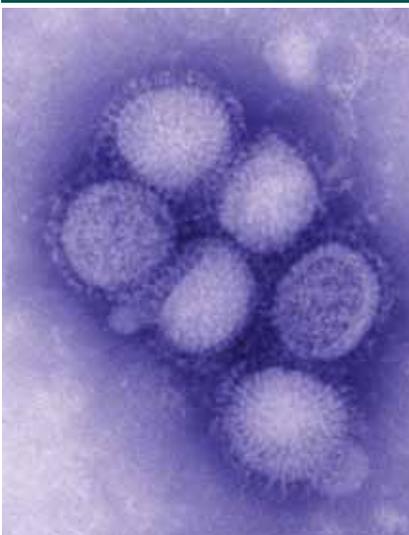




Western Australian Auditor General's Report

# Coming, Ready or Not: Preparing for Large-scale Emergencies

Report 4 – May 2009





**THE PRESIDENT  
LEGISLATIVE COUNCIL**

**THE SPEAKER  
LEGISLATIVE ASSEMBLY**

## **PERFORMANCE EXAMINATION – COMING, READY OR NOT: PREPARING FOR LARGE-SCALE EMERGENCIES**

This report has been prepared for submission to Parliament under the provisions of section 25 of the Auditor General Act 2006.

Performance Examinations are an integral part of the overall performance auditing program and seek to provide Parliament with assessments of the effectiveness and efficiency of public sector programs and activities thereby identifying opportunities for improved performance.

The information provided through this approach will, I am sure, assist Parliament in better evaluating agency performance and enhance parliamentary decision-making to the benefit of all Western Australians.

A handwritten signature in black ink, appearing to read 'C. Murphy'.

COLIN MURPHY  
AUDITOR GENERAL  
20 May 2009

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## Auditor General's Overview

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Emergencies by their nature are unpredictable. Large-scale emergencies are, thankfully, relatively rare. As recent events show, however, they can have catastrophic consequences. An effective response to minimise the impact of an emergency on the community relies on being well prepared.

Many Western Australian agencies actively prepare for the emergencies that they expect to deal with and assess their performance and capacity on actual incidents and exercises. These indicate that they are prepared for specific emergencies.

However, it is less clear if the state is well prepared overall for the emergencies we may face. The state's emergency management framework, which is established under the Emergency Management Act 2005, contains gaps that could potentially affect the response to emergencies. Making sure these gaps are fixed and the framework is working requires clear direction and leadership.

Addressing the challenge also requires clarification of responsibilities in some critical areas and cooperation and coordination amongst the numerous agencies that are part of the state's emergency response capacity.

These challenges are serious. Nevertheless, I am satisfied that the challenge is recognised and understood and I look forward to seeing developments in the near future.

# Executive Summary

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## Introduction

Emergencies are events that require a coordinated and organised response. They can happen suddenly and without warning. Some will be beyond the day-to-day capacity of local agencies and communities to respond. They will require agencies and communities to organise and gather extra resources to cope with and recover from the event or disaster.

Emergency management activities can be grouped into four stages: prevention, preparedness, response and recovery. Being prepared involves having plans, structures and arrangements that bring together government, voluntary and private organisations so that we are ready to respond when an emergency happens.

The Emergency Management Act 2005 (the Act) governs emergency management and organisation in Western Australia (WA). It set up a number of key emergency management bodies, the peak body being the State Emergency Management Committee (SEMC). The Act sets out the hazards that agencies must prepare for such as cyclones, fire, floods, air and rail crashes, hazardous materials spills and human and animal epidemics. It allocates the responsibility for their management to a number of hazard management agencies (HMAs).

WA's preparations include planning at the state level and the community level through local government. WA also links into emergency preparation in other jurisdictions including the Commonwealth Government.

In examining the state's preparedness for emergencies we looked at whether WA has an emergency management framework and plans in place to manage emergencies, particularly large-scale emergencies. We focused on the high level state preparations through the SEMC, and the West plans and support plans which form the basis of agencies' preparations. We asked whether the SEMC and agencies have assessed their capability to respond and know how well prepared they and the state are for emergencies.

## Conclusion

Gaps exist in the implementation of WA's emergency management framework. These gaps include the identification of hazard management agencies and the hazards the state faces, and out-of-date emergency management plans. There has been no formal assessment of the state's overall preparedness for large-scale emergencies. Agencies have not formally assessed their preparedness but consider that they have substantial operational experience, capability and capacity to respond to major emergencies.

## Key Findings

- *There is no formal process for regularly reviewing and deciding which hazards the state should prepare for so WA may not be preparing for the right hazards. For instance, WA has a plan for liquid fuel shortages but not for energy or gas shortages.*
- *The SEMC has not assessed the level of preparedness of the state so it is not clear how well prepared the state is overall for large-scale emergencies.*
- *Twenty-four state emergency management plans (Westplans) are in place but 13 are passed the required review date, as are four of the eight support plans.*
- *Gaps in emergency management regulations could potentially affect agencies' capacity to respond to emergencies. These gaps include allowing the sharing of information, prescribing combat and support agencies, and providing insurance and compensation for volunteers.*
- *Six hazards listed in the legislation, including bushfires, do not have a specified HMA and three hazards identified by the SEMC are not included in the legislation. Hazard management agencies will not be able to use the Act's powers fully in an emergency caused by these hazards.*
- *It is not clear from most plans which HMA will lead when an emergency involves more than one hazard. This situation has existed for many years and can result in confusion over who takes the lead in these emergencies.*
- *The SEMC has not ensured local governments comply with their emergency management obligations. Available information shows that local governments are often not meeting key requirements including identifying local hazards and creating a risk register, establishing local emergency management arrangements, and regularly testing their arrangements.*
- *Some key roles such as local emergency coordinators and hazard management officers have not been defined in the state emergency management policies.*
- *Most agencies we reviewed test their plans, but individual agencies do not formally assess their overall capacity to respond to large-scale emergencies.*
- *The agencies we reviewed have processes to escalate their response according to the scale and type of incident, improving the likelihood of an effective response.*

- *There are limited systems to record and disseminate lessons learned from previous incidents and exercises, so the same problems may re-occur in future.*
- *The SEMC has not assessed or provided guidelines to agencies on the operational arrangements needed to support their state emergency management plans.*
- *HMAAs do not share a common crisis information management system or approach to managing incidents. This reduces their capability to respond to major emergencies.*

## Key Recommendations

The State Emergency Management Committee and Emergency Management WA, should:

- formally and regularly assess which hazards the state should prepare for
- assess the state's level of preparedness at least annually, identifying gaps and significant risks
- review procedures for plan preparation and approval so that agencies can prepare their plans in a more timely way
- ensure agencies fulfil their obligations under the Act
- submit outstanding legislative changes to Parliament as a matter of priority
- work with local government to ensure up-to-date, comprehensive local arrangements are in place
- monitor and take action to ensure local plans are in place and cover areas where the hazard could occur
- define key roles within the emergency management framework
- ensure that agencies have a common or compatible crisis information management system in place
- ensure that all agencies can access other agencies' operations centres when needed and that the procedures to do so are documented
- ensure all agencies use the same approach to managing incidents.

Agencies should:

- update out-of-date Westplans and support plans as a matter of urgency
- identify overlaps between Westplans and develop written procedures for these circumstances
- annually assess their capability to respond to emergencies and take measures to address any shortfalls
- ensure their Westplans and support plans have supporting local arrangements in place
- ensure their internal emergency management arrangements are up-to-date and regularly reviewed
- train their staff who will be involved in emergencies in incident management.

## Response from the Chair of the State Emergency Management Committee

As the Chair of the State Emergency Management Committee I am confident the State is well prepared to respond to a major emergency. Previous emergencies and exercises at both a State and National level show that Western Australia has the experience, capability and capacity to respond effectively to a major emergency. However as there are a number of factors that impact the way in which we operate, I agree there are areas for improvement which would enhance the State's framework and arrangements.

The Auditor General's report has been instrumental in identifying these gaps which all the agencies involved are working in partnership to address, and this report should support and accelerate that process.

The State Emergency Management Committee will continue to strive to improve the capacity and capability of the State to identify emerging threats, preparing for and responding to major emergencies to ensure that our State is resilient and prepared for emergencies. In doing so it will consider the Auditor General's recommendations

# Western Australia's emergency management framework is set out in legislation

## Good preparation helps the emergency response

Western Australia's (WA's) preparations for emergencies cut across several layers of government and involve multiple agencies as well as the private sector. Effective preparations and a sound framework give government and the community some assurance that we are ready for emergencies. Gaps in the preparedness framework can reduce the effectiveness of responses to emergencies.

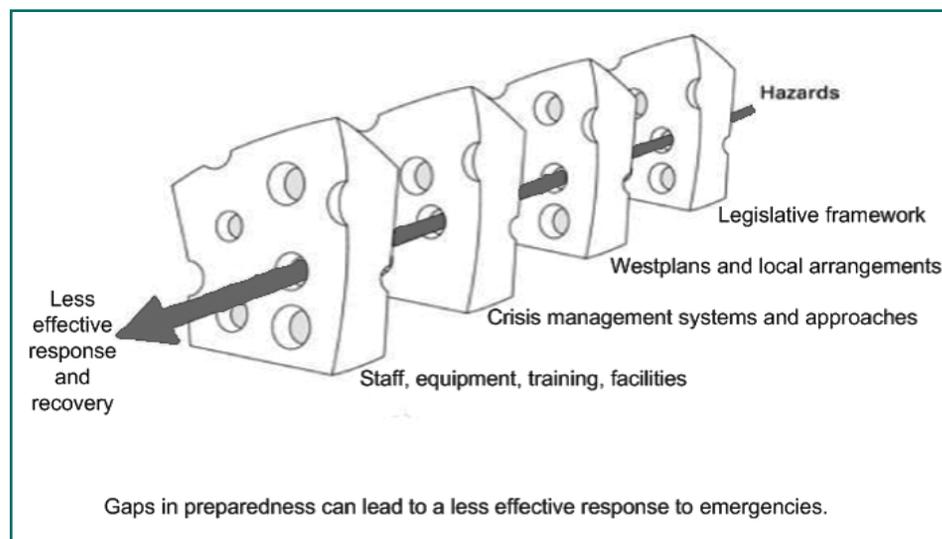


Figure 1: Layers of preparedness

Preparing for an emergency means all the key parts of the framework are in place. Within this framework are layers of protection that prevent, mitigate and prepare for emergencies. Like the Swiss cheese model developed by James Reason, gaps in these layers of protection can mean a less effective emergency response and a more severe impact on the community.

Source: OAG

## Western Australia's emergency management framework is set out in legislation

State governments are responsible for emergency management at the state, district and local level. The Commonwealth Government provides physical assistance on request if a state or territory cannot reasonably cope during an emergency, facilitates national coordination, and provides guidance and support to help states and territories develop their capacity to deal with emergencies.

Prior to the Emergency Management Act 2005 (the Act) and the Emergency Management Regulations 2006 (the Regulations), WA's emergency preparation was based on a Policy Statement arising from a 1985 Cabinet Minute.

The Act provides for the prompt and coordinated organisation of emergency management in WA. It outlines the state emergency management structures, roles, and powers. It provides key legislative powers and protection to prevent or reduce the impact of, prepare for, respond to and take measures to recover from large-scale, catastrophic incidents.

**An emergency** is the occurrence or imminent occurrence of a hazard which is of such a nature or size that it requires a significant and coordinated response.

The Act sets up a state-wide and local structure for emergency management. It defines:

- state arrangements including the roles of the State Emergency Coordinator, the State Emergency Management Committee (SEMC), State Emergency Coordination Group and emergency management districts
- local arrangements including local emergency authorities, emergency management arrangements for local governments and powers available to local government during a cyclone
- hazards: natural events such as cyclones, earthquakes, floods, storms and tsunamis or a fire, road, rail or air crash, plagues, terrorist acts or any other event that is capable of causing or resulting in loss of life, injury or impacts on the safety to persons or animals or destruction or damage to property and the environment
- hazard management agencies' (HMAs') role
- powers during an emergency situation or a state of emergency
- protection for volunteers
- compensation and insurance.

The Emergency Management Regulations 2006:

- list hazard management agencies for each hazard
- set up the operating procedures for the SEMC.

Emergency management activities can be grouped into four stages: prevention, preparedness, response and recovery. This performance examination focuses on the second stage: preparing to respond to an emergency.

Prevention	Preparedness	Response	Recovery
Mitigation or prevention of the chance, and adverse effects, of an emergency	Preparation for response to an emergency	Combating the effects of the emergency	Supporting the reconstruction and restoration of communities, infrastructure and environment

Figure 2: Emergency management is a four-stage process

Source: OAG

## There is a framework for emergency preparedness

The Act establishes separate infrastructure for planning and operational activities. Planning includes both prevention and preparedness. The SEMC is the peak body for planning.

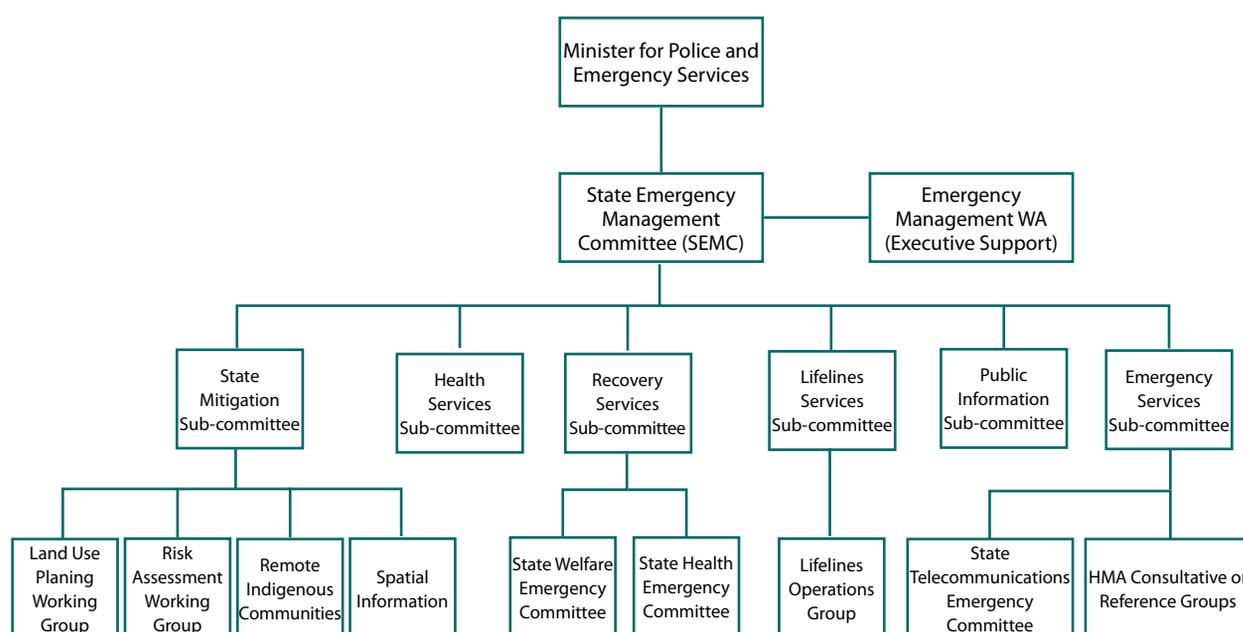


Figure 3: State emergency management sub-committees and advisory committees reporting to the SEMC

The SEMC is the peak emergency management body responsible for planning and preparing the state's emergency management capability. It oversees the planning arm of emergency management.

Source: EMWA

Under the Act, the SEMC:

- advises the Minister on emergency management and the preparedness of the state to combat emergencies
- provides direction, advice and support to public authorities, industry, commerce and the community in order to plan and prepare for an efficient emergency management capability for the state
- provides a forum for whole of community coordination to minimise the effects of emergencies
- provides a forum for development of community wide information systems to improve communications during emergencies
- develops and coordinates risk management strategies to assess community vulnerability to emergencies
- performs other functions under the Act, including arranging for state emergency management policies and plans to be prepared
- can direct a public authority to undertake the roles and responsibilities described in state emergency management policies.

Other committees are active during operations as are agencies responding to the emergency. For a large-scale event the State Emergency Coordination Group, and the State Disaster Council may be activated.

Emergency Management WA (EMWA), a division of FESA, provides executive support to the SEMC and the State Emergency Coordination Group. EMWA provides whole-of-government emergency management services and works to improve community safety through training programs, and assistance to local government.

EMWA has 18 staff positions. Their roles include policy and planning (three), mitigation and recovery (three), training and development (three), and assistance and advice to local government (seven) and management (two).

## Plans and arrangements are key to preparation

Western Australia uses an all hazards approach to emergency management. While it is not possible to develop arrangements for every single incident that may occur, it is advisable to have a single set of arrangements capable of covering all hazards. In line with this approach the Act and Regulations list hazards for which a set of arrangements (Westplans) must be developed.

### What is a Westplan?

A Westplan is a state-level strategic plan for a hazard. It details the hazard specific information for the management of emergencies. Under emergency management policy, an agency must test its Westplan at least once a year and review it at least every two years.

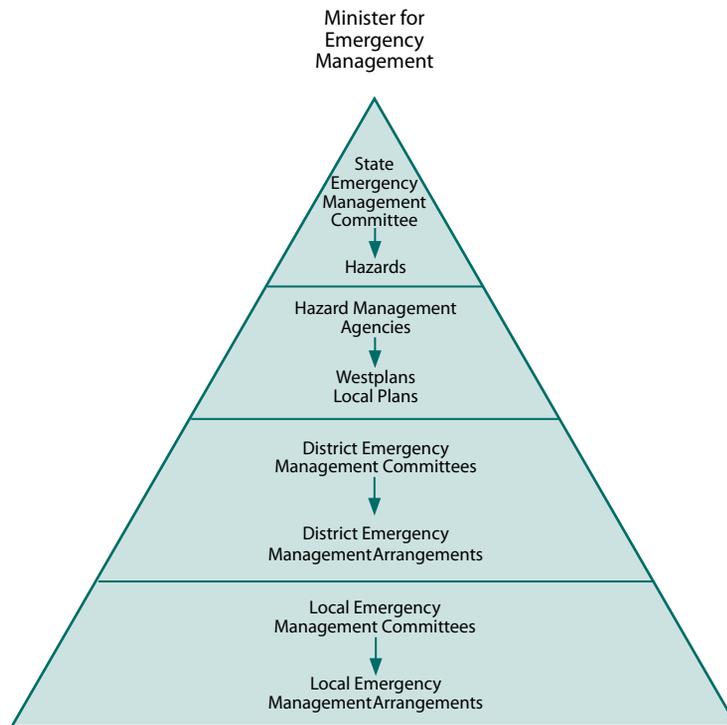
The SEMC assigns a HMA for each hazard. This HMA must then prepare and maintain a Westplan which covers prevention, preparedness, response and recovery for that hazard.

Westplans include:

- hazard definition
- responsibilities for prevention, preparedness, response and recovery
- relevant laws and codes
- community education
- evacuation arrangements
- local and district hazard emergency management plans
- level of response
- how and when the plan is activated or stood down
- arrangements with other jurisdictions for assistance
- other Westplans which support this plan.

The SEMC also appoints support agencies to carry out certain functions during an emergency, such as to restore essential services or to provide assistance including welfare, medical and health, transport, communications, and engineering. These functions are set out in support plans.

Local governments prepare for all hazards in their district. Under the Act, local governments must have local arrangements and recovery plans and establish a local emergency management committee (LEMC). A HMA also prepares local plans if a hazard is found in certain areas of the state, such as for a major dam.



**Figure 4: Responsibilities for Westplans and local arrangements under the emergency management framework**

The SEMC identifies hazards requiring a Westplan and the HMA to develop each plan. The HMA also prepares any local plans for a hazard. A District Emergency Management Committee helps establish and maintain emergency management arrangements for its district. Local governments establish LEMCs to assist and advise them with emergency management arrangements for their local community.

Source: OAG

## Our examination focus and approach

Our performance examination addressed three key criteria:

1. Does WA have an emergency management framework?
  - Are the emergency management legislation and structures in place?
  - Are key responsibilities defined?
2. Have emergency management plans been prepared?
  - Do identified hazards have an up-to-date Westplan?
  - Are support plans and local arrangements in place?
3. Do the SEMC and agencies know if agencies are prepared to respond?
  - Do agencies regularly test their plans and level of preparedness?
  - Do agencies adapt their plans following incidents, exercises and other reviews?

We examined the state's activities to prepare for emergencies but not prevention, response and recovery functions. The first criterion required us to look at state level activities, and the second focused on agencies responsible for plans. The third criterion involved assessment at state and agency level. We did not assess agencies' operational capability or capacity to respond to emergencies but asked them if they had assessed their own capacity.

We selected 10 Westplans and support plans for more detailed assessment and interviewed five agencies and one private sector company (all of whom are hazard management or support agencies). These are all referred to as 'agencies'. We did not audit local government but reviewed their activity through the SEMC's annual report.

Agency	Plan	Westplan / Support Plan	Purpose
Fire and Emergency Services (FESA)	Flood	Westplan	For actual or impending floods
	HAZMAT	Westplan	For hazardous materials emergencies
	State Isolated Communities FreightSubsidy	Support plan	Subsidy of freight costs for goods such as food which need to be delivered another way due to the emergency
Office of Energy	Liquid Fuel Shortage	Westplan	Severe shortage of petroleum products, including diesel and petrol fuels
Water Corporation	DAMBREAK	Westplan	Dam break occurring at Water Corporation dam
Western Australia Police (WAPOL)	Air Crash	Westplan	Multi-agency response to aircraft emergencies
	Traffic Crash	Westplan	Road traffic crash emergency
WestNet Rail	Freight Rail Network – WestNet	Westplan	WestNet Rail network emergencies
Department for Child Protection (DCP)	Welfare	Support plan	Provision of welfare services such as food, clothing and shelter for those affected by an emergency
	Registration and Inquiry	Support plan	To register and trace people affected by an emergency and reunite them with families and friends

**Figure 5: Summary of selected plans by responsible agency or company**

In conducting the performance examination we:

- interviewed key agencies
- reviewed Westplans and support plans, legislation, policies and other key documents
- met with WestNet Rail
- met with the Western Australian Local Government Association and representatives from four local governments.

We conducted the examination with regard to the Australian Standard on Assurance Engagements (ASAE 3500 Performance Engagements).

# Gaps exist in the legislative and policy framework

## Findings

- *The SEMC has not formally reviewed which hazards the state should prepare for so WA may not be preparing for the right hazards.*
- *Gaps in emergency management regulations could potentially affect agencies' capacity to respond to emergencies.*
- *Six hazards listed in the legislation, including bushfires, do not have a specified HMA and three hazards identified by the SEMC are not included in the legislation. Hazard management agencies will not be able to use the Act's powers fully in an emergency caused by these hazards.*
- *The review of emergency management policies is not completed so policies may not support or may conflict with the Act.*
- *Some key roles have not been defined in the state emergency management policies.*

## Recommendations

The State Emergency Management Committee and Emergency Management WA, should:

- formally assess each year which hazards the state should prepare for and decide if there are any areas which can be excluded for a particular hazard
- submit outstanding legislative changes to Parliament as a matter of priority
- review responsibilities for prevention and recovery to ensure that these activities are fully addressed at the appropriate level of government
- assess what policies and guidelines the emergency management community needs and develop a program of work to deliver these
- document all key roles within the emergency management framework.

## There is no formal process for periodically reviewing which hazards the state should prepare for

The SEMC has not conducted a state-wide risk assessment or other formal process to identify which hazards require a significant coordinated response and if the nature of those already identified has changed over time. Many of the current hazards identified are those formalised in Policy Statement 7 in the mid eighties and have not been reviewed since.

The type, likelihood and severity of hazards can change over time and new hazards, such as terrorist acts, emerge. Environmental changes, such as predicted drier, hotter climates, may increase the severity of hazards such as bushfires, storms and cyclones.

At the same time, the community's ability to cope with and recover from these events may decrease. We rely increasingly on utilities (electricity, water and gas) and digital communications in our daily lives. Their availability can help us deal with an emergency but due to our increased reliance we are less resilient.

Western Australian and international incidents have prompted the SEMC to consider which hazards the Act should cover and whether some 'hazards' should be handled under the emergency management framework. For instance, there is a Westplan for liquid fuel shortages (petroleum products only) but not for energy shortages, which occurred as a result of the recent explosion at the Varanus Island gas plant. The SEMC has been considering whether a more appropriate hazard may be energy shortage with liquid fuel shortages handled under the Fuel, Energy and Power Resources Act 1972.

In addition, the State Mitigation Sub-committee is working with the National Risk Assessment Advisory Group to identify risks at a state and national level. A Risk Assessment Working Group has been established under the State Mitigation Sub-committee. Its terms of reference include identifying and prioritising risk data requirements as they relate to hazards in WA and developing a state risk register to inform priority setting.

### **Gaps in emergency management regulations could potentially affect agencies' capacity to respond to emergencies**

The SEMC and agencies cannot use all the powers available under the Act, as the SEMC has not ensured that all enabling regulations are in place or that the regulations include all SEMC recognised hazards and HMAs.

If a hazard or HMA is not listed in the Act or Regulations, agencies cannot use the Act's powers fully during an emergency. These powers include the authority to command people to leave an area or to commandeer equipment in an emergency situation.

#### **Gaps in the current regulations include matters raised in a previous Auditor General's report**

Significant areas still require regulations:

- Three hazards identified by the SEMC have a Westplan but are not listed in the Act or Regulations: liquid fuel shortage, dam break, and marine transport emergencies. The SEMC advised that it is progressing this.
- Six hazards, including Bushfires, do not have an HMA specified in the Regulations. The Auditor General's 2004 report Responding to major bushfires recommended that the government clarify state and local government responsibilities and rectify the deficiencies in the Westplan for Bushfires. In terms of the Act this means appointing an HMA for bushfires.
- Combat agencies and support organisations and the activity or function for which they are responsible is still to be prescribed.

- Sharing of information about a person during an emergency, such as their personal details, health, and whereabouts for services including accommodation, catering, and registration and inquiries.
- Volunteers' insurance and compensation.
- Limits to the circumstances and manner in which the powers under the Act are exercised.

The six hazards which do not have a HMA in the Regulations were all part of the emergency management framework prior to the introduction of the Act and so have been recognised for more than four years. The Westplan for liquid fuel shortage reverted back to the Office of Energy in 2007. Prior to this it was administered by another agency. As liquid fuel shortage is not a prescribed hazard the application of the Act to this plan is unclear.

Hazard	Hazard recognised in Policy Statement 7 prior to Act	Hazard in Act or Regulations	HMA for preparedness in Regulations
Air transport emergencies	✓	✓	✓
Animal and plant biosecurity	✓	✓	✓
Chemical, biological, radiological and nuclear	✓	✓	✓
Collapse (landslide, building)	✗	✓	✓
Dam break	✓	✗	✗
Earthquake	✓	✓	✓
Urban fire	✓	✓	✗
Bushfire	✓	✓	✗
Flood	✓	✓	✓
Fuel shortage emergencies	✓	✗	✗
Hazardous materials	✓	✓	✓
Human epidemic	✓	✓	✓
Land search and rescue	✓	✓	✓
Marine oil pollution	✓	✓	✗
Marine transport emergencies	✓	✗	✗
Nuclear-powered warships	✓	✓	✓
Rail crash – freight	✓	✓	✓
Rail crash – passenger	✓	✓	✓
Road transport emergencies	✓	✓	✓
Sea search and rescue	✓	✓	✓
Space re-entry debris	✓	✓	✓
Storm/tempest	✓	✓	✓
Terrorist act	✗	✓	✓
Tropical cyclone	✓	✓	✓
Tsunami	✓	✓	✓

**Figure 6: SEMC recognised hazards and responsibility for emergency management functions**  
 At their first meeting after the Act was promulgated, the SEMC reaffirmed the hazards previously identified in Policy Statement 7 and agreed that they be prescribed in the legislation. Two hazards were not listed in the Policy Statement.

Source: OAG

### There is progress but it is slow

The SEMC and EMWA are working to resolve outstanding regulations, but a timeframe is yet to be established. For instance:

- HMAs for hazards relating to passenger rail crashes, freight rail crashes and the spillage, release or escape of a biological substance capable of causing death, personal injury or damage to the health of a person, property or the environment were only added in January 2009.
- An HMA for bushfires has not been prescribed. One reason is the need to resolve potential incompatibilities between the Act and the Bush Fires Act 1952 in regard to powers given to some officers. FESA received legal advice on these incompatibilities in 2007.
- HMA responsibility has not been determined for prevention, preparedness, response and recovery in the event of a dam break. Potential agencies are the Water Corporation and FESA. The Water Corporation is responsible for the dams it owns and manages, but FESA is the HMA for floods. FESA is also the HMA for cyclones and the consequent floods they can cause.

### Prevention and recovery activities are mostly the responsibility of local government

Being prepared also means ensuring all necessary functions are organised before an emergency happens. Under the Act, much of the responsibility for prevention and recovery activities falls on local government. However, neither the SEMC or EMWA on their behalf have established if local governments have complied with this legislative requirement.

While HMAs are usually responsible for preparedness and response, only a few are responsible for prevention or recovery. EMWA advised during the examination that prevention arrangements may be reviewed in future as part of the normal review processes.

Prevention activities aim to mitigate or prevent the chance, and adverse effects, of an emergency. Under the regulations, HMAs are only responsible for prevention functions for human epidemic, biological and radiological substances, terrorist acts and passenger and freight rail emergencies. Local governments consider prevention of risks as part of the risk assessment when developing their local arrangements. Some natural hazards such as cyclones cannot be prevented but their impact can be mitigated.

There are two HMAs listed in the Regulations for the recovery function (for passenger and freight rail emergencies). DPC is responsible for the Recovery support plan but this is only for significant recovery operations requiring a state level response. Under the Act, local governments must include a recovery plan and nominate a local recovery coordinator in its local emergency management arrangements. A local government manages recovery after an emergency affecting its local community.

## **The review of emergency management policies is not complete, so policies may not support or may conflict with the Act**

The Act requires the SEMC to prepare state emergency management policies. The policies provide direction for emergency management practitioners on matters such as contents of emergency management plans, local government responsibilities, exercise, annual reporting to the SEMC and post-operational reviews after emergencies or exercises. These policies are binding on agencies and local government.

The policies are variously required to be reviewed every one or two years. At the time of audit, six of the 16 emergency management policies were overdue for review or the review was not complete. These six policies include:

- state recovery coordination
- exchange of information (which also requires regulations)
- emergency management in remote indigenous communities.

The nine policies that have been reviewed are again due for review in late 2009. The SEMC has recognised that its review program is overdue but it has no plans for how to remedy this situation.

## Some key roles within the emergency management framework are not defined

Western Australia's emergency management framework encompasses two levels of government, numerous agencies as well as some private sector involvement. It is therefore important that all key emergency management roles are clearly defined and understood.

We found that not all roles are defined and understood and that this could impact the effectiveness of emergency management. For example:

- The State Emergency Coordinator has appointed the Officer in Charge of each Western Australian police station as the local emergency coordinator. There are more than 140 in WA. But there is no written description of this role from the SEMC, so WAPOL cannot fully inform and train its staff in the function or authority of this role. Since this examination began EMWA and WAPOL have commenced discussion to resolve this.
- A HMA may authorise its staff or others to act as hazard management officers in an emergency situation. However, the SEMC has issued no guidelines on how this role is performed. This is despite these officers having considerable powers in an 'emergency situation' and a 'state of emergency' such as directing or stopping people from entering or leaving an area evacuating people, and closing roads.
- The role of the SEMC's executive support arm, EMWA, is not documented even though the Act requires that the SEMC and EMWA should agree on this role. Without this, the SEMC may not receive the facilities and services that it needs to perform its functions.

# Plans are in place but 13 are past their review date

## Findings

- *Twenty-four Westplans are in place but 13 are past the required review date, 10 of these are more than five years overdue.*
- *Four of the eight support plans need updating.*
- *The SEMC has not assessed or provided guidelines to agencies on the operational arrangements needed to support their state emergency management plans.*
- *Agencies have processes to escalate their response according to the scale and type of incident, improving the likelihood of an effective response.*
- *It is not clear from most plans which HMA will lead when an emergency involves more than one hazard.*
- *The SEMC has not ensured local governments comply with their obligations. Available information shows that local governments are often not meeting key requirements including identifying local hazards and creating a risk register, establishing local emergency management arrangements, and regularly testing their arrangements.*

## Recommendations

The State Emergency Management Committee and Emergency Management WA, should:

- review procedures for plan preparation and approval so that agencies can prepare their plans in a more timely way
- work with local governments to ensure comprehensive up-to-date local arrangements are in place.
- ensure agencies fulfill their obligations under the Act
- monitor and take action to ensure local plans are in place and cover areas where the hazard could occur.

Agencies should:

- update their Westplans and support plans as a matter of urgency
- identify where overlaps could occur between hazard management agencies during an incident involving multiple hazards and develop written procedures for these circumstances
- ensure their internal emergency management arrangements are up-to-date and regularly reviewed
- ensure their Westplans and support plans have local arrangements in place.

## Twenty-four Westplans are in place but 13 are past their review date

There has been no review of 13 Westplans in the past two years as required by emergency management policy. Of the 13, there are 10 which have not been reviewed for five years or more.

HMAAs have advised the SEMC that reviews have started on 12 plans. The review process can take two to three years.

Westplans are the state's strategic approach to managing a hazard. The assigned HMA prepares the Westplan and the SEMC approves the plan.

Testing of the plans should occur once a year and a review done every two years. Through this approach, the state's understanding of the issues, risks, strategies and practices should remain relevant and effective.

There is a Westplan for all hazards except terrorist act. WAPOL and DPC are developing this plan with reference to the National Counter-terrorism Plan. They plan to table this Westplan with the SEMC in August 2009.

Hazard	Westplan title	Reviewed in last two years	Last revised
Tsunami	Tsunami	x	1999
Rail crash	Metropolitan Passenger Rail Network	x	1999
Fire (urban)	Urban Fire	x	2000
Space re-entry debris	Space Debris	x	2001
Nuclear-powered warships	State Nuclear Powered Warship Visits	x	2002
Earthquake	Earthquake	x	2003
Fuel shortage emergencies	Liquid Fuel Shortage	x	2003
Dam break	DAMBREAK	x	2004
Flood	Flood	x	2004
Storm/tempest	Storm	x	2004
Fire (wildfire/bush fire)	Bushfire	x	2005
Hazardous materials	HAZMAT	x	2005
Marine oil pollution	Marine Oil Pollution Plan	x	2006

Figure 7: Westplans overdue for review

State emergency management policy requires a review of Westplan every two years. Thirteen Westplans are overdue for a review. One agency told us that they are preparing to table two plans in 2009. A further two plans cannot be finalised until decisions are made on which agency will be the HMA.

Source: SEMC

The Westplan review process includes consultation with local government, other HMAs and combat and support agencies and consideration at the appropriate committees. This process can be lengthy and as a result, agencies can struggle to meet the two-year review policy. For example, the review process of a plan approved in 2008 took three years.

Local government requires three months for consultation on a plan, and the SEMC and the Emergency Services Sub-committee only meet three months. If the plan needs major changes then it may need to go out for comment more than once.

### Some Westplans do not cover all areas of the state or sources of hazard

Planning for some hazards does not cover all areas of the state or all aspects of the hazard. This potentially reduces the level of preparedness in these areas. For instance:

- The Westplan for the Rail Freight Network does not include the rail line east of Kalgoorlie or privately owned networks as they are not leased and managed by WestNet Rail.
- Westplan DAMBREAK does not include large, privately owned dams. These dams are increasingly holding larger volumes of water. Many of these dams are in the south west of the state and close to major population areas. These dams are not included in the Westplans as they are not under the control of the Water Corporation.
- Some local governments have not yet included their remote Aboriginal communities in their local arrangements.

The SEMC should regularly assess whether there are any areas or hazard sources not covered by current Westplans which pose a significant risk and require more extensive planning.

## Four of the eight support plans need updating

Like Westplans, a review of each support plan is required every two years. Four support plans are past their review date. Two are under review and the agency expects to table the draft plans at the SEMC in 2009.

Support plans describe the approach of a support agency during an emergency to restoring essential services or providing support services such as welfare, health, transport, communications and engineering.

Support function	Responsible Agency	Reviewed in last two years	Date of review
Isolated communities freight subsidy	FESA	✘	1999
State reception of evacuees from overseas	DCP	✘	2003
Registration and inquiry support	DCP	✘	2003
Telecommunications support	FESA	✘	2005

**Figure 8: Support plans past their review date**

Four support plans are overdue for review.

Source: SEMC

## The SEMC has not assessed or provided guidelines to agencies on the operational arrangements needed to support their state emergency management plans

Agencies' internal plans, policies and procedures are essential to link Westplans and support plans to the emergency response. The SEMC has not provided guidance to agencies on the characteristics of effective operational arrangements, nor does it review or assess their adequacy. Without these guidelines it is difficult to provide an objective assessment of the adequacy of these arrangements.

All of the agencies we reviewed have operational arrangements to support their Westplans and support plans. Agencies vary in how these arrangements are set up and monitored.

Some agencies prepare local plans under their Westplan while others compile them centrally. Agencies advised that the local plans which underpin their Westplan are mostly lists of local resources and contacts.

In some agencies the local plans are more structured and detailed, for example:

- The Water Corporation has a dam safety emergency plan for 85 of its dams where a population could be at risk. It also minimises the risk of dam break through risk assessment, maintenance, electronic monitoring and routine inspections. Each dam safety emergency plan contains the dam's assembly points, evacuation procedures, power sources, communication system, instrumentation, monitoring program, and flood inundation modelling. The program is based on the current national best practice in dam safety and set out in the guidelines published by the Australian National Committee on Large Dams.

Agencies provide their staff with a range of guidance and tools, for instance:

- FESA and WAPOL have internal policies available electronically.
- WAPOL procedures are contained in an emergency management manual (controlled copies) and their police operations manual (electronic).
- FESA also provides its staff with tools such as the HAZMAT emergency response guide, which is kept on each emergency response vehicle.

Some agencies have mechanisms to regularly monitor and review their arrangements. For instance:

- FESA (HAZMAT), the Water Corporation and DCP have active committees managing their Westplan. The role of these committees often includes reviewing the Westplan, recent incidents and events and communication with key stakeholders.

- DCP receives quarterly updates from its District Emergency Services Officers on their local plans.
- WAPOL reviews each local plan during their annual management audits of each police station. DCP's District Emergency Services Officers do quarterly checks of arrangements in their district and report the results centrally.

Some agencies – FESA (HAZMAT) and the Water Corporation (DAMBREAK) – have links with national committees which they use to share information about the hazard they are managing and to learn from other jurisdictions. FESA has also set up a specially trained team which it can bring in to manage events where hazardous chemicals are involved. They can also call on a range of expertise to provide advice during a HAZMAT incident.

## Agencies have processes to escalate their response according to the scale and type of incident

All the agencies we reviewed had procedures for escalating their response to an incident.

The level of response to an incident needs to escalate relative to the size of the event and its impact. Otherwise excessive resources will be used or the response is insufficient to manage the incident.

WAPOL and FESA are HMAs for a number of hazards. Both have generic escalation procedures irrespective of the type of incident.

Other HMAs, such as WestNet Rail, describe in their Westplan how they will vary their response and when. Similarly, the Water Corporation's draft Westplan for a dam break describes how it will respond depending on the size of the event.

As a support agency, DCP relies on the HMA to escalate the response, but it also assesses the sufficiency of its own resource if an event has occurred or is imminent. For example, DCP monitors the size and path of a cyclone using information provided by FESA and the Bureau of Meteorology and moves its resources accordingly.

## It is not clear from most plans which HMA will lead when an emergency involves more than one hazard

Only two of the Westplans we reviewed described a process for determining which HMA should take lead responsibility when more than one hazard is involved in an incident. This was cited in a recent incident debrief and agencies reported other examples where they had experienced this.

At the time of our examination, there has been no action to clarify responsibility when hazards overlap. The revised State Emergency Plans Development Guide lists what should be included in a Westplan such as other Westplans that may be activated. It does not ask HMAs to set out the circumstances in which another HMA may take control of the emergency.

## The SEMC has not ensured local governments comply with their obligations

While the SEMC has the authority to direct local governments to prepare for emergencies, it has not done so, even though many do not meet the obligations that the Act and emergency management policies place on them. The SEMC also does not periodically assess the suitability and comprehensiveness of local government plans and arrangements.

We also found that while the SEMC has statistical information which enables an overall assessment of local government compliance, it was unable to specifically identify which local governments were not meeting their obligations.

The Act and SEMC policies establish eight broad requirements for emergency management that local governments must meet. These include:

- establish a LEMC. Its responsibilities include assisting the local government in ensuring that emergency management arrangements are established and liaising with emergency management agencies in developing, testing and reviewing arrangements
- identify hazards that are risks within the local government district, complete a risk register and develop treatment plans to manage the risks
- establish local emergency management arrangements including:
  - prepare policies for emergency management in the district
  - define the roles and responsibilities of public authorities and persons involved in emergency management in the district
  - establish the strategies and priorities for emergency management in the district.

Information obtained to June 2008 from local governments by the SEMC give an indication of the extent that local governments were complying with these obligations (Figure 9).

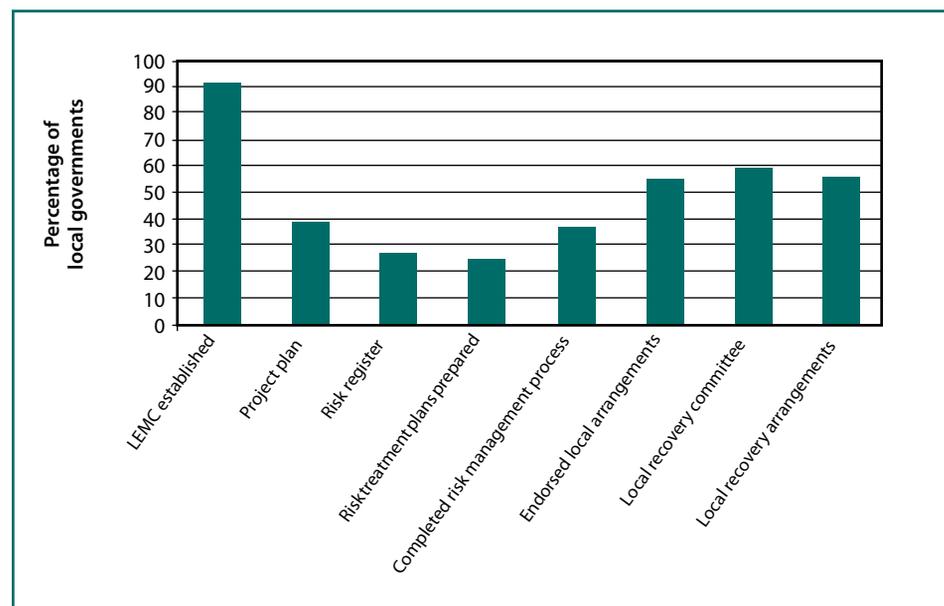
The results show that the eight emergency management obligations are often not met. For instance, only 24 per cent of local governments reported that they had prepared risk treatment plans, while only 55 per cent reported that they established local emergency management arrangements.

The SEMC could not advise Audit which of the local governments were not complying with their obligations. This is because the SEMC obtains the information in a way that does not facilitate identification. For instance, 13 local governments did not advise SEMC that they had a LEMC in 2007-08. At our request FESA identified and followed up these authorities. All but two advised that their LEMC is now established, or they have decided to join the LEMC of a neighbouring local government.

The inability to identify local governments in the SEMC data meant that we were unable to make any assessment as to whether non-compliance is high amongst local governments that have large populations and/or large infrastructure investments.

The Act has no penalties to ensure local governments have a LEMC, prepare plans, or report to the SEMC. The SEMC must therefore actively work with local governments to ensure its arrangements are in place and suited to the risks faced by local government.

Local governments would like more feedback on their arrangements. EMWA has prepared a checklist to assess these, but it has only received five local arrangements to review in the past year.



**Figure 9: Local governments' progress in emergency management**

Only 35 per cent of local governments have completed their risk management process and have risk treatment plans in place while only 55 per cent have local recovery arrangements.

Source: OAG & SEMC 2007-08 Annual Report

# It is not clear how well prepared the state is overall for large-scale emergencies

## Findings

- *The SEMC has not assessed how well prepared the state is overall for large-scale emergencies.*
- *Annual testing of emergency management is mandated but the SEMC is not enforcing this requirement.*
- *While most of the agencies we reviewed test their plan regularly they do not formally assess if they are sufficiently prepared for large-scale emergencies.*
- *There are limited systems to record and disseminate lessons learned from previous incidents and exercises. The same problems may re-occur in future as this knowledge is not shared among HMAs.*
- *HMAs do not share a common crisis information management system or approach to managing incidents. This reduces their capability to respond to major emergencies.*
- *Arrangements for sharing access to operations centres should be in place as not all agencies have a centre with sufficient capacity for some large-scale emergencies.*

## Recommendations

The State Emergency Management Committee and Emergency Management WA, should:

- provide an assessment of the state's level of preparedness at least annually, including any gaps identified and significant risks
- ensure that agencies have a common or compatible crisis information management system
- ensure that each agency has assessed the level of operations centre it requires and has agreed arrangements to access other agencies centres as needed
- ensure all agencies use the same approach (incident management system) to managing incidents.

Agencies should:

- formally assess on an annual basis their capacity to respond and take measures to address key shortfalls identified
- train their staff who will be involved in emergencies in the incident management approach used by WAPOL and FESA.

## The SEMC's role includes assessing the state's preparedness

One of the SEMC's roles is to know and advise on the preparedness of the state for emergencies. This is not an easy task. The extent to which Western Australia should prepare depends partly on the anticipated type and size of emergencies. The nature and extent of some may be unforeseeable and some may be the catastrophic or once in a hundred years event that will severely test the planning and resources of the best arrangements.

Our expectation was that the SEMC, HMAs and support agencies would assess their level of preparedness on a regular basis. We expected to see regular assessments and reporting of:

- the level of staff, equipment and training needed for response
- ways that the SEMC and agencies record and monitor lessons learned through exercises and incidents
- systems to share information during emergencies and operations centres ready to activate in a crisis
- a shared understanding and approach to managing incidents amongst agencies.

## The SEMC has not assessed how well prepared the state is overall for large-scale emergencies

The SEMC does not assess and advise government whether all agencies, district and local committees have adequate arrangements in place and are testing their plans. Each year the SEMC reports to the Minister and Parliament on emergency management activities in Western Australia. But the report does not detail how prepared the state is overall for large-scale emergencies and whether there are any major gaps or shortcomings.

SEMC's policy requires that all LEMCs give copies of their post-exercise reports for each event they test to their district emergency management committee to ensure overall assessment of the local communities' capability. However, if this is done, it is not reflected in their annual reports to the SEMC.

Exercises can vary in complexity, from exercising more than one plan, involving multiple agencies or local governments over several days, simulating real life scenarios or conducting desktop exercises. Exercises can be used to train people, test planning processes and to identify weaknesses in procedures, techniques and equipment.

### **Annual testing of emergency management is mandated but SEMC is not enforcing this requirement**

The SEMC's policy requires annual testing of each Westplan and support plan as well as arrangements at three levels (local, district, state-wide). The SEMC can direct public authorities to test a plan. However, the SEMC has never used this authority. Activation of a plan during an emergency counts as an exercise.

### **Almost all HMAs and support agencies we reviewed are testing their plans**

Nine of the 10 agency plans we reviewed in detail were tested annually or were regularly activated for emergencies. However, whether testing is done each year of the other 22 Westplans and support plans is not known, as the SEMC and Emergency Services Sub-committee do not obtain the necessary information.

### **Not all emergency management districts and local governments test their arrangements**

The SEMC's annual report shows some 71 per cent of districts exercised their emergency management arrangements in 2007-08. In the prior year, 60 per cent exercised these arrangements.

Not all local governments test their arrangements regularly. The SEMC's annual report lacks information about which or how many local arrangements were tested. It is not clear from information held by the SEMC whether the local governments that failed to exercise in 2007-08 also failed to exercise in 2006-07.

## **Individual agencies have not formally assessed if they are sufficiently prepared for large-scale emergencies**

### **Agencies do not formally assess their overall response capacity to respond against the possible scale of incidents that may occur**

Agencies we reviewed have not formally assessed their preparedness to meet large-scale emergencies. However, they advised that their operational responses to major emergencies to date had mostly been successful.

We found that while agencies assess their level of staff resources and have processes to increase this during an event, they do not often do this for the size of event they expect could occur. Although Westplans specify roles and responsibilities for both combat and support agencies, there is no evidence that combat and support agencies formally assess their resourcing and practical capability to assist to the level that may be required in certain emergencies.

Capacity to respond is based on sufficient staff, with the appropriate training, equipment and facilities that an agency needs to deliver a response that matches the likely scale of the emergency.

One small HMA has recognised that it does not have the same capacity to respond to an incident as a large combat agency. To overcome this it has established a memorandum of understanding with a combat agency to respond on its behalf in certain circumstances.

Only two of the agencies we reviewed inform their senior management of their capability to respond or the level of risk posed by the hazard they manage. Operational agencies such as WAPOL and FESA regularly deal with events related to their Westplan, such as road accidents and cyclones. They increase their staffing in response to the size of the incident. WAPOL advised they have a regular and robust exercise program that specifically assess the ability of key elements of the agency to respond. FESA and WAPOL assess their resources weekly based on any impending and current incidents such as a cyclone or a public event where large numbers of people are expected.

The HMAs we spoke to did not specifically advise other agencies on the level of aid they would require if the plan was activated. Instead agencies commented during the consultation phase about their capacity to provide the level of support the HMA requires of them.

### **There are limited systems to record and disseminate lessons learned increasing the risk that mistakes are repeated in future incidents**

There is a lack of central recording and analysis of lessons from incidents and exercises. Agencies carry out a range of post-incident reviews such as hot debriefs and extensive internal reviews, but there is limited dissemination of this information outside the agency.

To achieve effective preparedness, agencies should use exercises and past emergencies to improve arrangements and systems so the response to the next event is better and mistakes are not repeated. By their nature, emergencies require an immediate and rapid response. In hindsight it is often easy to identify where the response could have been better.

Recommendations from previous incidents and from training, exercises and reviews are not kept centrally so others can access them. Instead this information is held within individual agencies and not often available even to others involved in managing the event. The SEMC as the peak emergency management body is in a position to facilitate the sharing and learning of lessons, but do not require or receive all incident and exercise reports.

Some agencies have good systems for capturing and monitoring recommendations from incidents and exercises. The Water Corporation includes findings from exercises on its incident database, including who must action them and by when. EMWA has advised that they have started development of an emergency management extranet which has the ability to record and disseminate lessons learned amongst agencies.

External authorities such as national safety bodies or the State Coroner may also examine an incident and how it was run, providing further sources of lessons learned. Agencies also sit on national bodies for specific hazards and emergency management more generally. These are also useful avenues for sharing knowledge and experience.

### **HMAAs do not share a common crisis information management system or approach to managing incidents**

Most agencies have not yet adopted the SEMC preferred crisis information management system (WebEOC), or a compatible system. Of the agencies we reviewed only WAPOL and FESA use the same structured approach (AIIMS) to manage incidents. This is despite the fact that poor communication and information exchange is one of the biggest risks when managing an incident, and a structured approach is key to effective coordination between and within agencies.

#### **WebEOC**

In September 2008, the SEMC endorsed WebEOC as the preferred common crisis information management system and asked that agencies which are using another system ensure interoperability with WebEOC. A common system allows HMAAs to manage, share and disseminate strategic crisis information during an incident. WAPOL uses WebEOC.

In the event of a major emergency that requires a multi-HMA response, the key agencies need to gather and share key strategic information on what is happening and so prioritise and direct operational activities. Good information informs the decisions which need to be made.

There are several reasons why agencies have not yet adopted WebEOC. Some consider the system too costly, as they will not use it during their day-to-day operations. Others have their own system or are unwilling to host the server. Most agencies do not have systems which are compatible with WebEOC.

#### **AIIMS**

AIIMS is a structured approach to managing incidents to ensure that the agencies managing an emergency act in a coordinated way. It sets out:

- overall incident control (operates across agencies)
- individual agency command (operates within agencies)
- resource coordination (supports incident control through access to external resources)

As well, AIIMS describes four functions that are allocated in an incident: incident control, planning, operations and logistics. The HMA usually controls the incident as well as, resource coordination during the response.

FESA offers training in AIIMS to interested agencies and local governments. WAPOL is also developing its training capacity, mostly to train its own staff.

### **Arrangements for agencies to access other agencies operations centres should be in place**

During a major emergency HMAs and combat agencies often use an operations centre to coordinate their response. This is in addition to any local incident control centre(s) that have been set up.

As part of their preparedness activities HMAs should identify appropriate operations centres from which combat and support agency liaison officers can operate. Some agencies have developed relatively sophisticated centres due to operational needs or state level responsibilities. However, not all HMAs need this level of operations centre all the time. There is potential for duplication of resources if an agency that does not regularly manage incidents sets up a sophisticated and highly equipped operations centre. But in some emergencies they may need this level of facility. One agency recently used another agency's operations centre, as their centre was inadequate for the size of the emergency.

Currently key combat agencies have operations centres which other hazard management agencies can use if they need to. However, there are no written agreements between these agencies and the other HMAs as to how and when the centres can be used if needed. WAPOL have informally offered the use of their centre to other HMAs.

## Shortened forms used in this report

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AIIMS	Australasian Inter-service Incident Management System
DCP	Department for Child Protection
EMWA	Emergency Management WA
DPC	Department of the Premier and Cabinet
FESA	Fire and Emergency Services Authority
HMA	Hazard management agency
LEMC	Local emergency management committee
SEMC	State Emergency Management Committee
WAPOL	Western Australia Police