# D Emergency management sector overview

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## D.1 Introduction

This sector overview provides an introduction to the emergency management sector and the government services reported in ‘Emergency services for fire events’ (chapter 9) and ‘Ambulance services’ (chapter 11 – included in the Health volume of the Report).

Emergency management is the practice of managing the impact from emergency events on individuals, communities and the environment (EMA 1998). Emergency events vary in size and intensity, affecting individuals (such as in medical emergencies), household/business assets (such as in building fires), or community, economy and the environment (such as in natural disasters) (box D.1). Events of considerable magnitude or duration, such as earthquakes, cyclones and bushfires, can involve international, interstate and other cooperation and support.

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| Box D.1 Emergency events |
| An emergency event is an event that endangers or threatens to endanger life, property and/or the environment, and requires a significant and coordinated response (EMA 1998). It covers:   * structure fires * rescues — including road crash rescues and marine rescues * medical emergencies and transport * natural disaster events — bushfire (landscape fire), earthquake, flood, storm, cyclone, storm surge, landslide, tsunami, meteorite strike, and tornado * consequences of acts of terrorism * other natural events — such as drought, frost, heatwave, or epidemic * disaster events resulting from poor environmental planning, commercial development, or personal intervention * technological and hazardous material incidents — such as chemical spills, harmful gas leaks, radiological contamination, explosions, and spills of petroleum products * quarantine and control of diseases and biological contaminants. |
| *Source*: AEM (2015). |
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### Roles and responsibilities

#### State and Territory governments

State and Territory governments are responsible for regulatory arrangements that protect life, property and the environment. They have primary responsibility for delivering emergency services directly to the community through emergency service organisations. The range of emergency service organisations encompassesfire service organisations (chapter 9), ambulance service organisations (chapter 11), State and Territory Emergency Service organisations (SES), marine and lifesaving rescue and coast guard organisations.

Emergency service organisations include government departments, statutory authorities, and smaller branches, agencies or services within larger departments or authorities (table DA.1). They also include non‑government organisations, supported by State and Territory government funding and legislation, which provide emergency management services on behalf of the state, such as St John Ambulance in WA and the NT.

#### Australian Government

The primary role of the Australian Government is to support the development, through State and Territory governments, of a national emergency management capability. Australian Government assistance includes financial assistance for natural disaster resilience, mitigation and preparedness, and support for emergency relief and community recovery. State and Territory governments can also seek non‑financial assistance for response and recovery activities (for example, the Department of Defence can provide personnel, equipment and expertise to assist in the civil response to an emergency event).

Australian Government agencies also have specific emergency management responsibilities, including: the control of exotic animal and plant diseases; aviation and maritime search and rescue; the management of major marine pollution (beyond coastal waters); the prediction of meteorological and geological hazards; the provision of firefighting services at some airports and some defence installations; human quarantine; and research, reporting and development. The Australian Government also manages the Crisis Coordination Centre, which maintains a 24‑hour a day situational awareness, analysis and reporting capability and an emergency management planning capability.

#### Local governments

Local governments have specific emergency management responsibilities in contributing to a range of measures to manage risks to their communities and the environment and in coordinating community resources and capabilities in responding to emergencies.

### Profile of the emergency management sector

Detailed profiles for emergency services for fire events and ambulance services within the emergency management sector are reported in chapter 9 and chapter 11 respectively. Descriptive statistics for SES organisations are presented in tables DA.14–DA.19.

#### Emergency service organisation costs

Nationally in 2015-16, total expenditure across ambulance, fire and emergency service organisations was $7.2 billion, or $302.70 per person in the population (figure D.1 and  
table DA.3).

A range of other government agencies, such as police and health services, also fund emergency management (section D.3). In addition, governments also incur costs for government disaster coordination agencies and volunteer marine rescue and lifesaving organisations (these costs are not available for this Report).

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| Figure D.1 Expenditure of emergency service organisations, per person in the population 2015-16a |
| |  | | --- | | Figure D.1 Expenditure of emergency service organisations, per person in the population, 2015-16  More details can be found within the text surrounding this image. | |
| ASO = Ambulance service organisation; FSO = Fire service organisation; SES = State/Territory emergency service organisation. a See table DA.3 for detailed footnotes and caveats. |
| *Source*: State and Territory governments (unpublished); table DA.3. |
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#### Funding emergency service organisations

Funding of emergency services organisations varies by service and jurisdiction (figure D.2) and occurs through a mix of:

* State and Territory governments grants,
* fire and emergency service levies,
* ambulance user/transport charges and
* subscriptions and other revenue.

| Figure D.2 Emergency service organisations funding sources,  2015-16a, b |
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| | Figure D.2 Emergency service organisations funding sources, 2015-16  More details can be found within the text surrounding this image. | | --- | |
| a See table DA.2 for detailed footnotes and caveats. b Total levies in the ACT and the NT are nil. |
| *Source*: State and Territory governments (unpublished); table DA.2. |
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The Australian Government provides emergency management funding to State and Territory governments through programs including:

* The *Natural Disaster Relief and Recovery Arrangements* provides assistance with relief and recovery efforts following an eligible natural disaster event. The contribution in 2015‑16 was $224.1 million. Allocations vary across jurisdictions and over time depending on the timing and nature of natural disaster events (figure D.3 and table DA.6).
* The *Natural Disaster Resilience Program* provides funding to strengthen community resilience to natural disasters. In 2015-16 funding was $13.4 million (table DA.5).

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| Figure D.3 Natural Disaster Relief and Recovery Arrangements assistance (2015-16 dollars)a |
| |  | | --- | | Figure D.3 Natual Disaster Relief and Recovery Arrangements assistance, in 2015-16 dollars  More details can be found within the text surrounding this image. | |
| a See table DA.6 for detailed footnotes and caveats. |
| *Source*: Australian Government (unpublished); table DA.6. |
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The Australian Government also provides financial support to eligible individuals affected by a disaster, with payments in 2015-16 of $22.0 million (table DA.7).

#### Emergency service organisations human resources

Nationally in 2015-16, 35 285 full time equivalent (FTE) people were employed by emergency service organisations. Over half (53.8 per cent) were employed in fire and emergency service organisations, while the remainder were employed by ambulance service organisations (table D.1).

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| Table D.1 Full time equivalent salaried personnel in ambulance, fire and SES organisations, 2015-16a |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Total ambulance, fire and emergency service organisations | | | | | | | | | | | *Ambulance service organisations* | | | | | | | | | | |  | 4 349 | 4 454 | 3 822 | 1 478 | 1 313 | 402 | 240 | 248 | 16 306 | | *Fire and emergency service organisations (FSO and SES)* | | | | | | | | | | | FSOs | 5 432 | 6 642 | 3 124 | 1 529 | 1 084 | 424 | 467 | 278 | 18 979 | | SES | 324 | 167 | 98 | na | 51 | 24 | 7 | 24 | na | | Total | 5 756 | 6 809 | 3 222 | 1 529 | 1 135 | 448 | 474 | 302 | 18 979 | | **Total** | **10 104** | **11 263** | **7 044** | **3 007** | **2 447** | **850** | **714** | **550** | **35 285** | | |
| a See tables DA.4 and DA.17 for detailed footnotes and caveats. **na** Not available. |
| *Source*: State and Territory governments (unpublished); tables DA.4 and DA.17. |
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#### Volunteers

In 2015-16, 256 451 fire, ambulance and emergency service volunteers (and another 2620 community first response ambulance volunteers) were on the records of emergency service organisations (table DA.4). Emergency services volunteers play a significant role in the provision of emergency services in Australia, particularly in rural and remote areas, by providing:

* response services in the event of an emergency
* community education, cadet schemes and national accredited emergency training
* emergency event support and administrative roles
* community prevention, preparedness and recovery programs.

### Social and economic factors affecting demand for services

The size, severity, timing, location and impacts of emergencies are difficult to predict. However, many known factors increase vulnerability to emergency events (COAG 2011). Work‑life patterns, lifestyle expectations, demographic changes, domestic migration, and community fragmentation are increasing community susceptibility and demand for emergency management services (COAG 2009).

Within individual communities, certain members may be more vulnerable or become vulnerable over time, and may need tailored advice and support. Factors that can increase vulnerability include: greater level of socioeconomic disadvantage in the community; English as a second language; more remote areas; older population; reduced mobility; reduced access to services.

### Service‑sector objectives

The framework of performance indicators in this sector overview is based on objectives for emergency management established in the *National Strategy for Disaster Resilience* and are common to all Australian emergency services organisations (box D.2). To meet these objectives, emergency service organisations classify their key functions in managing emergency events to the prevention/mitigation, preparedness, response and recovery framework.

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| Box D.2 Objectives for emergency management |
| Emergency management services aim to build disaster resilient communities that work together to understand and manage the risks that they confront, through providing highly effective, efficient and accessible services that:   * reduce the adverse effects of emergencies and disasters on the community (including people, property, infrastructure, economy and environment) * contribute to the management of risks to the community * contribute to community recovery * enhance public safety. |
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## D.2 Sector performance indicator framework

This sector overview is based on a sector performance indicator framework (figure D.4) made up of the following elements:

* sector objectives — five sector objectives reflect the key objectives of emergency management (box D.2)
* sector‑wide indicators — three sector‑wide indicators relate to the sector objectives.

| Figure D.4 Emergency management sector performance indicator framework |
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| | Figure D.4 Emergency management sector performance indicator framework  More details can be found within the text surrounding this image. | | --- | |
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#### Community preparedness for emergency events

‘Community preparedness for emergency events’ is an indicator of governments’ objectives to reduce the adverse effects of emergencies and disasters on the community and to contribute to the management of risks to the community (box D.3).

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| Box D.3 Community preparedness for emergency events |
| ‘Community preparedness for emergency events’ is defined as the number of people who know what to do to prepare for an emergency and/or have developed an emergency plan, divided by the total population.  The higher the proportion of the population who are prepared for an emergency event, the more likely the impact of emergency events will be minimised.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions (only available for one reporting period) * complete (subject to caveats) for the 2011-12 reporting period. All required 2011-12 data are available for all jurisdictions. |
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Nationally in 2011‑12, 30.7 per cent of respondents reported that they had developed emergency plans in the event of a natural disaster, while 29.9 per cent of respondents stated that they had ‘a fair bit’ or ‘a lot’ of knowledge of what to do to prepare for natural disasters (table DA.8). People were more likely to have developed an emergency plan where they perceived that a natural disaster was likely to occur in their community or if they perceived that a natural disaster was likely to affect their home (figure D.5).

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| Figure D.5 Proportion of people that have developed emergency plans in the event of a natural disaster, 2011-12a |
| |  | | --- | | Figure D.5 Proportion of people that have developed emergency plans in the event of a natural disaster, 2011-12  More details can be found within the text surrounding this image. | |
| a See box D.3 and table DA.8 detailed definitions, footnotes and caveats. |
| *Source*: Western, M., Mazerolle, L., and Boreham, P. (2012), *National Security and Preparedness Survey 2011-12*; table DA.8. |
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#### Total asset loss from emergency events

‘Total asset loss from emergency events’ is an indicator of the governments’ objectives to reduce the adverse effects of emergencies and disasters on the community and to contribute to the management of risks to the community (box D.4).

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| Box D.4 Total asset loss from emergency events |
| ‘Total asset loss from emergency events’ is defined as the insured asset losses incurred by the community following disaster events, divided by the total population. Insured asset losses are derived from general insurance companies submissions following large events incurring cost to the community and insurers. Events are only recorded where there is a potential for the insured loss to exceed $10 million, so many large single losses occurring on a day to day basis are not included. Other asset losses not currently included relate to:   * for all levels of government — uninsurable assets such as roads, bridges, and recreational facilities are not considered (this is of greatest significance in rural and remote areas) * remedial and environmental damage costs (including pollution of foreshores and riverbanks and beach erosion).   Annual insured asset losses need to be interpreted with caution. They can be particularly volatile overtime due to the influence of large irregular emergency events such as bushfires (chapter 9) and extreme weather events. For most jurisdictions, the value of asset losses can be very low (or zero) in most years, punctuated by large natural disaster events (table DA.10).  A low or decreasing value of total asset loss from emergency events is desirable.  Data for these measures are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2015-16 data are available for all jurisdictions. |
| *Source*: ICA (2014); AEM (2015). |
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Nationally in 2015-16, the insured asset loss from emergency events was $1.1 billion, equating to $45.13 per person in the population (tables DA.9–10 and figure D.6).

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| Figure D.6 Asset loss from emergency events (2015‑16 dollars)a |
| |  | | --- | | Figure D.6 Asset loss from emergency events, in 2015-16 dollars  More details can be found within the text surrounding this image. | |
| a See box D.4 and table DA.9 for detailed definitions, footnotes and caveats. |
| *Source*: ICA (2016), table DA.9. |
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#### Deaths from emergency events

‘Deaths from emergency events’ is an indicator of governments’ objectives to reduce the adverse effects of emergencies and disasters on the community (including people, property, infrastructure, economy and environment) and to enhance public safety (box D.5).

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| Box D.5 Deaths from emergency events |
| ‘Deaths from emergency events’ is defined as the number of deaths from emergency events per million people in a calendar year. Three categories are presented:   * road traffic deaths — deaths primarily caused by accidents involving road transport vehicles * fire deaths — deaths primarily caused by exposure to smoke, fire or flames * deaths from exposure to forces of nature — including exposure to excessive natural heat or cold, exposure to sunlight, victim of lightning, victim of earthquake, victim of volcanic eruption, victim of avalanche, landslide and other earth movements, victim of cataclysmic storm, and victim of flood.   A low or decreasing number of deaths from emergency events is desirable.  Caution should be taken when interpreting these results as the ABS have randomly assigned values in categories where the number of deaths are low, to protect confidentiality.  Data for these measures are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2015 data are available for all jurisdictions. |
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Nationally in 2015, there were 58.3 deaths per million people from emergency events, a decrease from 60.3 deaths per million people in 2014 (table DA.13).

##### Road traffic deaths

Road crash incidents are the single largest contributor to deaths from emergency events reported, making up 90 per cent of these deaths (tables DA.11 and DA.13).

From 1986 to 2015, road traffic deaths declined from 187.3 to 52.9 deaths per million people (figure D.7).

| Figure D.7 Road traffic deaths, by State and Territory, 1986 to 2015**a** |
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| | Figure D.7 Road traffic deaths, by State and Territory, 1986 to 2015  More details can be found within the text surrounding this image. | | --- | |
| a See box D.5 and table DA.11 for detailed definitions, footnotes and caveats.. |
| *Source*: ABS (2016) *Causes of Death, Australia 2015*, Cat. no. 3303.0; table DA.11. |
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##### Fire deaths

The number of fire deaths varies from year to year, often impacted by large bushfires. In 2015, there were 97 fire deaths nationally (details in chapter 9).

##### Deaths from exposure to forces of nature

Relatively few deaths (33 deaths in 2015 nationally, or 1.4 deaths per million people in the population) are recorded as being caused by exposure to forces of nature (table DA.12).

## D.3 Cross‑cutting and interface issues

The effective development of a ‘resilient community’ — one that works together to understand and manage the risks that it confronts (COAG 2011) — requires the support and input of a range of community stakeholders, including from other government services.

* *Police services* have a critical role in effective emergency management within each jurisdiction. They generally assume critical roles in a jurisdiction’s disaster management plans and coordination authorities (Victorian Bushfires Royal Commission 2010; Queensland Floods Commission of Inquiry 2012). Police services (and the justice system) also have a critical role in implementing the prevention strategies of a jurisdiction — such as enforcing road laws.
* *Health services*, in particular emergency departments of public hospitals, have an important role in the preparation and response to emergency events. Similarly, ambulance services are an integral part of a jurisdiction’s health service providing emergency as well as non-emergency patient care and transport.
* In large scale emergencies, a range of agencies may be called upon to provide assistance. For example, through Australian Government arrangements for the provision of assistance to states and territories, the Australian Defence Force has been called upon to assist emergency services organisations in responding to emergencies such as the 2011 Queensland floods (Queensland Floods Commission of Inquiry 2012).

Emergency services, police and public hospitals are also key services involved in preventing and dealing with acts of terrorism as set out in Australia’s National Counter Terrorism Plan (NCTC 2012). While this Report does not explicitly include the details of these government activities, such activities need to be kept in mind when interpreting performance results.

The National Strategy for Disaster Resilience recognises that the needs of vulnerable communities should be considered in developing emergency management plans and programmes. ANZEMC has also identified the resilience of vulnerable sections of society (including Aboriginal and Torres Strait Islander Australians, culturally and linguistically diverse communities, children and youth, the elderly and people with disability) as a priority area for action (COAG 2012). The 2007 *Keeping Our Mob Safe: The National Emergency Management Strategy For Remote Indigenous Communities* (currently under review) provides a framework for coordinated and cooperative approaches to emergency management in remote indigenous communities (AEM 2007).

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