum of Understanding is to identify the responsibilities of the Emergency Service agencies when utilising the Emergency Operations Centre(s) of Territorial Authorities for the purposes of supporting an emergency operation, prior to the declaration of a Civil Defence Emergency.

Area covered by this Memorandum of Understanding

This agreement applies to the areas covered by the Otago/Southland Emergency Response Plan.

Responsibilities of the Lead Agency

The Lead Agency is the organisation with the legislative or agreed authority for control of an incident.(CIMS Manual).

Responsibilities of Support Agencies

An organisation contributing services or resources directly to the Lead Agency.
(CIMS manual).

Responsibilities of the Emergency Operations Centre

For the purpose of the Otago/Southland Emergency Response Plan (OSERP) the EOC responsibilities within the plan are:

1. Intelligence collection, collation, interpretation and dissemination;
2. Operational planning in support of the response operation; this to include the provision of staff resources within the EOC to assist the lead and support agency response functions.
3. Co-coordinating the provision of any additional resources (other than own Agency resources) requested by a responding agency.

4. Welfare assistance and support to the affected members of the community, if requested by the Lead Agency
5. Logistical support.
6. Support with communications;
7. Other related tasks as may be agreed to.

Financial Responsibilities

Each Agency, including the EOC, retains the financial responsibility for its own resources and activities.

Any Agency may request extra resources, for which that Agency has or accepts the financial responsibility.

Training

Lead and Support agencies will participate in training and exercises, at least annually, with each Primary EOC.

Co-operation

Partners to this agreement agree to cooperate and put in place mechanisms and processes that give effect to the Memorandum of Understanding.

Legal

Nothing in this Memorandum of Understanding will absolve an Agency from their statutory or contractual obligations.

Term and Review of the MOU

The MOU will commence on the date that is signed by the parties, and will continue until revoked.

There will be an annual review of activities undertaken in both Otago and Southland, and reported to the Otago Southland Emergency Planning Group. All partners will be involved in the review, which is to be carried out between July and September each year.

Signed for and on behalf of
.....

Signed for and on behalf of the
.....

Name:

Name:

Position:

Position:

Date:

Date:

Appendix 6: Hazard Events

Determination of Lead Agency & Support Agency

Incident Type	Lead Agency	Support Agency	Principle Legislation
Fires (Urban)	Fire	Police Ambulance TLA Power Board	Fire Service Act 1975
Fires (Rural)	TLA Fire Service	DOC RFA NZFS Contractors	Forest & Rural Fires Act 1977
Hazmat	Fire Service ?Public Health Authorities	TLA Dangerous Goods Aviation/Marine	Fire Services Act 1975 Dangerous Goods Act Explosives Act 1957 Health Act 1956
Transportation Accident (Land)	Police Ministry of Transport	Fire Service Ambulance Transit (NZ)	Crimes Act Local Govt Transport Act 19974
Transportation Accident (Sea)	Maritime Safety Authority Police SAR Harbourmaster	Rescue Coordination Centre (RCC) Ambulance Fire	Maritime Safety Act 1994
Transportation Accident (Air)	Police	RCC Fire Ambulance	Civil Aviation Act 1990
Industrial Fire	Fire	OSH Ambulance Fire	H&S Employment Act 1991 Fire Safety Act 1975 Crimes Act
Dam/Stop bank Failure	Police	Fire Ambulance Electrical Agencies Civil Defence	Civil Defence Act Police Act Local Govt Amendment Act

Incident Type	Lead Agency	Support Agency	Principle Legislation
Chemical Discharge	Regional Council TLA	Agency Discharging Fire Ambulance Police	Resource Management Act Toxic Substances Act
Waste Pollution	TLA	Health Authorities	Local Govt Act Toxic Substances Act
Industrial Accidents Non Injury Injury	? Ambulance	OSH Fire Police Dept of labour	Health & Safety Act
Human Disease Epidemic	Ministry of Health Medical Officer of Health	Public health Ministry of health	Health Act 1956
Organisms Epidemic includes animal, bird, fish and plants	Ministries of Agriculture, Forestry, Fisheries and Health	Police Customs TLA	Bio security Act 1993 Forests Act
Marine Oil Pollution	Marine Safety Authority Regional councils	Ports Authority Marine SAR Regional Councils	Marine pollution Act 1974 Maritime transport Act 1994
Sabotage	SIS Police Military	Aviation Authorities Police Fire Ambulance	Crimes Act
Terrorism	Police	?	International terrorism (Emergency Powers) Act 1987
Civil Unrest	Police Military	Fire Ambulance	Crimes Act 1961 Summary offences Act 1981 Defence Act 1990
Riot	Police	Fire Ambulance	Crimes Act 19961
Computer crime	Serious Fraud Office Police	Computer Expertise	Telecommunications Act Commerce Act
Computer Viruses	Police	Internet Service Providers	Crimes Act

Incident Type	Lead Agency	Support Agency	Principle Legislation
Storms	Police Power Authorities	Other local service Fire CD	Local Government Amendment Act
Earthquake	Police CD	Fire Ambulance	Civil Defence Act Police Act Fire Services Act
Landslide	Earthquake & War Damages Commission (EQC)	Fire Ambulance Civil Defence	Civil Defence Act Police Act Fire Services Act
Tsunami	Civil Defence Police		Civil Defence Act
Avalanche	Police Alpine SAR	Ambulance Land SAR	Police Act
Volcanic Eruption	Civil Defence Institute of Geological Studies	Police DOC Civil Aviation Health/Fire	Civil Defence Act Fire Services Act Civil Aviation Act
Drought	Ministry of Agriculture and Fisheries	NIWA Primary producers Health	Health Act Local Bodies Act
Radiological	Health Local Users	Police Fire Ambulance	Health Act Hazardous Substances N. O. Act
Extraterrestrial Impacts	Defence Police	Fire Ambulance Health	?

(OSEPG notes 2000 from Dickie A 1999)

Appendix 7: Location of AED's in Southern Region 2005

Location	Ambulance	Fire Co-Response	Amb. First Response	Fire First Response	PRIME System	Community First Response	AED
Alexandra	Yes				Yes		Yes
Arrowtown				Yes			Yes
Athol						Yes	Yes
Balclutha	Yes						Yes
Balfour							No
Beaumont							No
Berwick							No
Blackmount						Yes	Yes
Bluff	Yes						Yes
Brighton			Yes				Yes
Browns							No
Clinton							No
Clyde							No
Clydevale							No
Colac Bay							No
Conical Hills			Yes(Private)				No
Cromwell	Yes				Yes		Yes
Dipton		Yes				Yes	Yes
Drummond							No
Dunedin	Yes						Yes
Dunedin Airport							No
Duntroon							Yes
Edendale		Yes					Yes

Location	Ambulance	Fire Co-Response	Amb. First Response	Fire First Response	PRIME System	Community First Response	AED
Frankton	Yes						Yes
Frankton Airport							No
Garston						Yes	No
Glenorchy			Yes				Yes
Gore	Yes						Yes
Hampden				Yes			Yes
Hedgehope						Yes	No
Heriot							No
Hyde							No
Invercargill	Yes						Yes
Invercargill Airport							No
Kaitangata							No
Kaka Point							Yes
Kakanui							No
Kingston			Yes			Yes	Yes
Kurow	Yes						Yes
Lake Hawea							No
Lauder							No
Lawrence	Yes				Yes		Yes
Luggate							Yes
Lumsden	Yes				Yes		Yes
Macraes Flat				Yes			Yes
Manapouri							No
Mataura							No
Middlemarch					Yes		Yes
Milford Sound			Yes				Yes
Millers Flat							No

Location	Ambulance	Fire Co-Response	Amb. First Response	Fire First Response	PRIME System	Community First Response	AED
Milton	Yes				Yes		Yes
Mokoreta						Yes	No
Mosgiel	Yes						Yes
Mossburn							No
Naseby				Yes			Yes
Nightcaps							No
Oamaru	Yes						Yes
Ohai				Yes			Yes
Omakau		Yes					Yes
Omarama		Yes					Yes
Orepuki							Yes
Otautau	Yes				Yes		Yes
Otekaieke							No
Otematata				Yes			Yes
Outram					Yes		No
Owaka	Yes				Yes		Yes
Palmerston					Yes		Yes
Papatowhai							No
Patearoa							No
Port Chalmers				Yes			Yes
Portobello				Yes			Yes
Pukerau							No
Pukeuri							No
Queenstown					Yes		Yes
Ranfurly	Yes				Yes		Yes
Ravensbourne							No
Riversdale			Yes				Yes

Location	Ambulance	Fire Co-Response	Amb. First Response	Fire First Response	PRIME System	Community First Response	AED
Riverton	Yes				Yes		Yes
Roxburgh	Yes				Yes		Yes
Stewart Island			Yes		Yes		Yes
Taieri Beach							No
Tapanui	Yes				Yes		Yes
Tarras							No
Thornbury							No
Tiwai Point	Yes						Yes
Tokanui	Yes				Yes		Yes
Tuatapere	Yes				Yes		Yes
Waihola							No
Waikaia						Yes	Yes
Waikawa			Yes				Yes
Waikaka							No
Waikouaiti							Yes
Waimahaka							No
Waitahuna							No
Waitati							No
Waiwera South							No
Wallacetown							No
Wanaka	Yes				Yes		Yes
Weston							No
Windsor							No
Winton	Yes				Yes		Yes
Wyndham							No

Appendix 8: Incident and Emergency Levels

Event Type	Event Status / Procedures	CDEM EOC Roles	Controllers' Roles
Level 1 – Adverse Event Local Incident for which a declaration is not required or appropriate <ul style="list-style-type: none"> • Can be dealt with by Emergency Services and/or Local Authority resources alone. • Specialists may be required for specific circumstances 	No (CDEM) Declaration <ul style="list-style-type: none"> • The incident is dealt with using CIMS Multi-Agency Event structures and processes. • Nature of the incident will usually determine the Lead Agency • Immediate joint decision as to Lead Agency/Incident Controller necessary if Lead Agency is unclear. 	EOC support Local Co-ordination Centres/ Lead Agency/TA EOCs may be alerted or be partially operative in support of the Multi-Agency Response.	Lead Agency controller: <ul style="list-style-type: none"> • Co-ordination of multi-agency response Local TA CDEM Controller and Group EMO notified if potential for Local EOC to be involved
Level 2 – Adverse Event Local Incident for which a declaration is not required or appropriate <ul style="list-style-type: none"> • Can be dealt with by Emergency Services and/or Local Authority resources alone. • Higher level of inter-agency coordination required. • Specialists may be required for specific circumstances 	No (CDEM) Declaration The incident is dealt with using CIMS and Joint Coordination through Lead Agency EOC. <ul style="list-style-type: none"> • Nature of the incident will dictate the Lead Agency • Civil Defence Emergency Welfare needs likely driver for TA Civil Defence involvement • TA may become a Key Support Agency in terms of co-ordinating support/management functions designated on the day. 	Lead Agency EOC communicating event and response intelligence/ information to Local EOC. Local EOC partially or fully activated and co-ordinating functions in support of joint-response and Lead Agency. Local EOC collecting and analysing event and response intelligence/ information to assist with Joint Coordination and potential transition/escalation to Level 3. Group EOC in monitoring role.	Lead Agency controller: <ul style="list-style-type: none"> • Co-ordination of multi-agency response Support organisations - including TA Civil Defence (Local CDEM Controller or delegated staff): <ul style="list-style-type: none"> • Co-ordination of own functions. • Coordination / delivery of functions / tasks designated by Lead Agency controller. Local CDEM Controller: <ul style="list-style-type: none"> • Notify and inform Group Controller Group Controller / EMO: <ul style="list-style-type: none"> • Inform Ministry of CDEM

<p>Level 3</p> <p>Imminent or State of Local Emergency involving a single TA</p> <ul style="list-style-type: none"> Escalates from Level 1 or 2 event, or a warning of a major event is received, that may not be able to be managed without the adoption of emergency powers <p>Or</p> <ul style="list-style-type: none"> Immediately recognisable as an event that cannot be managed without the adoption of emergency powers. 	<p><u>Declaration</u> of state of local emergency is <u>being considered</u>, or has been <u>deemed necessary</u> involving a single TA</p> <p>Declaration can be for an entire district or one or more wards.</p> <p>Plan and manage transition from Lead Agency EOC coordination to Local EOC coordination.</p>	<p>Local EOC fully activated and is co-ordinating response and management of the emergency.</p> <p>Group EOC and adjacent EOCs alerted or partially activated to monitor the situation and prepare to respond if the situation deteriorates.</p> <p>Group EOC collecting and analysing event and response intelligence/ information to assist with Joint Coordination and potential transition/escalation to Level 4.</p>	<p>Local Controller:</p> <ul style="list-style-type: none"> Set local priorities Co-ordination of local response Determine Lead Agencies for response functions / tasks Notify and inform Group Controller <p>Group Controller:</p> <ul style="list-style-type: none"> Support Local Response Inform Ministry of CDEM Consideration of escalation. Notify adjacent / partner CDEM Groups
<p>Level 4</p> <p>Imminent or State of Local Emergency that is regionally significant</p> <ul style="list-style-type: none"> Due to the magnitude or geographic spread of the emergency, actual or predicted, a higher level or remote coordination of local responses and/or resources is required <p>Or</p> <ul style="list-style-type: none"> A warning of a significant event that will have a significant impact has been received <p>Or</p> <ul style="list-style-type: none"> Co-ordinated assistance is required to support other CDEM Group(s) 	<p><u>Declaration</u> of state of local emergency in the CDEM Group Area being considered, or deemed necessary, that involves the entire Group area, or one or more districts require external assistance.</p> <p>Or</p> <p>Adjacent or partner CDEM Group(s) require(s) assistance</p>	<p>Group EOC and affected Local EOCs fully activated</p> <p>NCMC and adjacent Group EOCs may be alerted or partially activated to monitor the situation and be ready to respond if the situation deteriorates.</p>	<p>Local Controller:</p> <ul style="list-style-type: none"> Set local priorities Co-ordination of local response Determine Lead Agencies for response functions / tasks Respond to priorities set by the Group Controller <p>Group Controller:</p> <ul style="list-style-type: none"> Set Group Priorities Co-ordination of Group response + resources Determine Lead Agencies for Group response functions / tasks Support Local Responses <p>National Controller:</p> <ul style="list-style-type: none"> Support Group response(s) Consideration of escalation.

Level 5 Imminent or State of National Emergency	Declaration of state of national emergency is being considered, or has been deemed necessary	NCMC, Group EOC(s) and affected Local EOC(s) fully activated	<p>Local Controller:</p> <ul style="list-style-type: none">• Co-ordination of Local response• Respond to priorities set by National and Group Controller. <p>Group Controller:</p> <ul style="list-style-type: none">• Co-ordination of Group responses + resources• Respond to priorities set by the National Controller• Set Group priorities• Support local responses <p>National Controller:</p> <ul style="list-style-type: none">• Support Group response(s)• Co-ordination of national level-response + resources
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Appendix 9: Management Structure

