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Australian Institute for
Disaster Resilience



**Australian
Emergency Management
Glossary**

AUSTRALIAN EMERGENCY MANUALS SERIES

PART I

The Fundamentals

Manual 3

AUSTRALIAN EMERGENCY MANAGEMENT GLOSSARY

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THE AUSTRALIAN EMERGENCY MANUALS SERIES

The first publication in the original AEM Series of mainly skills reference manuals was produced in 1989. In August 1996, on advice from the National Emergency Management Principles and Practice Advisory Group, EMA agreed to expand the AEM Series to include a more comprehensive range of emergency management principles and practice reference publications. The Series is now structured in five parts as set out below.

Parts I to III are issued as bound booklets to State and Territory emergency management organisations and appropriate government departments for further dissemination to approved users including local government. Parts IV and V (skills and training management topics) are issued in loose-leaf (amendable) form to all relevant State agencies through each State and Territory Emergency Service who maintain State distribution/amendment registers. All private and commercial enquiries are referred to EMA as noted at the end of the Foreword on page v.

AUSTRALIAN EMERGENCY MANUALS SERIES STRUCTURE AND CONTENT

		Publishing Status—Sep 98
PART I - THE FUNDAMENTALS		
Manual 1	Emergency Management Concepts and Principles (3rd edn)	A/R
Manual 2	Australian Emergency Management Arrangements (6th edn)	R
Manual 3	Australian Emergency Management Glossary	A
Manual 4	Australian Emergency Management Terms Thesaurus	A
PART II – APPROACHES TO EMERGENCY MANAGEMENT		
Volume 1—Risk Management		
Manual 1	Emergency Risk Management	D
Volume 2—Risk Evaluation		
	Titles to be advised	P
Volume 3 ~ Mitigation Planning		
	Titles to be advised (covering PPRR)	P
Volume 4—Implementation of Emergency Management Plans		
	Titles to be advised	P
PART III - EMERGENCY MANAGEMENT PRACTICE		
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Manual 2	Disaster Medicine	A/R
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Volume 2—Specific Issues		
Manual 1	Evacuation Planning	D
Manual	Flood Plain Management	D
Manual	Flood Preparedness	D
Manual	Flood Warning	A/R
Manual	Flood Response Operations	D
Manual	Civil Defence	D
Manual	Community Emergency Planning (3rd edn)	A/R
Manual	Urban Search and Rescue	P
Volume 3 Guidelines		
Guide 1	Multi-Agency Incident Management	A
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Guide 3	Safe and Healthy Mass-Gatherings	D
Guide 4	Medical Aspects of NBC Hazards	D
Guide	Disaster Victim Identification	A/R

AUSTRALIAN EMERGENCY MANUALS SERIES STRUCTURE AND CONTENT

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PART IV — SKILLS FOR EMERGENCY SERVICES PERSONNEL

Manual 1	Storm Damage Operations (2nd edn)	A
Manual 2	Operations Centre Management	A
Manual 3	Leadership	A
Manual 4	Land Search Operations (2nd edn—Amdt 1)	A
Manual 5	Road Accident Rescue (2nd edn)	A
Manual 6	General Rescue (4th edn—formerly Disaster Rescue)	A
Manual 7	Map Reading and Navigation (Amdt 1)	A
Manual 8	Four-Wheel-Drive Vehicle Operation (Amdt 1)	A
Manual 9	Communications (2nd edn)	A/R
Manual	Flood Rescue Boat Operation (Amdt 2)	A/R
Manual	Vertical Rescue (Amdt 1)	A/R
Manual	Chain Saw Operation	A/R

PART V — THE MANAGEMENT OF TRAINING

Manual 1	Basics of Training Management (2nd edn)	R
Manual 2	Exercise Management	D

Key to status: A = Available; A/R = original version Available/under Review;
D = under Development; P= Planned; R = under Review/Revision

FOREWORD

The Australian Emergency Management Glossary has been developed in consultation with all key emergency management organisations in Australia. These organisations were provided with the opportunity to submit terms and definitions for inclusion, suggest reference material, and comment on the final draft.

Information contained in this manual has been drawn from a number of references and adapted to reflect the needs of the emergency management community.

This manual is available in print and is also accessible through Emergency Management Australia's Internet site. As situations change, the manual will be updated and amended.

Proposed changes should be forwarded to the director general, emergency management Australia, at the address shown below, through the respective state/territory emergency management committee

This publication is provided free of charge to approved Australian organisations which may obtain copies through their state or territory emergency management headquarters which maintains a distribution/amendment register.

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Enquiries should be sent to the Director General, Emergency Management Australia, PO Box 1020, Dickson, ACT 2602, Australia.



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INTRODUCTION

AIM, USER GROUP, AND SCOPE

The aim of the *Glossary* is to provide a list of emergency management terms and definitions. Terms included are those likely to be encountered by emergency management workers.

The types of organisations that would find the *Glossary* of value include:

- local governments;
- State and Commonwealth government departments;
- professional groups;
- processing, storage and transport industries;
- other large private sector organisations;
- hospitals, educational institutions, etc; and
- community organisations.

BACKGROUND

Confusion in emergency management often arises from a misunderstanding over words because emergency management is at the nexus of many fields. There is also an increasing proliferation and duplication of terms and definitions, as the emergency management field itself is still evolving and adapting itself to new and changing contexts.

The *Glossary* provides information on the range of terms and definitions encountered in emergency management, and may, in the future, lead to a consensus on terms and definitions. This *Glossary* does not present new or different definitions of terms, but draws together definitions from many existing sources. It also suggests a set of core terms (see Annex B).

WHAT IS EMERGENCY MANAGEMENT?

Emergency management is a range of measures to manage risks to communities and the environment. These measures are described by:

- the 'comprehensive' approach;
- the tall hazards' approach;
- the 'all agencies (or integrated)' approach; and
- the 'prepared community'.

Comprehensive emergency management concerns strategies for risk assessment, prevention, preparedness, response and recovery. It is not enough to wait for emergencies to occur and then react: risks to the community and the environment must be managed in a rational manner.

The **all hazards** approach concerns arrangements for managing the large range of possible effects of risks and emergencies. This concept is useful to the extent that a large range of risks can cause similar problems, and such measures as warning, evacuation, medical services and community recovery will be required during and following emergencies. Many risks will, however, require specific response and recovery measures, and will almost certainly require specific prevention and mitigation measures.

All agencies should be involved to some extent in emergency management. The context of emergency management for specific agencies varies, and may include:

- ensuring the continuity of their business or service;
- protecting their own interests and personnel;
- protecting the community and environment from risks arising from the activities of the organisation; and
- protecting the community and environment from credible risks.

Emergency management measures may thus be couched in a number of organisational and community contexts, including risk management, environmental management, occupational health and safety, quality management, and asset management.

The concept of the **prepared community** concerns the application of the comprehensive, all hazards and all agencies approaches at the local level (typically the local government level).

Emergency management measures, and the newly emerging techniques of emergency risk management, can be applied to a wide range of major **risks** and **hazardous events**, by a variety of disciplines.

'EMERGENCY' VERSUS 'DISASTER'

Each specialist field describes hazardous events in different ways, and there is also variation between the States and Territories. Thus, the hazardous events are variously labelled as 'accidents', 'incidents', 'emergencies', and 'disasters'; depending upon the scale of the event, the number of organisations involved, and the ability of the organisations to cope within their normal resources. For example, a major vehicle accident may be labelled an 'incident' by the emergency services, but may be labelled a 'disaster' by an emergency medical facility.

A general movement away from the terms 'counter-disaster' and 'disaster' towards the term 'emergency' has occurred in Australia over the last few years. Thus, in the *Glossary*, the term 'emergency' is generally used in compound terms, such as 'emergency management', in preference to 'disaster'. The terms 'disaster' and 'disaster management' are, however, still used in Australia to describe events of a truly disastrous nature.

PRINCIPLES FOR DEVELOPING THE GLOSSARY

The following principles were used in developing the *Glossary*.

- **Prescriptive versus descriptive** - Some dictionaries are 'prescriptive', in that they only include the so-called 'correct' terms and definitions, and exclude others. Other dictionaries, such as the Oxford English Dictionary and Macquarie Dictionary, are 'descriptive' in that they attempt to list and define most terms in common usage. The *Glossary* combines both approaches: it is descriptive in that it includes the most common terms, but it is prescriptive in that it suggests preferred terms and definitions, ie. the first definition is usually the preferred definition.
- **Invention of new terms and definitions** - In the development of the *Glossary* new terms were not invented, and new definitions were developed only when no useful definition existed. The invention of new terms and definitions is a natural process of language, and should be left to the users of language. Changes to definitions have been minimal, and only made to unify the style of the *Glossary*, eg. "Meaning..." and "Means..." have been removed from the beginning of some definitions, some spelling has been standardised, and the plural form of terms has been replaced by the singular form.
- **A core set of emergency management terms** - A core set of terms is listed for some of the fundamental concepts of emergency management: See Annex B for this set of terms.
- **Selection of emergency management terms** - The terms were selected from Emergency Management Australia (EMA) publications, Australian standards, best practice guidelines and codes of practice, correspondence from Australian organisations, and UN and other international publications.
- **Selection of definitions** - Definitions were selected using the criteria of:
 - widespread acceptance;
 - widespread use;
 - definition from an EMA publication;
 - definition from Australian publications and websites;
 - correspondence from Australian organisations; and
 - UN and other international publications.

For complete sets of terminology in a given field, see the specialist glossaries and publications listed in Annex A.

RELATIONSHIP BETWEEN THE GLOSSARY AND THE THESAURUS

The *Australian Emergency Management Glossary* has been developed in parallel with the *Emergency Management Terms Thesaurus*. The *Glossary* is intended to be a dictionary and working tool for all in emergency management. It thus contains an alphabetical list of terms and definitions. The *Thesaurus* is intended to be a tool for people accessing information, librarians and file managers. It thus contains an alphabetical list of terms showing the relationship between many of these terms, with some abbreviated definitions included as 'scope notes'. The development of the two publications has been coordinated to ensure a workable degree of compatibility.

EXPLANATORY NOTES

The *Glossary* contains terms, abbreviations and acronyms definitions. The following conventions are used.

- Any term (word, phrase or name) shown in **bold** is defined elsewhere.
- Alternative definitions for the same term begin with ‘*’.
- The number in brackets at the end of each definition refers to the reference from which the definition was taken. These references are listed in Annex A.
- The preferred term is accompanied by a definition. Where a term is not preferred, reference to another term is indicated with the phrase ‘See...’.
- Where an explanation of an abbreviation is provided elsewhere, the phrase ‘See...’ is used.
- Where another term of similar meaning may be referred to, the phrase ‘See also...’ is used.
- Where a term is considered synonymous with another term, the phrase ‘Syn...’ is used.
- Where a term, usually the name of an organisation, has changed, the phrase ‘Previously known as...’ is used to indicate the previous term, and the phrase ‘Now known as...’ is used to indicate the current term.

ACKNOWLEDGMENTS

The *Glossary* was developed with the active participation of many organisations across Australia, without whose assistance the Glossary could not have been produced. These organisations included:

- State and Territory –
 - emergency management organisations,
 - ambulance services,
 - police departments,
 - fire services,
 - Emergency Services,
 - health departments;
- Commonwealth –
 - departments,
 - research organisations;
- national peak bodies;
- industry;
- community organisations; and
- research institutions.

A

AA See **Airservices Australia**.

AAA See **Australian Airports Association**.

AAC Australian Agricultural Council.

AAEC Australian Atomic Energy Commission.

AAFA Australian Assembly of Fire Authorities. *Now known as Australasian Fire Authorities Council (AFAC)*.

AAHL Australian Animal Health Laboratory.

AAOA Australian Airport Owners Association. *Now known as Australian Airports Association (AAA)*.

AAPMA See **Association of Australian Port and Marine Authorities**.

AARFA Australian Association of Rural Fire Authorities. *Now known as Australasian Fire Authorities Council (AFAC)*.

AATA Australian Air Transport Association.

absorbed dose The energy absorbed per unit mass by matter from **ionising radiation** which impinges upon it.⁽⁵⁷⁾ See also **dose**.

abutment That part of the valley side against which the **dam** is constructed.⁽¹⁰⁾

acceleration A change in velocity with time; in seismology and in **earthquake** engineering, it is

expressed as a fraction of gravity, with reference to vibrations of the ground or of a structure.⁽⁹⁵⁾

acceleration coefficient An index related to the expected severity of **earthquake** ground motion.⁽⁷⁴⁾

accelerograph Instrument for recording **acceleration**.⁽⁹⁵⁾ See also **accelerometer** and **seismograph**.

accelerometer A **seismograph** for measuring ground **acceleration** as a function of time.⁽⁴²⁾ See also **accelerograph** and **seismometer**.

acceptable risk That level of **risk** that is sufficiently low that society is comfortable with it. Society does not generally consider expenditure in further reducing such risks justifiable.⁽¹¹⁾ See also **risk criteria**, **tolerable risk**, and **tolerated risk**.

accident A sudden event in which harm is caused to people, property or the built or natural environment.⁽⁵⁾ See also **incident**, **emergency** and **disaster**.

accident rate The number of reportable accidents related to the number of persons working, or the total number of hours worked, or to units, produced in an installation, company, etc. This enables, within limits, a comparison of the safety performance of various installations, companies, etc. provided exactly the same definitions for the accident rate are used.⁽¹⁸⁾

ACDC Australian Counter Disaster College. *Now known as Australian Emergency Management Institute*.

ACIC Australian Chemical Industry Council. *Now known as Plastics and Chemical Industry Council (PACIA)*.

ACRES See **Australian Centre for Remote Sensing**.

active fault A fault along which slip has occurred in historical (or Holocene) time, or on which **earthquake** foci are located.⁽⁴²⁾

activity The number of disintegrations per unit time taking place in a **radioactive material**.⁽⁶⁾

acute dose A total radiation dose received at one time over a period so short that biological recovery cannot occur.⁽¹²⁾ See also **dose**.

acute respiratory disease Several acute, mild to severe infections of the respiratory tract, caused by a variety of viruses and bacteria. It ranges from the common cold to influenza, bronchitis, even fatal pneumonia. A major cause of illness and mortality in disaster situations.⁽⁷²⁾ Syn. 'acute respiratory infection (ARI)'.⁽⁷²⁾

acute respiratory infection (ARI) See **acute respiratory disease**.

acute toxicity * A toxic effect which occurs immediately or shortly after a single exposure.⁽¹⁰²⁾⁽¹⁰¹⁾

* Adverse effects occurring within a short time (usually up to 14 days) after administration of a single dose (or exposure to a given concentration) of a test substance, or after multiple doses (exposures), usually within 24 hours.⁽³¹⁾ See also **toxicity**.

ADF Australian Defence Force.

ADG Code See **Australian Code for the Transport of Dangerous Goods by Road and Rail**.

advance burn A prescribed fire that reduced fuel through a forest area before felling operations. It is

intended to improve the safety of timber harvesting operations and as a silvicultural tool to protect lignotubers and standing trees.⁽³⁾ See also **prescribed burning**.

advance operations centre A location in close proximity to a pollution incident from which an **on scene coordinator** directs pollution response operations.⁽⁷⁾ See also **emergency operations centre**.

advanced life support Interventions to protect the airway, assist breathing, relieve pain and suffering, and maintain circulation (includes the use of laryngoscope and/or Magill's forceps, defibrillation and drug therapy).⁽¹⁹⁾ See also **basic life support, emergency medicine** and **first aid**.

AEC Australian Environmental Council. Now known as **Australian and New Zealand Environment and Conservation Council (ANZECC)**.

AEMI See **Australian Emergency Management Institute**.

AEP See **airport emergency plan and annual exceedance probability**.

aerial bombing See **air attack**.

aerial detection The discovering, locating and reporting of fires from aircraft.⁽³⁾

aerial firefighting See **air attack**.

aerial fuel The standing and supporting combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, bark and creepers.⁽³⁾ See also **coarse fuel, elevated dead fuel, fine fuel, fuel type, slash** and **surface fuel**.

aerial ignition The igniting of fine fuels for prescribed purposes by dropping incendiary devices or materials from aircraft.⁽³⁾ *See also* **air attack**.

aerial observer A person specifically assigned to discover, locate, and report fires from an aircraft, and to observe and describe conditions at a fire scene.⁽³⁾

aerial reconnaissance The use of aircraft for observing fire behaviour, the threat to values, control activity, and other critical factors to facilitate command decisions on strategies needed for suppression.⁽³⁾

aerodrome emergency procedure
See **airport emergency plan**.

aeromedical evacuation Use of rotary or fixed winged aircraft to facilitate the retrieval of the injured or infirm. Aircraft are staffed by suitably qualified practitioners of aviation medicine.⁽¹⁹⁾

AFAC *See* **Australasian Fire Authorities Council**.

AFP Australian Federal Police.

aftershock Smaller earthquake following the largest earthquake of a series concentrated in a restricted crustal volume.⁽⁴²⁾⁽¹³⁾ *See also* **earthquake swarm**, **foreshock** and **main shock**.

agency field commander The officer responsible for commanding the activities of an agency in the field.⁽⁴⁰⁾

agency operations centre A facility from which a particular agency's resources are commanded, controlled, coordinated and assigned to an incident.⁽⁴⁰⁾ *See also* **emergency operations centre**.

agency representative An individual

allocated to an incident from an assisting agency who has been delegated full authority to make decisions on all matters affecting that agency's participation at the incident.⁽²⁾ *Syn.* 'liaison officer'.

AGSO *See* **Australian Geological Survey Organisation**.

AHC Animal Health Committee. *Now known as* **Veterinary Committee of Australia and New Zealand (VCANZ)**.

AHD *See* **Australian height datum**.

aid Free material or financial assistance or other support given to an organisation, community or country.⁽⁷²⁾

AIDAB Australian International Development Assistance Bureau. *Now known as* **Australian Agency for International Development (AusAID)**.

AIEH Australian Institute of Environmental Health.

AIES *See* **Australian Institute of Emergency Services**.

AIFS Australian integrated forecaster station.

AIIMS *See* **Australian Interservice Incident Management System**.

AIP *See* **Australian Institute of Petroleum**.

AIPECE *See* **Australian Institute of Petroleum Environmental Conservation Executive**.

air attack The direct use of aircraft in the suppression of wildfire.⁽³⁾ *Syn.* 'aerial bombing' and 'aerial firefighting'.

aircraft accident An occurrence during the operation of an aircraft in which any person involved suffers

- death or serious injury or in which the aircraft receives substantial damage.⁽⁴⁷⁾ See also **aircraft incident**.
- aircraft incident** An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could affect continued safe operation if not corrected. An incident does not result in serious injury to persons or substantial damage to aircraft.⁽⁴⁷⁾ See also **aircraft accident**.
- air inversion** A meteorological condition in the earth's atmosphere in which the air some distance from earth surface is higher in temperature than that at ground level. Such a condition traps air and released vapours near the earth surface, thereby impeding dispersion.⁽⁷¹⁾
- airline coordinator** A representative authority delegated by an airline to represent its responsibilities during an emergency involving its aircraft or property.⁽⁴⁷⁾
- airport control tower** A facility established to provide air traffic control service for airport traffic.⁽⁴⁷⁾
- airport emergency exercise** A test of the **emergency plan** and review of the results in order to improve the effectiveness of the plan.⁽⁴⁷⁾
- airport emergency plan** Procedures for coordinating the response of airport services with other agencies in the surrounding **community** which could assist in responding to an **emergency** occurring on, or in the vicinity of, the airport.⁽⁴⁷⁾
- airport flight information service** **Air traffic service** units which provide airport flight information service, **search and rescue**, alerting service to aircraft at non-controlled airports, and assistance to aircraft in emergency situations.⁽⁴⁷⁾
- Airservices Australia (AA)** A statutory authority responsible for air traffic services, aeronautical information services, and firefighting services. It is also responsible for protecting the environment from the effects of Commonwealth jurisdiction aircraft.⁽¹¹¹⁾ *Previously known as 'Civil Aviation Authority'.*
- air traffic service** A generic term meaning, variously, flight information service, alerting service, air traffic advisory service, air traffic control, area control, approach control, or aerodrome control services.⁽⁴⁷⁾
- airway** The passage by which air enters and leaves the lungs.⁽⁷³⁾
- airway management** Administration of airway structures to ensure clear passage for the flow of gases into and out of the body. It may involve simple postural changes such as jaw thrust or lateral positioning, or advanced techniques such as oropharyngeal intubation.⁽¹⁹⁾
- ALARA** An acronym concerning risk management for 'as low as reasonably achievable'. See also **ALARP**.
- alarm** Signal giving warning of danger. Advisory that hazard is approaching but is less imminent than implied by warning message.⁽⁹⁵⁾ See also **warning** and **alert**.
- alarm and dispatch centre** A facility in use in many metropolitan areas for the rapid dispatch of **emergency services**. The facility is usually contacted by the general public using a simple three-digit telephone number.⁽⁴⁷⁾

ALARP An acronym concerning risk management for 'as low as reasonably practicable'. See also **ALARA**.

alert That period when it is believed that resources may be required which enables an increased level of preparedness.⁽³²⁾ See also **warning** and **alarm**.

alert phase A situation wherein apprehension exists as to the safety of a vessel or aircraft and of the persons on board.⁽⁴⁹⁾ See also **distress phase** and **uncertainty phase**.

ALGA See **Australian Local Government Association**.

all-agencies approach Arrangements for dealing with emergencies and disasters involving an active partnership between Commonwealth, State and Territory, and local levels of government, statutory authorities, and voluntary and community organisations. *Syn.* the 'integrated approach'.

all-hazards approach Dealing with all types of emergencies or disasters and civil defence using the same set of management arrangements.

allocated resources Resources working at an incident.⁽²⁾ See also **resources**.

alpha radiation Radiation consisting of streams of alpha particles.⁽⁵¹⁾ See also **beta radiation** and **gamma radiation**.

ambulance casualty officer An ambulance officer supervising the **patient treatment post**, until the arrival of a **medical triage officer**.⁽³²⁾

ambulance control centre Usually a

pre-designated site in State or regional disaster plans from which ambulance operations for a disaster can be coordinated. May be the same operations room used for normal ambulance dispatching, a separate room in the same facility, or a geographically distinct centre linked with a State Emergency Operations Centre.⁽³²⁾ See also **agency operations centre**.

ambulance controller Usually a senior ambulance officer, located distant from the disaster site at a medical or **ambulance control centre**, responsible for controlling all ambulance operations at a disaster. Receives input from the on-site ambulance commander and liaises with the **medical controller**.⁽³²⁾ See also 'ambulance site commander'.

ambulance coordination centre See **ambulance control centre**.

ambulance holding point An area which may be set aside at which ambulances and other patient transport vehicles are marshalled until required to collect patients from the **patient treatment post**. Prevents congestion at the **ambulance loading point**.⁽³²⁾ *Syn.* 'ambulance loading area'.

ambulance loading area See **ambulance loading point**.

ambulance loading point The area, adjacent to the **patient treatment post**, from which patients are loaded onto ambulances or other vehicles for transport away from the disaster site.⁽³²⁾

ambulance marshal An person designated to supervise parking and movements of ambulances from a designated **ambulance holding point**.⁽³²⁾

ambulance marshalling area See **ambulance holding point**.

ambulance site commander The senior ambulance officer on-site who assumes command of all ambulance personnel and resources and liaises with the **medical commander**.⁽³²⁾ See also **ambulance controller**.

ambulance transport officer An ambulance officer on-site who manages ambulance functions until replaced by more senior personnel, when he/she will manage the effective loading of ambulance vehicles.⁽³²⁾

AMDGG See **Australian Medical Disaster Coordination Group**.

AMOSC See **Australian Marine Oil Spill Centre**.

amplitude The difference between zero level and peak of any wave such as a **seismic wave**.⁽⁹⁵⁾

AMSA See **Australian Maritime Safety Authority**.

anabatic wind An upslope wind, it usually applies only to the wind blowing up a hill or mountain as the result of strong surface heating of the slopes.⁽¹⁰⁸⁾ See also **katabatic wind**.

ANCOLD Australian National Committee on Large Dams.

ANEMIS See **Animal Health Emergency Information System**.

anemometer Instrument which measures wind speed or wind speed and direction.⁽⁹⁵⁾⁽¹⁰⁸⁾

Animal Health Emergency Information System (ANEMIS) A system for the collection, assimilation, actioning and dissemination of essential disease

control information using paper documentation and automatic data processing assistance.⁽²⁹⁾

annual exceedance probability (AEP) * The **probability** of a specified magnitude of a natural event being exceeded in any year.⁽¹⁰⁾

* A measure of the **likelihood** (expressed as a **probability**) of a **flood** reaching or exceeding a particular magnitude. A 1% (AEP) flood has a 1% (or 1 in 100) chance of occurring or being exceeded at a location in any year.⁽³³⁾ See also **average recurrence interval**.

annual flood Highest peak **discharge** in a year.⁽⁹⁵⁾

annual flood series A series of recorded annual maximum **flood** peak discharges.

ANRARA Australian National Road Accident Rescue Association

ANSTO See **Australian Nuclear Science and Technology Organisation**.

ANTA See **Australian National Training Authority**.

antecedent precipitation index Weighted summation of past daily precipitation amounts, used as an index of soil moisture.⁽⁹⁵⁾ See also **drought index**.

anticyclone Region of the atmosphere where the pressures are high relative to those in the surrounding region at the same level. It is represented on a synoptic chart by a system of isobars at a specific level, or of contours at a specific pressure, which enclose relatively high value of pressure or contour height.⁽¹⁰⁸⁾ *Syn.* 'area of high pressure', 'high' and 'high pressure

- system'.
- antidote** A treatment for chemical over-exposure which is specific (more or less) to the chemical or class of chemicals, in contrast to supportive treatment which maintains body functions.⁽¹⁰²⁾
- ANZEC** Australian and New Zealand Environment Council. *Now known as Australian and New Zealand Environment and Conservation Council (ANZECC).*
- ANZECC** Australian and New Zealand Environment and Conservation Council.
- ANZHIPT** Australian and New Zealand Hazardous Industry Planning Taskforce.
- ANZLIC** See **Australian and New Zealand Land Information Council.**
- APPEA** Australian Petroleum Production and Exploration Association.
- appurtenant works** All ancillary structures of a **dam** including, but not limited to, spillways, inlet and outlet works, tunnels, pipelines, penstocks, power stations and diversions.⁽¹⁰⁾
- APRSS** Australian Photogrammetric and Remote Sensing Society.
- AQIS** See **Australian Quarantine and Inspection Service.**
- ARC** Australian Red Cross. *See also Red Cross.*
- areal precipitation** The average amount of precipitation which has fallen over a specific area during a particular interval of time.⁽¹⁰⁸⁾
- ARI** See **annual recurrence interval** and **acute respiratory disease.**
- ARL** See **Australian Radiation Laboratory.**
- ARMS** See **automatic real-time mapping system.**
- ASA** See **Airservices Australia.**
- ASDEST** See **Australian Space Debris Emergency Search Team.**
- aseismic** Non-seismic; used to designate an area free from **seismic** activity or a tectonic deformation process not accompanied by seismic events.⁽⁹⁵⁾
- ash flow** Pyroclastic flow including a liquid phase and a solid phase composed mainly of ashes.⁽⁹⁵⁾ *See also tephra.*
- ASIO** See **Australian Security Intelligence Organisation.**
- aspect** Side of a slope or structure fronting in a direction, eg. a northerly aspect indicates that the slope or wall of a structure faces the north. An important factor in fire behaviour considerations.⁽²¹⁾
- asphyxiant** A substance which, as a gas or vapour, can cause suffocation due to a lack of oxygen.
- assembly area** * A designated location used for the assembly of emergency-affected persons. The area may also incorporate an emergency relief centre.⁽⁹⁸⁾
* A prearranged, strategically placed area, where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.⁽⁶⁵⁾
- assessment** * Survey of a real or potential disaster to estimate the actual or expected damages and to make recommendations for **prevention, preparedness** and **response.**⁽⁹⁵⁾ *See also damage*

- classification and disaster area survey team.**
- * The first aider's evaluation of the casualty's condition indicated by the history, symptoms and **signs**.⁽⁷³⁾
- assisting agency** See **support agency**.
- Association of Australian Port and Marine Authorities (AAPMA)** A peak body representing the interests of marine organisations in Australia. Its mission is to enhance the efficient management and use of the nation's ports and marine facilities.⁽²⁰⁾
- ATAC** See **Australian Transport Advisory Council**.
- ATCFS** Automated Tropical Cyclone Forecasting System.
- ATE Code** See **Australian Code for the Transport of Explosives by Road and Rail**.
- ATM** Asynchronous transfer mode.
- atropine** A common **antidote**.
- attenuation function** Related to **seismic** events, a function that enables determination of peak ground motions at a site given the location and magnitude of the event.⁽¹¹⁾
- AURISA** See **Australasian Urban and Regional Information Systems Association Inc.**
- AusAID** See **Australian Agency for International Development**.
- AUSCONPLAN-SPRED** See **Australian Contingency Plan for Space Re-entry Debris**.
- AUSDISPLAN** Australian Disaster Plan. *Now known as Commonwealth Government Disaster Response Plan.*
- AUSLIG** See **Australian Surveying and Land Information Group**.
- AUSREP** See **Australian Ship Reporting System**.
- AUSSAR** See **Australian Search and Rescue**.
- Australasian Fire Authorities Council (AFAC)** The body representing urban and rural fire services and land management agencies in Australia and New Zealand with responsibility for the protection of life and property from fire and other emergencies. The Council was formed by the merging of the Australian Assembly of Fire Authorities (AAFA) and the Australian Association of Rural Fire Authorities (AARFA).⁽²¹⁾
- Australasian Urban and Regional Information Systems Association Inc. (AURISA)** The principal authoritative source of information in the Australian, New Zealand and Asia-Pacific region for urban and regional information systems with an emphasis on spatial information systems policy, applications and technology.⁽⁹⁷⁾
- Australian Agency for International Development (AusAID)** An independent agency within the Department of Foreign Affairs and Trade. AusAID's four main objectives are to:
- provide advice to the Government on international development issues;
 - plan and deliver Australia's official development cooperation program;
 - work in close partnership with the Australian community and with overseas countries and international agencies in implementing programs for ecologically sustainable development; and

- enhance understanding in Australia of international development issues and of Australia's development cooperation program.⁽⁹⁷⁾ *Previously known as 'Australian International Development Assistance Bureau (AIDAB)'*.

Australian Airports Association

(AAA) An Australia-wide association of airport owners and operators working closely with authorities to ensure that airport safety standards are maintained. The AAA organises training courses for its members and provides a common airport industry voice.

Australian and New Zealand Convention of Ambulance Authorities

A forum where the heads of each country's ambulance services meet and provide a cross-flow of information on human resource management, medical, industrial and emergency management issues that affect management of ambulance services.⁽⁹⁷⁾

Australian and New Zealand Environment and Conservation Council (ANZECC) A national forum for member governments to exchange information and experience, and to develop coordinated policies on national and international environment and conservation issues. *Previously known as Australian Environmental Council (AEC) and Australian and New Zealand Environment Council (ANZEC)*

Australian Assembly of Fire Authorities (AAFA) *Now known as Australasian Fire Authorities Council (AFAC).*

Australian Association of Rural Fire Authorities (AARFA) *Now known as Australasian Fire Authorities Council (AFAC).*

Australian Centre for Remote Sensing (ACRES) A business unit of the **Australian Surveying and Land Information Group (AUSLIG)**, Department of Industry, Science and Tourism, which is Australia's principal earth resource satellite ground station and data processing facility. It is one of a network of ground stations covering most of the world.⁽⁹⁷⁾

Australian Chemical Industry Council (ACIC) *Now known as Plastics and Chemicals Industry Association.*

Australian Chief Veterinary Officer

The nominated senior Commonwealth veterinarian in the Department of Primary Industries and Energy who manages Australia's international animal health commitments and the Commonwealth's response to an **exotic animal disease** incursion.⁽²⁹⁾ See also **chief veterinary officer**.

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) The code prepared by the standing national Advisory Committee on the Transport of Dangerous Goods and endorsed by the Australian Transport Advisory Council. The ADG Code is based on recommendations prepared by the United Nations Committee of Experts on the Transport of Dangerous Goods and covers the classification, packaging, marking and transport of dangerous goods.⁽¹⁰³⁾

Australian Code for the Transport of Explosives by Road and Rail (ATE Code) A code intended to provide a uniform basis for State and Territory legislation governing the transport of explosives. *Syn.* 'Australian Explosives Code' and 'ATE Code'.

Australian Contingency Plan for Space Re-entry Debris (AUSCONPLAN-SPRED) A plan prepared by **Emergency Management Australia** to coordinate the activities of Commonwealth, State and Territory departments and authorities involved in recovering and neutralising any radiological threat arising from the re-entry of radioactive space debris over Australia.

Australian Counter Disaster College (ACDC) *Now known as Australian Emergency Management Institute.*

Australian Disaster Plan (AUSDISPLAN) *Now known as Commonwealth Government Disaster Response Plan.*

Australian Emergency Management Institute (AEMI) The training and education section of **Emergency Management Australia**. *Previously known as 'Australian Counter Disaster College (ACDC)'*.

Australian Environmental Council (AEC) *Now known as Australian and New Zealand Environment and Conservation Council (ANZECC).*

Australian Explosives Code See **Australian Code for the Transport of Explosives by Road and Rail.**

Australian Geological Survey Organisation (AGSO) The national

geological research and survey agency in Australia. It is a research agency in the Commonwealth Department of Primary Industries and Energy, which has a key role to play in helping Australia's resource based industries increase their international competitiveness, while observing the principles of sustainable development.⁽⁹⁷⁾

Australian height datum (AHD) A common national surface level datum approximately corresponding to mean sea level.⁽⁶¹⁾

Australian Institute of Emergency Services (AIES) A professional body for the study of the roles and functions of emergency services and emergency management organisations throughout Australia and the promotion and advancement of professional standards in these and associated services.

Australian Institute of Petroleum (AIP) A representative body of Australia's petroleum industry. Its mission is to promote the reputation and assist in the development of a strong internationally competitive Australian industry, with particular emphasis on refining, distributing and marketing petroleum products efficiently, economically and safely, all in harmony with the environment and community standards.⁽⁹⁷⁾

Australian Inter-Service Incident Management System (AIIMS) Five sub-systems which collectively provide a total systems approach to incident management, modified from the National Interagency Incident Management System (USA).⁽²⁾ See **also incident control system.**

Australian International Decade for Natural Disaster Reduction

(IDNDR) Coordination Committee

A Committee that liaises with the other national and international IDNDR Committees and, in concert with these and other appropriate government and non-government organisations, develops and implements a plan for the promotion of the activities of the Decade consistent with UN Resolutions 42/169 and 44/236 and the comprehensive approach to disaster management.⁽³⁸⁾ See also

Australian International Decade for Natural Disaster Reduction (IDNDR) Project and Advisory Sub-Committee.**Australian International Decade for****Natural Disaster Reduction****(IDNDR) Project and Advisory Sub-Committee**

A committee to provide advice to the IDNDR Coordination Committee and to take executive decisions where appropriate. The tasks of the Committee are to:

- develop and review project submissions to the IDNDR Coordination Committee;
- evaluate and approve projects;
- provide guidance to the IDNDR Coordination Committee especially on matters relating to the strategic plan; and,
- seek expert advice for IDNDR activities.⁽³⁸⁾ See also

Australian International Decade for Natural Disaster Reduction (IDNDR) Coordination Committee.**Australian Local Government**

Association (ALGA) The peak body representing local government throughout Australia.

Australian Marine Oil Spill Centre

(AMOSC) An industry-financed facility based at Geelong which

operates Australia's major oil spill response equipment stockpile on 24 hour stand-by for response around the Australian coast and provides training in the theoretical, planning and practical issues of oil spill response management for the oil industry, government and other personnel.⁽⁹⁷⁾

Australian Maritime Safety Authority**(AMSA)**

A Commonwealth regulatory safety agency having as its charter the efficient delivery of safety and other services to the Australian maritime industry and provision of search and rescue services to the aviation and maritime sectors.⁽²⁰⁾

Australian Medical Disaster**Coordination Group (of Australian****Health Minister's Advisory****Council) (AMDGG)**

The peak body responsible for the development of national policy on **disaster medicine**.

Australian National Training**Authority (ANTA)**

A Commonwealth statutory authority responsible for the development of a national vocational education and training system in cooperation with State and Territory Governments, the Commonwealth Government and industry.⁽⁹⁷⁾

Australian Nuclear Science and**Technology Organisation**

(ANSTO) An organisation whose functions are to:

- provide expert scientific and technical advice across the nuclear fuel cycle to government and to support Australia's national strategic and nuclear policy objectives;
- operate large nuclear science and

technology based facilities in Australia and overseas for the benefit of the research and development community, including postgraduate students and staff in the higher education sector and for industry;

- undertake research on specific topics to advance the understanding of nuclear science and the nuclear fuel cycle;
- apply resultant technologies and other relevant, unique capabilities on focussed research and development to increase the competitiveness of Australian industry and the quality of life for all Australians.⁽⁹⁷⁾

Australian Quarantine and Inspection Service (AQIS) As part of the Commonwealth Department of Primary Industries and Energy, AQIS provides quarantine services including imported foods, import clearance, post-entry animal quarantine, post-entry plant quarantine, barrier control at airports, at seaports and at mail exchanges, the Northern Australian Quarantine Strategy, imported grains and the ballast water program.⁽⁹⁷⁾

Australian Radiation Laboratory (ARL) As part of the Commonwealth Department of Health and Family Services, the agency responsible for the radiation aspects of health and management of the radiation badge service.

Australian Search and Rescue (AUSSAR) A division of the **Australian Maritime Safety Authority (AMSA)** responsible for coordinating both maritime and aviation **search and rescue (SAR)** operations.

Australian Security Intelligence

Organisation (ASIO) The Commonwealth agency responsible for advising the Australian Government on risks to Australia's security.

Australian Ship Reporting System (AUSREP) A system designed to contribute to safety of life at sea that is operated by the **Australian Marine Safety Authority (AMSA)** through the **Rescue Coordination Centre (RCC)**.

Australian Space Debris Emergency Search Team (ASDEST) A team comprising Australian Defence Force personnel and Commonwealth government scientific and radiation health specialists which has responsibility for locating, neutralising and recovering radioactive space debris under **AUSCONPLAN SPRED**.

Australian Surveying and Land Information Group (AUSLIG) An organisation that operates within the Department of Industry, Science and Tourism, which is the Commonwealth Government's primary source of advice on land information matters and is responsible for:

- policy, standards and coordination associated with delivery of national and international land information programs;
- management of the national mapping, maritime boundary, remote sensing and geodesy programs; and
- implementation of the Australian Spatial Data Infrastructure.⁽⁹⁷⁾

Australian Transport Advisory Council (ATAC) Ministerial council for transport matters.

Australian Veterinary Emergency

- Plan (AUSVETPLAN)** A series of documents which outline the Australian approach to the eradication and control of the more important animal diseases not presently occurring in this country; linking policy, strategies, implementation, coordination and agency plans.⁽²⁹⁾ See also **COMVETPLAN**.
- AUSVETPLAN** See **Australian Veterinary Emergency Plan**.
- automatic real-time mapping system (ARMS)** A computer-based system that superimposes grid reference data from a global positioning system onto a mapping system to facilitate the plotting of the perimeter of a fire or other phenomena requiring the plotting of a perimeter or path. The data can be transmitted via radio to a control room to provide an accurate real time picture of the extent of a situation.⁽²¹⁾
- automatic weather station (AWS)** A station, often situated in an isolated location, at which meteorological measurements are made by automatic methods which do not require local human supervision and control. Various sensors may be used, producing output in either digital or analogue form. Output from individual sensors may be accumulated locally, transmitted continuously or at fixed times to a central controlling station, or made available for interrogation on demand.⁽⁵²⁾
- auxiliary spillway** A secondary **spillway** designed to operate only during exceptionally large floods.⁽⁹⁾
- available resources** Resources at an incident and available for allocation at short notice.⁽²⁾ See also **resources**.
- avalanche** Mass of snow and ice falling suddenly down a mountain slope and often taking with it earth, rocks and rubble of every description.⁽¹⁰⁸⁾ See also **landslide**.
- average annual damage (AAD)** The average damage per year that would occur in a nominated development situation from flooding over a very long period of time. AAD provides a basis for comparing the economic effectiveness of different management measures against floods of all sizes, ie. their ability to reduce the AAD.⁽⁶¹⁾
- average recurrence interval (ARI)** The long-term average number of years between the occurrence of a flood as big as or larger than the selected event, eg. floods with a discharge as great as or greater than the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.⁽⁶¹⁾ See also **annual exceedance probability**.
- avgas** Aviation gasoline.
- AVL** Automatic vehicle location.
- avtur** Aviation turbine fuel.
- awareness stage** The attaining of initial knowledge of the existence of an actual or potential emergency situation or incident. It includes the receiving of information by any person or agency who in turn subsequently notifies the **search and rescue** system.⁽⁸⁾
- AWS** See **automatic weather station**.

B

bacillary dysentery An acute, severe, intestinal disease due to the *Shigella* bacillus, type 1, characterised by bloody stools and fever, associated with poor personal hygiene and sanitation in crowded closed communities (ships, refugee camps, jails). Especially frequent in children and often occurring as sudden outbreaks. Transmitted via the faecal route or water-borne through contaminated water supply, either directly through hand contact or indirectly through contaminated food. The term '**dysentery**' is often used in a general sense for many non-specific cases of gastro-enteritis and diarrhoea.⁽⁷²⁾

back bearing The direction from an object back to the point of observation; the opposite to a **bearing**.⁽²⁷⁾

back burn A fire started intentionally from a prepared line or other barrier to burn an area of flammable material in the path of an advancing fire in order to control that fire.⁽²¹⁾
See also **prescribed burning**.

background radiation The **radiation** in man's natural environment, including cosmic rays and radiation from the naturally radioactive elements.⁽⁶⁾

barometric pressure The pressure exerted by the atmosphere as a consequence of the force of gravity.⁽⁹⁵⁾

barrage Barrier across a stream provided with a series of gates or

other control mechanisms to control the water surface level upstream, to regulate the flow or to divert water supplies into a canal.⁽⁹⁵⁾ See also **dam**.

base of dam The general foundation area of the lowest portion of the main body of the **dam**.⁽¹⁰⁾

BASI See **Bureau of Air Safety Investigation**.

basic life support The provision of basic interventions to protect the airway, assist breathing and maintain the circulation without the use of drugs, defibrillation or advanced techniques. Normally refers to a combination of **expired air resuscitation** and **external cardiac compression** to provide **cardiopulmonary resuscitation**.⁽³²⁾
See also **advanced life support**, **emergency medicine**, and **first aid**.

bearing The direction from a point of observation to an object.⁽²⁷⁾ See also **back bearing**.

Beaufort scale A numerical scale for indicating the force or velocity of wind, ranging from 0 for calm to 12 for hurricane, or velocities above 120 kilometres/hour.⁽⁵¹⁾ See Annex C for more information.

becquerel (Bq) The **SI** unit for measuring the activity of a radioactive sample. One becquerel is the equivalent of one disintegration per second (replaces the 'curie (Ci)' - $1 \text{ Ci} = 3.7 \times 10^{10} \text{ Bq}$).⁽⁷¹⁾

belayed Controlled under tension by a rescuer.⁽⁵⁹⁾

bench mark An accurate height measurement of a feature marked on a map. See also **spot measurement**.⁽²⁷⁾

beta radiation Radiation consisting of a stream of beta particles.⁽⁵¹⁾ See also **alpha radiation** and **gamma radiation** and **ionising radiation**.

biological agent A microorganism which causes disease in man, plants, or animals or causes the deterioration of material.⁽⁹⁵⁾

biological disaster Disaster caused by the exposure of living organisms to germs and toxic substances.⁽⁹⁵⁾

biological exposure index An index providing a warning level of biological response to a substance or agent, or warning levels of the substance or agent or its metabolite(s) in the tissues, fluids or exhaled air of an exposed person.⁽¹⁰⁴⁾

biological hazard Includes infectious and cytotoxic waste.⁽³²⁾

biological hazardous waste Any substance of human or animal origin other than food waste, which is to be disposed of and could harbour or transmit pathogenic organisms; includes but not limited to pathological specimens such as tissues, blood elements, excreta, secretions, bandages, and related substances.⁽⁷¹⁾

biological monitoring The measurement and evaluation of hazardous substances or their metabolites in the body tissues, fluids or exhaled air of an exposed person.⁽¹⁰³⁾

biophysical environment See **environment**.

biosphere See **environment**.

biota The total animal and plant life of a region, or sometimes a period, as seen collectively and interdependently.⁽⁵¹⁾ See also

environment.

blacking out See **mopping up**.

BLEVE See **boiling liquid expanding vapour explosion**.

blister agent A general body tissue irritant such as mustard gas that burns or blisters the skin and the lung tissue if inhaled.⁽³⁷⁾ See also **chemical warfare agent**.

blizzard Violent winter storm, lasting at least three hours, which combines below freezing temperatures and very strong wind laden with blowing snow that reduces visibility to less than 1 kilometre.⁽¹⁰⁸⁾

blocking anticyclone Slow-moving **anticyclone** of middle latitudes which has the appearance on a synoptic chart of an obstacle blocking the normal west-to-east movement of migratory extra-tropical depressions.⁽¹⁰⁸⁾

blood agent A chemical that interferes with cell respiration after entering the lungs through inhalation.⁽³⁷⁾ See also **chemical warfare agent**.

blood volume expander Sterile solution administered by intravenous injection to counteract the physiological complications of blood loss.⁽⁴⁷⁾

blow up A sudden increase in fire intensity and rate of spread, sufficient to preclude immediate control, or to upset existing suppression plans. It is often accompanied by powerful convection.⁽³⁾

boiling liquid expanding vapour explosion (BLEVE) A BLEVE occurs when liquids are stored under pressure at a temperature above their boiling points. A BLEVE is a major container failure, into two

or more pieces, at the moment in time when the contained liquid is well above its normal boiling at atmospheric temperature.

BOM See **Bureau of Meteorology**.

boom A floating mechanical device designed to control or divert oil.

Bq See **becquerel**.

branch An attachment fitted to the end of a hose to speed up the water to form an effective jet or spray pattern.⁽³⁾

breach The opening in a **dam** resulting from partial or total physical failure of a **dam**. The breach process is modelled by postulating certain breach shapes and rates of breach development.⁽¹¹⁾ See also **dam failure**.

breach hydrograph The **hydrograph** that results at the toe of a **dam** as a result of the **breach** of a dam.⁽¹¹⁾

breakaway The points at which a fire, after it has been contained, escapes into unburnt areas across a **fireline** or fire edge.⁽³⁾

breaking load See **mean breaking load**.

breaking strain See **mean breaking load**.

breathing apparatus A personal respirator worn to provide protection from the hazards of gases, vapours, fumes and dusts. Breathing apparatus may be of the cartridge or canister type, self-contained air supply, remote air supply or dust mask type.⁽⁸²⁾ See also **self-contained breathing apparatus**.

breeder reactor A reactor that produces fissionable fuel as well as consuming fuel, especially one that creates more than it consumes. The

new fissionable material is created by capture in fertile materials of neutrons from fission. The process by which this occurs is known as 'breeding'.⁽⁶⁾

briefing The process of advising personnel of the details of the incident or event with which they will be dealing. See also **debriefing**.

broadcast burning See **prescribed burning**.

brucellosis A febrile **zoonotic** disease caused by eating unpasteurised milk or dairy products from infected animals.⁽⁷²⁾

buffer A strip or block of land on which the fuels are reduced to provide protection to surrounding lands.⁽³⁾

bulk water carrier A large **tanker** used for replenishing water to firefighting tankers.⁽³⁾

bund An enclosure around plant or tanks to contain leakage or spillage.⁽⁸⁰⁾

Bureau of Air Safety Investigation (BASI) As a part of the Commonwealth government Department of Transport and Regional Development, the agency responsible for investigation of accidents and incidents involving civil-registered aircraft in Australia and its Territories.

Bureau of Meteorology (BOM) The overall mission of the Bureau is to observe and understand Australian weather and climate and provide meteorological, hydrological and oceanographic services in support of Australia's national needs and international obligations. This overall mission involves four separate basic missions:

- * monitoring - observation and data

collection to meet the needs of future generations for reliable homogeneous national climatological data;

* research - research directed to the advancement of meteorological science and the development of a comprehensive description and scientific understanding of Australia's weather and climate;

* services - provision of meteorological and related data, information, forecast, warning, investigation and advisory services on a national basis; and

* international - coordination of Australia's involvement in international meteorology.⁽⁹⁷⁾

burn A chemical or thermal burn, the former caused by corrosive substances and the latter by cryogenic liquids or hot substances.⁽⁸⁹⁾

burning off See **prescribed burning**.

burning out Intentionally lit fires to consume islands of unburnt fuel inside the fire perimeter.⁽³⁾

burn plan The plan which is approved for the conduct of **prescribed burning**. It contains a map identifying the area to be burnt and incorporates the specifications and conditions under which the operation is to be conducted.⁽³⁾

bushfire A fire involving grass, scrub or forest.⁽⁸⁶⁾ *Syn.* 'wildfire'.

bushfire danger period A period of the year, either established by legislation or declared by the relevant agency, when restrictions are placed on the use of fire due to dry vegetation and the existence of conditions conducive to the spread of fire.⁽²¹⁾

C

CAA See **Civil Aviation Authority**.

CACNARE See **Convention on Early Notification of Nuclear Accidents**.

CAD See **computer-aided dispatch**.

caller line identification (CLI) A facility that allows emergency service call takers to identify the caller's phone number and the address recorded for that phone. *Syn.* 'call-in line identification' and 'call line identification'.⁽²¹⁾

call line identification (CLI)/call-in line identification (CLI) See **caller line identification**.

call-out The executive command to deploy resources.⁽³²⁾

callsign The name assigned to a radio user for communications purposes.

carcinogen An agent which is responsible for the formation of a cancer.⁽¹⁰²⁾ See also **mutagen** and **teratogen**.

carcinogenic Capable of causing cancer.⁽¹⁰²⁾

cardiopulmonary resuscitation (CPR) A **resuscitation** technique that combines **expired air resuscitation** with **external cardiac compression**.⁽⁷³⁾ See also **advanced life support**, **basic life support** and **first aid**.

care area Location where first medical care is given to injured.⁽⁴⁷⁾

CAS No./CAS Number See **Chemical Abstract Service Number**.

casualty * An injured person. * A person killed or injured as the result of the incident or emergency.⁽⁶⁵⁾ See also **emergency affected person**, **patient** and **victim**.

casualty clearing area/post. See **patient treatment post**.

casualty collecting area A safe area close to the disaster incident site to which casualties are brought by rescuers. May be the same as the **patient treatment post** or an intermediate staging area from which casualties are collected by ambulance personnel not involved directly in rescue.⁽³²⁾

casualty collecting officer See **ambulance casualty officer**.⁽³²⁾

catchment area The area receiving the waters feeding a part or the totality of a watercourse.⁽¹⁰⁸⁾

catchpit An enclosure usually filled with granite or other non-chemically reactive chippings normally below ground level to contain leakage or spillage of flammable liquid safely.⁽⁸⁰⁾ See also **bund** and **compound**.

catering supervisor A person appointed to accept responsibility for the on-site management of catering.⁽³⁶⁾

cause-consequence diagram The combination of an **event tree** and a **fault tree**.⁽¹⁸⁾

CBT Computer-based training or competency based training.

CCDTF See **Commonwealth Counter Disaster Taskforce**.

CCEAD See **Consultative Committee on Exotic animal diseases**.

CD See **counter disaster** or **civil defence**.

CDANZ See **Communicable Diseases Network of Australia and New Zealand**.

CENNA See **Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency**.

chain reaction A process in which one nuclear transformation sets up conditions which permit a similar nuclear transformation to take place in another atom. Thus, when fission occurs in uranium atoms, neutrons are released which in turn produce fission in neighbouring uranium atoms.⁽⁶⁾

Chemical Abstracts A collection of abstracts that includes references to chemical literature world-wide produced by the American Chemical Society and the principle store of **Chemical Abstract Service Numbers**, containing information on over seven million chemicals.

Chemical Abstract Service Number (CAS No.) A number assigned to a single chemical by the **Chemical Abstracts Service** (a US-based reference service) which serves to identify that chemical. Some mixtures, but not many, are assigned a CAS Number. This is the only 'one chemical - one number' system covering all publicly-known chemicals.

Chemical Radiological Response Team (CRRT) A Department of Defence team with a capability to deal with chemical warfare agents and radiological incidents.⁽³⁷⁾

chemical warfare agent A chemical causing toxic damage to living tissue

that is used as a weapon, including **blister agents**, **blood agents**, **choking agents**, and **nerve agents**.⁽³⁷⁾

CHEMSAFE The Plastics and Chemicals Industries Association (PACIA) offers two services under the CHEMSAFE Emergency Management Program:

- the CHEMSAFE Emergency Response Service which responds to a broad spectrum of incidents, providing expert advice and total incident management; and,
- the CHEMSAFE Transport Incident Response Service which provides on the scene support in the event of a transport incident involving chemical products.⁽⁷⁰⁾

chief veterinary officer (CVO) The veterinarian of each State or Territory animal health authority who has responsibility for animal disease control in that State or Territory.⁽²⁹⁾

choking agent An irritant such as phosgene that irritates and damages lung tissue. See *also* **chemical warfare agent**.⁽³⁷⁾

cholera A severe acute infection of the intestines, characterised by profuse watery diarrhoea, vomiting, dehydration, muscle cramps and collapse. It is spread by the ingestion of foods and water contaminated by the faeces of infected (symptomatic or asymptomatic) persons. Several diarrhoeal diseases are diagnosed as cholera, but the latter is caused by the *Vibrio cholerae*. It is subject to international quarantine regulations.⁽⁷²⁾

chronic poisoning See **chronic toxicity**.

chronic toxicity A toxic effect which

occurs after repeated or prolonged exposure. Chronic effects may occur some time after exposure has ceased.⁽¹⁰²⁾ *Syn.* chronic poisoning. See *also* **acute toxicity**.

Ci Curie. See **becquerel**.

CISD See **critical incident stress debriefing**.

CISM See **critical incident stress management**.

Citizens Radio Emergency Service Teams (CREST) A group of trained, accredited volunteer radio operators that monitor the emergency frequencies on the citizens band radio service (CB), relaying calls for assistance from the public to the relevant emergency service. CREST also provides communications support to other services during times of need.⁽⁹⁷⁾

Civil Aviation Safety Authority An independent statutory authority responsible for conducting the safety regulation of civil air operations in Australia and the operation of Australian registered aircraft overseas.⁽¹¹¹⁾

civil defence The performance of some or all of the undermentioned humanitarian tasks intended to protect the civilian population against the dangers, and to help it recover from the immediate effects, of hostilities or disasters and also to provide the conditions necessary for its survival. These tasks are: warning; evacuation; management of shelters; management of blackout measures; rescue; medical services including first aid and religious assistance; fire-fighting; detection and marking of danger areas; decontamination and other protective measures; provision of

- emergency accommodation and supplies; emergency assistance in the restoration and maintenance of order in distressed areas; emergency repair of indispensable public utilities; emergency disposal of the dead; assistance in the preservation of objects essential to survival; and, complementary activities necessary to carry out any of the tasks mentioned above, including but not limited to planning and organisation.⁽⁴⁸⁾
- civil disorder** A riot, violent protest, demonstration, or illegal assembly, that may affect public safety.
- Civil Liability Convention (CLC)**
International Convention on Civil Liability for Oil Pollution Damage 1992.
- clarification** Removal of suspended matter from water. *See also disinfection.*⁽³²⁾
- class** *See dangerous goods class.*
- class label** A label of a type specified in the **ADG Code** for the class of **dangerous goods.**⁽¹⁰⁷⁾
- CLC** *See Civil Liability Convention.*
- CLI** *See caller line identification.*
- clinical debriefing** *See formal debriefing.*
- cloud cover** The amount of sky covered or obscured by cloud, expressed in eighths (often called 'oktas') with eight eighths being complete cloud cover.
- COAG** *See Council of Australian Governments.*
- coarse fuel** Dead woody material, greater than 25 millimetres in diameter, in contact with the soil surface (fallen trees and branches).⁽³⁾ *See also aerial fuel, elevated dead fuel, fine fuel, fuel type, slash and surface fuel.*
- Coastal Resource Atlas (CRA)** An atlas to provide locational information on physical and biological features of the coastal environment at risk of damage from marine oil spills.⁽²⁶⁾
- cold chain** System of refrigeration with appropriate apparatus and transport facilities to ensure the cold or frozen conservation of vaccines and medicaments throughout the transfer, from the place of manufacture and expedition to the point of arrival and use.⁽⁷²⁾ *See also immunisation.*
- cold zone** This area contains the **command post** and such other support functions as are deemed necessary to control the incident.⁽⁸⁹⁾ *Syn.* 'clean zone' or 'support zone'. *See also control zone.*
- coliform bacilli** The various bacteria which are normal inhabitants of the intestines but which become pathogenic under certain conditions. *E. coli* is the commonest.⁽⁷²⁾
- collection area** Location where seriously injured are collected initially.⁽⁴⁷⁾
- collective effective dose** A measure of the total **radiation** exposure of a group of people which is obtained by summing their individual effective doses.⁽⁵⁷⁾ *See also dose.*
- collective equivalent dose** A measure of the total **radiation** exposure of a specific organ type or tissue type in a group of people which is obtained by summing the equivalent doses received by those individual organs or tissues of the people exposed.⁽⁵⁷⁾ *See also dose.*

combat To take steps to eliminate or reduce the effects of an incident upon the community.⁽²³⁾

combat agency The agency identified as being primarily responsible for responding to a particular emergency.⁽⁶¹⁾ *Syn.* 'combating agency', 'combating authority', 'lead combat agency', and 'lead combat authority'. *See also* **control agency** and **support agency**.

combating agency/authority *See* **combat agency**.

combat zone *See* **hot zone**.

combustible Capable of catching fire and burning.⁽⁵¹⁾ *See also* **flammable**.

combustible dust Dust that is combustible or ignitable in mixtures with air. (Examples of such dusts are starch and coal dust. Layered dusts under certain conditions may glow without ignition.)⁽⁷⁹⁾ *See also* **dust**.

combustible liquid A liquid having a flash point and which is not a **flammable liquid**.⁽⁸⁹⁾

combustion * The process of burning.
* Consumption of fuels by oxidation, giving out heat, and generally flame and/or incandescence.⁽³⁾

COMDISPLAN *See* **Commonwealth Government Disaster Response Plan**.

command The direction of members and resources of an organisation in the performance of the organisation's role and tasks. Authority to command is established in legislation or by agreement with an organisation. Command relates to organisations and operates vertically within an

organisation.⁽⁵⁸⁾⁽³⁾⁽⁹⁰⁾⁽²³⁾ *See also* **control** and **coordination**.

commander A single-agency term. A commander has authority only within that agency. Responsibilities include the direction and coordination of the activities of that agency. A commander operates vertically within that agency and cannot command members of another agency.⁽²³⁾

command post (CP) *See* **forward control centre**.

command post exercise An indoor (within a headquarters, emergency operations centre, or emergency coordination centre) exercise to test and practise various aspects of a plan and the emergency management system. It may include actual tests of critical processes in the emergency management system such as emergency operations centre procedures, communications arrangements and coordination/liaison methods. Its aim is to realistically simulate an operational situation, using prepared messages and operational reports, without the requirement of using actual resources (people, vehicles, etc.) in the field. *See also* **exercise**.

commensurable risk Risk that is measurable by the same standards as others. In **risk analysis**, commonly refers to effects that are measurable in dollar terms.⁽¹¹⁾ *See also* **risk**.

committed effective dose The **effective dose** which a person is committed to receive from an intake of **radioactive material**.⁽⁵⁷⁾ *See also* **dose**.

committed equivalent dose The **equivalent dose** which an organ or

tissue is committed to receive from an intake of **radioactive** material.⁽⁵⁷⁾
See *also* **dose** and **equivalent dose**.

common mode failure The coincident failure of two or more independent components as the result of a single cause; of particular concern in an instrument system incorporating redundancy where an event causes coincident failure of two or more of the normally independent channels.⁽¹⁸⁾

Commonwealth Counter Disaster Taskforce (CCDTF) The peak Commonwealth government committee with emergency management responsibilities.⁽²²⁾

Commonwealth Government Disaster Response Plan (COMDISPLAN) A contingency plan for the provision of Commonwealth Government assistance to the Australian States and Territories in an emergency or disaster.⁽³⁷⁾

Commonwealth Scientific and Industrial Research Organisation (CSIRO) An independent statutory authority whose work covers scientific aspects and research in a broad range of areas of economic or social value to the nation, including agriculture, minerals and energy, manufacturing, communications, construction, health and the environment.⁽²²⁾

communicable disease A disease caused by germs such as bacteria and viruses that can be spread from one person to another.⁽⁷³⁾ *Syn.* 'infectious disease'.

Communicable Diseases Network of Australia and New Zealand (CDANZ) A committee comprised of representatives of all

Commonwealth and State health authorities, the New Zealand Department of Health, the Commonwealth Department of Primary Industries and Energy, the Australia New Zealand Food Authority, the Australian Defence Force, the Australian Society for Microbiology and other public health experts in communicable diseases, that exchanges information on the incidence and management of **communicable disease** outbreaks.⁽³⁷⁾

communications unit A vehicle (trailer or mobile van) used to provide the major part of an incident communications centre.⁽²⁾

community * A group with a commonality of association and generally defined by location, shared experience, or function.⁽⁴¹⁾

* A social group which has a number of things in common, such as shared experience, locality, culture, heritage, language, ethnicity, pastimes, occupation, workplace, etc.⁽³⁹⁾

community and personal support services, principles of Community and personal support services are most effective when they:

- are provided in a coordinated, timely and culturally-appropriate manner throughout the entire recovery process;
- are available for all people affected by the disaster, including -
 - individuals,
 - families,
 - communities,
 - groups/organisations, and
 - emergency service, recovery workers and volunteers;
- include the affected community in their development and

management;

- facilitate sharing of information between agencies as an integral part of service delivery;
- recognise that people will require accurate and current information about the situation and the services available;
- are integrated with all other recovery services, particularly financial assistance measures;
- provide assistance and resources to create, enhance and support community infrastructures;
- recognise that cultural, and spiritual symbols and rituals provide an important dimension to the recovery process; and,
- utilise personnel with appropriate capacities, personal skills, an awareness of the full range of services provided, and the ability to determine individual and community needs, and refer them to other agencies is essential.

community development officer A person appointed to initiate and coordinate activities in an affected **community** to assist its development in recovering from an emergency.⁽⁹⁸⁾

community recovery committee A committee which may be convened after an emergency to provide a management forum for the **recovery** process in respect of an affected area or a specific **community**.⁽⁹⁸⁾

community recovery services A broad range of tasks to be undertaken within an affected **community** to ensure that it is given the support to recover effectively from the disaster. Activities may include a range of practical assistance, organisation of public forums on current topics and

development of a range of community activities.⁽³⁴⁾ See also **personal support services**, **psychological services** and **recovery**.

compatible In relation to two or more substances, that if they do react they do not cause or substantially increase the potential to cause a fire, explosion, violent reaction, lead to the evolution of flammable or toxic gases or otherwise lead to injury to persons or damage to property and the environment.⁽¹⁰⁷⁾

competency standard The specification of the knowledge and skill and the application of that knowledge and skill to the standard of performance required in employment.

competency standards body (CSB)

A recognised body that is required to: (a) have expertise, or have access to expertise, in competency standards development; (b) be identified and accepted within the industry as being representative of an occupation, industry or industry subsection; and (c) have the clear support of the industrial parties within an occupation, industry or industry subsection.⁽¹⁰⁵⁾

composite warning placard The type of placard to be displayed at a package store comprising **HAZCHEM Code** for the hazardous substances stored and their **class labels**.⁽¹⁰⁰⁾

compound An area bounded by natural ground contours or by a **bund**, and intended to retain spillage or leakage. (A pit or a tank may sometimes be used to provide the same function.)⁽⁷⁶⁾ See also **catchpit**.

comprehensive approach The development of emergency and disaster arrangements to embrace the aspects of **prevention, preparedness, response, and recovery** (PPRR). PPRR are aspects of **emergency management**, not sequential phases. *Syn.* 'disaster cycle', 'disaster phases' and 'PPRR'.

compressed gas Any material or mixture having in the container an absolute pressure exceeding 276 kiloPascals at 21.1°C or, regardless of the pressure at 21.1°C, having an absolute pressure exceeding 717 kilopascals at 54.4°C.⁽⁵⁰⁾

computer-aided dispatch (CAD) Use of computer-based technology to assist **emergency service** organisations to dispatch and monitor the provision of services. May include screen-based call taking, emergency medical dispatch systems, quality assurance systems, automatic vehicle location, integrated mapping, management information systems and bi-directional data transfer.⁽¹⁹⁾

COMRECEPLAN An **emergency plan** outlining the roles and responsibilities of Australian organisations for the reception of Australian citizens and other approved persons evacuated from foreign countries.

COMVETPLAN An **emergency plan** outlining the roles and responsibilities of Commonwealth departments in the event of **exotic animal disease** emergencies.⁽⁹¹⁾
See also **AUSVETPLAN**.

concept of operations A controller's general idea of how an operation will be conducted given the anticipated

circumstances of the event. It is a statement of the controller's intentions should a foreseen event occur, and it may be expressed in terms of stages of the operation.

conditional probability The **probability** of one variable given the value of another. For example, given that a **flood** has reached the crest of an embankment **dam**, the probability of the dam failing is a conditional probability.⁽¹¹⁾

conflagration A particularly intense fire with a heat output of 60,000 - 250,000 kilowatts per metre along the fire front.⁽¹⁴⁾ See also **firestorm**.

consequence * The outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain.⁽⁸⁸⁾

* The outcome of an event or situation expressed qualitatively or quantitatively. In the emergency risk management context, consequences are generally described as the effects on persons, society, the environment and the economy.⁽⁴¹⁾

consequence analysis The estimation of the effect of potential hazardous events.⁽⁶²⁾

constrictive bandage A firmly applied bandage above the injury site and above the middle joint of the limb to control bleeding; used only when **direct pressure** fails.⁽⁷³⁾

construction safety study A study of the safety of workers and surrounding land users during the construction of a **hazardous industry**.⁽⁶²⁾

Consultative Committee on Exotic animal disease (CCEAD) A national committee responsible for

oversighting emergency disease preparedness within Australia and overseeing emergency responses in cases of exotic or endemic disease incidents.⁽²²⁾

contact case Person living in proximity to a contagious patient, likely to have been contaminated and likely to suffer or transmit the disease, thus necessitating surveillance and prophylactic measures.⁽⁷²⁾ *See also*

communicable disease.

contained A fire is contained when its spread has been halted, but it may still be burning freely within the perimeter or fire control lines.⁽³⁾

contamination * Invasion of a person or animal by pathogenic germs (contaminants). * Presence of an infectious agent on inanimate articles such as clothes, surgical instruments, dressings, water, milk, or food. * Transfer and propagation of a contaminant.⁽⁷²⁾

contingency plan *See emergency plan.*

continuing flood hazard The hazard a community is exposed to after floodplain management measures have been put in place. For a town protected by levees, the continuing flood hazard is the consequences of the levees being overtopped. For an area without any floodplain management measures, the continuing flood hazard is simply the existence of flood liability.⁽⁶¹⁾ *See also flood hazard.*

continuity of government The continuation of essential functions of governments.

contour interval The vertical distance between the contours drawn on a

map.⁽²⁷⁾

contributions in kind Non-cash assistance in materials or services offered or provided in case of disaster.⁽⁹⁵⁾

control The overall direction of **emergency management** activities in an emergency situation. Authority for control is established in legislation or in an **emergency plan**, and carries with it the responsibility for tasking and coordinating other organisations in accordance with the needs of the situation. Control relates to situations and operates horizontally across organisations.⁽⁹⁰⁾⁽³⁾ *See also command and coordination.*

control agency An agency nominated to control the response activities to a specified type of emergency.⁽⁹⁸⁾ *See also response agency.*

control area A declared area in which defined conditions apply to the movement into, out of, and within, of specified animals or things. Conditions applying in a control area are of lesser intensity than those in a **restricted area**. The limits of a control area and the conditions applying therein may be varied rapidly according to need.⁽²⁹⁾

control centre *See emergency operations centre.*

control equipment Equipment used to control or restrict the spread of oil spilt on the water.⁽⁷⁾

controlled The time at which the complete perimeter of a fire is secured and no **breakaway** is expected.⁽³⁾

controlled burn A man-made and **controlled** bushfire for the purposes of hazard reduction or forest

regeneration. *See also* **prescribed burning** and **fuel reduction**.

controller That person designated by the **control agency** to be the controller for a particular emergency.

control line *See* **fireline**.

control zone The designation of areas at dangerous goods incidents based upon safety and the degree of hazard, often defined as the **hot zone**, **warm zone**, and **cold zone**.⁽⁸⁹⁾

convection column The rising column of smoke, ash, burning embers and other matter generated by a fire.⁽³⁾

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (CENNA)

A convention that details responsibilities for notification, to the International Atomic Energy Agency (IAEA) and national parties to the Convention, of details of nuclear accidents which result in, or could result in, release of radioactive material which could cross an international boundary.⁽³⁷⁾ *See also* **Convention on Early Notification of Nuclear Accidents**.

Convention on Early Notification of Nuclear Accidents (CACNARE)

A convention that details arrangements for requesting assistance with a radioactive material release through the International Atomic Energy Agency (IAEA) or a State party to the convention and for overall direction, control, coordination and supervision of that assistance in-country. It also details the responsibilities for provision of administrative support and other matters.⁽³⁷⁾ *See also* **Convention on Assistance in the**

Case of a Nuclear Accident or Radiological Emergency.

convergence The propensity for emergency services personnel and others to be physically drawn to an emergency site, and the over-use of communications near the site.

coordination The bringing together of organisations and elements to ensure an effective response, primarily concerned with the systematic acquisition and application of resources (organisation, manpower and equipment) in accordance with the requirements imposed by the threat or impact of an emergency. Coordination relates primarily to resources, and operates, vertically, within an organisation, as a function of the authority to command, and horizontally, across organisations, as a function of the authority to control.⁽⁵⁸⁾ *See also* **control** and **command**.

coordinator surface search A vessel, other than a **rescue unit**, designated to coordinate surface **search and rescue** operations within a specified search area.⁽⁴⁹⁾

corrosive Having the quality of eating away, damaging or destroying materials or living tissue by direct chemical action.⁽⁷⁵⁾

corrosive substance Substance which, by chemical action, will cause severe damage in contact with living tissue, or will damage or even destroy other materials, especially metals (dangerous goods class 8).⁽⁸⁹⁾

cost Of activities, both direct and indirect, involving any negative impact, including money, time, labour, disruption, goodwill, political

- and intangible losses.⁽⁸⁸⁾
- cost effectiveness** A measure of effectiveness expressed in terms of the cost per unit of benefit. For example, in **risk analysis** the expenditure incurred per life saved is a measure of cost effectiveness.⁽¹¹⁾
- Council of Australian Governments (COAG)** Group comprising representatives from the Commonwealth and State and Territory governments and the Australian Local Government Association (ALGA) chaired by the Prime Minister which meets to discuss Commonwealth/State issues.⁽²²⁾
- counsel** To give advice or guidance to a person on conduct or behaviour through discussion and consultation. It is only undertaken or conducted by professionally qualified mental health practitioners, and normally follows the **debrief** process.⁽⁶⁶⁾
- counselling** The process of providing psychological support to persons involved in an incident.⁽²⁴⁾
- counter disaster** A term based on the letters 'CD', for **civil defence**, invented in Australia to describe the area now known as **emergency management**.
- counter disaster plan** See **emergency plan**.
- CPL** See **current planning level**.
- CPR** See **cardio-pulmonary resuscitation**.
- CRA** See **Coastal Resource Atlas**.
- cradle-to-grave** The systematic management of **hazardous materials** from production through to final disposal.
- crash alarm** A system by which relevant **emergency services** are notified simultaneously of a pending or actual emergency.⁽⁴⁷⁾
- creeping disaster** A disaster of insidious onset and slow progress, such as famine, drought, desertification, health deterioration or **epidemic**, that does not become manifest until damage and suffering reach extensive proportions and need massive emergency response.⁽⁷²⁾ *Syn.* 'slow onset disaster'.
- CREST** See **Citizens Radio Emergency Service Teams**.
- crest of dam** Frequently used to denote **top of dam**. However, the term 'crest' is usually applied to the level at which water may overflow the spillway section of the dam. Term **top of dam** is preferred to denote uppermost surface of the dam proper, excluding parapets, handrails, etc.⁽⁹⁾ See **spillway crest**.
- critical incident** Any situation faced by emergency workers that causes them to experience unusually strong emotional reactions which have the potential to interfere with their ability to function either at the scene or later.⁽⁶⁶⁾
- critical incident stress** An acute stress reaction caused by exposure to a traumatic event.⁽⁵³⁾ See also **post-traumatic stress disorder** and **psychological trauma**.
- critical incident stress debriefing (CISD)** The process of ensuring the welfare of **emergency service** and other personnel following a potentially traumatic event.
- critical incident stress debriefing**

- (CISD) team** A team of one or two peer supporters, plus a trained professional, who facilitate a **critical incident stress debriefing** for a group affected by a particularly stressful or traumatic incident. These debriefings are usually held 24 to 72 hours after the incident.⁽⁹⁴⁾
- critical incident stress syndrome**
See **post traumatic stress disorder**.
- critical mass** The smallest mass of fissile material that will support a self-sustaining **chain reaction** under specified conditions.⁽⁶⁾
- cross-contamination** The transfer of bacteria from raw foods or unclean surfaces to ready-to-eat, cooked food.⁽³⁶⁾
- crown fire** A fire burning in the higher branches and foliage of a tree.⁽⁸⁶⁾
- CRRT** See **Chemical Radiological Response Team**.
- cryogenic** Describing gases that have liquefied when cooled to temperatures below minus 150°C. Cryogenic substances, eg. liquid nitrogen, can produce severe body burns, similar to heat burns, or can cause embrittlement of materials such as metals.⁽⁸²⁾
- cryogenic liquid** An extremely low-temperature liquefied gas (below minus 150°C).⁽⁸⁹⁾
- CSB** See **competency standards body**.
- CSIRO** See **Commonwealth Scientific and Industrial Research Organisation**.
- cumec** A unit of measurement equal to one cubic metre per second, used as a flow rate, often of waters in rivers and creeks. Previously described by the term '**cusec**'.
- curie** See **becquerel**.
- current metre** Instrument for measuring the velocity of water.⁽⁹⁵⁾
- current planning level (CPL)** The reference flood level, usually relative to a gauge, below which flood-relevant planning controls are applied for a specific area or location.⁽³³⁾
- curriculum** An organised program constituted by a structured series of learning outcomes and associated learning experiences, generally organised as an integrated combination or series of courses. The successful completion of a curriculum is seen as necessary to achieve specified training and educational goals corresponding to different levels of qualification.⁽¹⁰⁵⁾
- cusec** A unit of measurement in the Imperial System, equal to one cubic foot per second (equal to 0.028 cumecs) as a rate of flow.⁽⁵¹⁾ *Now described by the term 'cumec'.*
- CVO** See **chief veterinary officer**.
- cyclone** A large-scale, closed circulation system in the atmosphere with low barometric pressure and strong winds that rotate counter-clockwise in the northern hemisphere and clockwise in the southern hemisphere. The system is referred to as a 'cyclone' in the Indian Ocean and South Pacific, '**hurricane**' in the western Atlantic and eastern Pacific and '**typhoon**' in the western Pacific.⁽⁹⁵⁾ *See also anticyclone and tropical cyclone.*
- cyclone severity categories** A series of categories with descriptions that provide information concerning effects due to winds typical of

cyclones. See Annex C for more information.

cyclone surge See **storm surge**.

cyclone warning A message released by a **tropical cyclone** warning centre (TCWC) when the existence of a **cyclone** or a developing disturbance with potential to develop into a cyclone exists and is expected to cause at least **gale** force winds in coastal areas within 24 hours.⁽³⁷⁾
See also **cyclone watch**.

cyclone watch A message released by a **tropical cyclone** warning centre (TCWC) when a **cyclone** or a disturbance with potential to develop into a cyclone exists and is likely to cause coastal gales within 48 hours but not within 24 hours.⁽³⁷⁾ See also **cyclone warning**.

D

DACC See **Defence Assistance to the Civil Community**.

dam An artificial barrier, together with **appurtenant works**, constructed for storage, control or diversion of water, other liquids, silt, debris or other liquid-borne material.⁽¹⁰⁾

damage assessment A report on the extent of damage caused by an event. See also **assessment**.

damage classification Evaluation and recording of damage to structures, facilities, or objects according to three (or more) categories:

- 'severe damage' which precludes further use of the structure, facility,

or object for its intended purpose;

- 'moderate damage' or the degree of damage to principal members, which precludes effective use of the structure, facility, or object for its intended purpose, unless major repairs are made short of complete reconstruction; and,

- 'light damage' such as broken windows, slight damage to roofing and siding, interior partitions blown down, and cracked walls; the damage is not severe enough to preclude use of the installation for the purpose for which was intended.⁽⁹⁵⁾ See also **assessment**.

dambreak affected zone That zone of flooding where the changes in depth and velocity of flooding due to dambreak are such that there is potential for incremental loss of life. The dambreak affected zone is limited to those areas where dambreak causes a rise in level of floodwaters greater than 300 millimetres.⁽¹¹⁾

dambreak analysis An analysis which provides an estimation of downstream flooding effects resulting from **dam failure**. The analysis includes a dam breach analysis and the routing of the dambreak hydrograph through the downstream channel.⁽¹¹⁾

dam collapse See **dam failure**.

dam failure The uncontrolled release of the contents of a **dam** through collapse of the dam or some part of it, or the inability of a dam to perform functions such as water supply, prevention of excessive seepage or containment of **hazardous substances**.⁽¹⁰⁾

dam safety emergency plan (DSEP)
A continually updated set of

- instructions and maps that deal with possible **emergency** situations or unusual occurrences at or related to a **dam** or **reservoir**.⁽¹⁰⁾
- dangerous contact animal** An animal showing no clinical signs of disease but which, by reason of its possible exposure to disease, will be slaughtered as a pre-emptive **disease control** measure.⁽²⁹⁾ See also **exotic animal disease**.
- dangerous contact premises (DCP)** Premises containing a **dangerous contact animal** and on which some or all susceptible animals will be slaughtered.⁽²⁹⁾ See also **exotic animal disease**.
- dangerous goods** Substances which are either specifically listed in the **ADG Code** or meet the classification criteria of the **ADG Code**.⁽¹⁰²⁾ See also **hazardous materials**.
- dangerous goods class** The class allocated to a substance under the **ADG Code**.⁽¹⁰²⁾ See Annex C for more information.
- Dangerous Goods Code** See **Australian Code for the Transport of Dangerous Goods by Road and Rail**.
- dangerous substances** See **dangerous goods**.
- DAP** Disaster affected person. See **emergency affected person**.
- data collection platform (DCP)** Automatic measuring facility with a radio transmitter to provide contact and transmission of data via satellite.⁽⁹⁵⁾
- date time group** The date and time expressed as six digits followed by the zone suffix at which a message was prepared for transmission followed by the first three letters of the month. The first pair of digits denotes the date, the second pair of digits denotes the hour, and the third pair denotes the minutes.
- DCP** See **dangerous contact premises**.
- death rate** See **mortality rate**.
- debrief** A meeting at the end of an operation with the purpose of assessing the conduct or results of an operation.⁽³²⁾ See also **debriefing** and **evaluation**.
- debriefing** The process of sharing the good and bad points of the response to an incident as a means to improving any future planning and responses.⁽²⁴⁾
- debris flow** A high-density **mud flow** with abundant coarse-grained materials such as rocks, tree trunks, etc.⁽⁹⁵⁾ See also **landslide**.
- decision support system** Interactive computer-based model that enables risk analysts and/or decision makers to see how variation of the key factors and parameters affecting decisions influence the optimal solution according to pre-set decision rules.⁽¹¹⁾
- declaration of disaster** Official issuance of a state of emergency upon the occurrence of a large-scale calamity, in order to activate measures aimed at the reduction of the disaster's impact.⁽⁹⁵⁾
- decommissioned dam** A **dam** which has been taken out of service and which has been rendered safe in the long term.⁽¹⁰⁾ See also **disused dam**.
- decomposition products** The products of a chemical or thermal breakdown of a substance.⁽⁸⁹⁾

decompression chamber A chamber in which the pressure can be varied, in which persons who have been subjected to abnormal pressure remain while returning gradually to atmospheric pressure.⁽⁵¹⁾ *Syn.* 'hyperbaric chamber'.

decontamination The process of reducing and preventing the spread of contamination from persons and equipment used at a **dangerous goods** incident.⁽⁸⁹⁾

Defence Assistance to the Civil Community (DACC) Assistance to the community provided by Department of Defence personnel in the event of natural disaster or civil emergency. *See also* **Defence Force Aid to Civil Defence** and **Defence Force Aid to the Civil Power**

Defence Force Aid to Civil Defence (DFACD) Assistance to civil defence agencies in protecting the civil population during periods of conflict. It differs from other forms of Defence assistance in that it is conducted under conditions imposed by Additional Protocol 1 to the Geneva Conventions.⁽²²⁾ *See also* **Defence Assistance to the Civil Community** and **Defence Force Aid to Civil Power**.

Defence Force Aid to the Civil Power (DFACP) Aid to the civil power from the Defence Force where there is any possibility that force may be required to be used by Defence personnel.⁽²⁵⁾ *See also* **Defence Assistance to the Civil Community** and **Defence Force Aid to Civil Defence**.

deflagration The chemical oxidation reaction (burning) of hydrocarbon material in which the reaction front

advances into the unreacted material at less than sonic velocity. A certain pressure rise will occur.⁽¹⁸⁾ *See also* **explosion**.

defusing An informal opportunity for emergency workers to spontaneously interact with their fellow workers after response to an emergency to assist in removing the causes of tension from that event. *See also* **debriefing** and **counselling**.

degree A unit of direction from a given point - there are 360 degrees in a circle. *See also* **mil**.

deluge system A device used in fire suppression to apply large volumes of water to a fire.⁽⁷¹⁾

de-minimis risk That **risk** which is sufficiently low that the community regards it as insignificant and is not concerned with it.⁽¹¹⁾

depression Region of the atmosphere in which the pressures are lower than those of the surrounding region at the same level.⁽¹⁰⁸⁾ *Syn.* 'cyclone', 'low', 'low-pressure area'

design earthquake Earthquake parameters selected for designing an earthquake-resistant structure according to code requirements.⁽⁹⁵⁾

design flood The **flood**, either observed or synthetic, which is chosen as a basis for the design of a hydraulic structure.⁽¹⁰⁸⁾ *See also* **probable maximum flood**.

design storm * Rainstorm, either observed or synthetic, which is chosen as the basis for the design of a hydraulic structure. * Rainfall amount and distribution adopted for a given drainage area, used in determining the **design flood**.⁽¹⁰⁸⁾ *See also* **probable maximum**

- precipitation.**
- design water level** The maximum water elevation including the flood surcharge, that a **dam** is designed to withstand.⁽⁴⁴⁾
- designated passenger holding area** Location to which the apparently uninjured aircraft occupants are transported.⁽⁴⁷⁾
- desk top exercise** An umbrella term for some types of indoor **discussion exercise**. They may feature a model of the area on which a prepared scenario is played out, or simply using a projected map, not in real time. The model or map is used to illustrate the deployment of resources, but no resources are actually deployed. Additionally, responses may be prepared in syndicate, in plenary, or under the guidance of a facilitator who maintains the pace and asks questions. A cost-effective and highly-efficient exercise method that should be conducted as a prelude to a **field exercise** as part of a graduated series.⁽³⁶⁾ See also **exercise**.
- detention reservoir** Flood storage reservoir with uncontrolled outlets.⁽⁹⁵⁾ *Syn.* **flood control reservoir**. See also **flood control dam**.
- deterministic** Leading to reasonably clear-cut solutions on the basis of prescriptive rules. The process of determining the **probable maximum flood** is an example of a deterministic process. Deterministic contrasts with probabilistic.⁽¹¹⁾
- DFAC** Defence Force Assistance to the Community. See **Defence Assistance to Civil Community (DACC)**.
- DFACC** Defence Force Aid to the Civil Community. See **Defence Assistance to Civil Community (DACC)**.
- DFACD** See **Defence Force Aid to Civil Defence**.
- DFACP** See **Defence Force Aid to the Civil Power**.
- DGC** See **Australian Code for the Transport of Dangerous Goods by Road and Rail**.
- DGPS** Differential global positioning system.
- dike** See **bund**.
- direct attack** A method of fire attack where wet or dry firefighting techniques are used. It involves suppression action right on the fire edge which then becomes the **fireline**.⁽³⁾
- directing staff** Personnel appointed to assist the **exercise director** in the control and coordination of an **exercise**. They are usually allocated specific functions to oversight, and may include such appointments as umpires, function coordinators, observers, damage control, safety officers, etc.⁽⁶⁷⁾ See also **exercise** and **exercise control**.
- direct pressure** Method for controlling bleeding.⁽⁷³⁾ See also **pressure point**.
- disaster** A serious disruption to **community** life which threatens or causes death or injury in that community and/or damage to property which is beyond the day-to-day capacity of the prescribed statutory authorities and which requires special mobilisation and organisation of resources other than

- those normally available to those authorities.⁽⁵⁸⁾ See also **accident**, **emergency** and **incident**.
- disaster affected person (DAP)** See **emergency affected person**.
- disaster area** A geographical part of the State or Territory in which a state of **emergency** or **disaster** exists.⁽⁵⁸⁾
- disaster area survey team (DAST)** A group that is deployed in an area after a disaster to ascertain the extent of damage to population and property and to recommend appropriate responses.⁽⁹⁵⁾
- disaster assessment** See **assessment**.
- disaster cycle** See **comprehensive approach**.
- disaster epidemiology** The medical discipline that studies the influence of such factors as life style, biological constitution and other personal or social determinants on the incidence and distribution of disease as it concerns disasters.⁽⁹⁵⁾ See also **epidemiology**.
- disaster management** The body of policy and administrative decisions and operational activities which pertain to the various stages of a disaster at all levels.⁽⁹⁵⁾ See also **emergency management**.
- disaster medical control centre** See **medical control centre**.
- disaster medicine** The study and collaborative application of various health disciplines to the **prevention**, **preparedness**, **response** and **recovery** from the health problems arising from **disaster**. This must be achieved in cooperation with agencies and disciplines involved in comprehensive **disaster management**.⁽³²⁾ See also **emergency medicine**.
- disaster mitigation** See **mitigation**.
- disaster phases** See **comprehensive approach**.
- disaster plan** See **emergency plan**.
- disaster preparedness** See **preparedness**.
- disaster prevention** See **prevention**.
- disaster recovery** See **recovery**.
- disaster recovery management (principles of)** See **recovery management (principles of)**
- Disaster Recovery Sub-Committee (of the Standing Committee of Community Services and Income Security Administrators)** The peak national reference group in relation to disaster recovery.
- disaster relief** See **relief**.
- disaster response** See **response**.
- disaster victim identification (DVI)** Procedures used to positively identify deceased victims of a multiple casualty event.⁽¹¹²⁾
- disaster victim identification (DVI) team** A police team responsible for identification of deceased disaster victims.⁽³²⁾
- DISCEX** See **discussion exercise**.
- discharge** The rate of flow of water measured in terms of volume per unit time, eg. cubic metres per second. Discharge is different from the speed or velocity of flow, which is a measure of how fast the water is moving, eg. metres per second.⁽⁶¹⁾ See also **cumec**.
- discussion exercise (DISCEX)** A discussion exercise is an indoor

- exercise employing a carefully prepared scenario to test and practise various aspects of emergency management planning, procedures or training.⁽⁶⁷⁾ *Syn.* 'tabletop exercise', 'model exercise' or 'syndicate exercise'. See also **exercise**.
- disease control** All policies, precautions and measures taken to prevent the outbreak or spread of communicable diseases.⁽⁹⁵⁾
- disease surveillance** Health system used to monitor, observe and evaluate on a continuing basis the progress of disease with the view to preventing or curing it.⁽⁷²⁾
- disinfection** Destruction of disease causing organisms.⁽³⁶⁾⁽³²⁾
- dispatch** * The act of ordering attack crews and/or support units to respond to a fire, or from one place to another.⁽³⁾
* The activation of emergency service and other resources to respond to requests for assistance. May involve the use of manual or computer-based systems.⁽¹⁹⁾ See also **computer-aided dispatch**.
- dispersal equipment** Equipment designed to combat oil spills by the application of **dispersant**.
- dispersant** A chemical formulation containing non-ionic surface active agents that lower the interfacial tension between oil and water and enable the oil film to break up more easily under natural wave action or mechanical agitation. Dispersants may be water-based, solvent- (hydrocarbon) based, or concentrates (high surfactant content).⁽³⁰⁾
- displaced person** Person, who, for different reasons or circumstances, has been compelled to leave their home. They may or may not reside in their country of origin, but are not legally regarded as a **refugee**.⁽⁹⁵⁾
- distress phase** A situation wherein there is a reasonable certainty that a vessel or aircraft or person is threatened by grave and imminent danger and requires immediate assistance.⁽⁴⁹⁾ See also **alert phase** and **uncertainty phase**.
- distress signal** A pyrotechnic device intended for signalling, warning, or rescue.
- disused dam** A **dam** where the storage is no longer used.⁽¹⁰⁾ See also **decommissioned dam**.
- division** A portion of the **fire perimeter** comprising of two or more sectors. The number of sectors grouped in a division should be such as to ensure effective direction and control of operations. Divisions are generally identified by a local geographic name.⁽³⁾
- dose** A generic term which may mean **absorbed dose**, **equivalent dose** or **effective dose** depending on context.⁽⁵⁷⁾ See also **acute dose**, **collective effective dose**, **collective equivalent dose**, **committed effective dose**, **committed equivalent dose**, **dose rate**, **EC₅₀**, **ED₅₀**, **LC₅₀**, **LC₁₀₀**, **LD₅₀**, **LD₁₀₀**. and **whole dose**,
- dose equivalent** See **equivalent dose**.
- dose rate** The amount of **ionising radiation** which an individual would receive per unit time.⁽¹²⁾
- dosimeter** An instrument for measuring and registering total

- accumulated exposure to **ionising radiation**.⁽¹²⁾
- downburst** Violent and damaging downdraught reaching the surface, associated with a severe **thunderstorm**.⁽¹⁰⁸⁾
- DPIEVETPLAN** The Commonwealth Department of Primary Industries and Energy's plan for **exotic animal disease** outbreak.⁽⁹¹⁾ *See also AUSVETPLAN.*
- DRABC** Danger; response; airway; breathing; circulation - the St John action plan for first aid management.⁽⁷³⁾
- drill** A method of training through the repetitive execution of an action or series of actions. *See also exercise.*
- drought index** A numerical value, such as the Byram-Keetch Drought Index, reflecting the dryness of soils, deep forest litter, logs and living vegetation.⁽³⁾ *Syn.* 'soil dryness index'.
- dry firefighting** The suppression of a fire without the use of water. This is normally achieved by removing the fuel by the use of hand tools or machinery.⁽³⁾
- DS** *See directing staff.*
- DSEP** *See dam safety emergency plan.*
- duff** The mat of undecomposed or partly decomposed vegetation matter on the forest floor, the original vegetative structures still being recognisable.⁽³⁾
- duplex** A pair of frequencies where the transmitted signal is on a different frequency to the received signal. *See also simplex.*
- dust** Small solid particles that settle out under their own weight but that may remain suspended for some time.⁽⁷⁹⁾ *See also fumes, mist, smoke, vapour and gas.*
- dust (sand) storm** Dust (sand) energetically lifted to great heights by strong and turbulent winds.⁽⁹⁵⁾
- DVI** *See disaster victim identification.*
- DVR** Disaster victim registration. *See registration and disaster victim identification.*
- dynamic testing** Analysis of the response of structures under simulated loads of the type imposed by natural hazards.⁽⁹⁵⁾
- dysentery** * A general term used for different kinds of unspecified diarrhoea or gastroenteritis.
* Specific infection of the colon, such as shigellosis (**bacillary dysentery**), or amoebiasis (amoebic dysentery).⁽⁷²⁾
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- EAR** *See expired air resuscitation.*⁽⁷³⁾
- earth flow** A mass movement characterised by down slope translation of loose material.⁽⁹⁵⁾ *See also landslide.*
- earthquake** The vibrations of the Earth caused by the passage of seismic waves radiating from some source of elastic energy.⁽⁴²⁾⁽¹³⁾
- earthquake design category** A category assigned to structure based on its structure classification, acceleration coefficient and site factor for the site.⁽⁷⁴⁾

earthquake focus See **hypocentre**.

earthquake forecasting See **forecast**.

earthquake hypocentre See **hypocentre**.

earthquake intensity A measure of ground shaking obtained from the damage done to structures built by humans, changes in the Earth's surface and felt reports.⁽⁴²⁾⁽¹³⁾ See also **earthquake magnitude**, **Modified Mercalli scale** and **Medvedev, Sponheuer and Karnik scale**.

earthquake intensity questionnaire Special form or card listing questions designed about the **Modified Mercalli** scale of intensity to which simple answers indicate the intensity of an **earthquake**. The answers to these questionnaires gathered from an area around a felt earthquake can be integrated with field observations and other reports in drawing isoseismal maps.⁽⁴²⁾

earthquake magnitude A quantity that is characteristic of the total energy released by an **earthquake**, in contrast to 'intensity' which subjectively describes earthquake effects at a particular place. Richter in 1935 devised the logarithmic magnitude scale in current use to define local magnitude (ML) in terms of the motion that would be measured by a standard type of seismograph located 100 kilometres from the epicentre of an earthquake. Several other magnitude scales are also in use, for example body-wave magnitude (MB) and surface-wave magnitude (MS) which use body waves and surface waves respectively. The scale is open-ended but the largest known

earthquake magnitudes are about MS 8.5.⁽⁴²⁾ See also **earthquake intensity**.

earthquake occurrence (recurrence) interval The average interval of time between the occurrence of earthquakes in a particular region.⁽¹³⁾

earthquake-resisting system The part of the structural system which is considered in the design to provide resistance to the **earthquake** forces.⁽⁷⁴⁾ See also **earthquake design category**.

earthquake risk The relative **risk** is the comparative **earthquake** hazard from one site to another. The probabilistic risk is the odds of earthquake occurrence within a given time interval and region.⁽⁴²⁾

earthquake swarm A series of minor earth tremors (none of which may be identified as the **main shock**) that occurs within a limited area and time.⁽⁹⁵⁾ See also **aftershock**, **foreshock** and **main shock**.

east coast low Very intense storm that develops in mid-latitudes on the seaward (eastern) side of continents. Such lows develop over warm ocean water in the lee of mountains and are dominated by intense convection, storm waves and heavy rainfall. Events where wind velocities reach in excess of 100 kilometres/hour within a few hours are called 'bombs'.⁽¹⁴⁾

easting A vertical line on a map which runs from north to south.⁽²⁷⁾ See also **northing**.

EC₅₀ The median effective concentration (parts per million or parts per billion) of the toxicant in the environment (usually water) producing a designated effect in

- 50% of the test organisms exposed.⁽⁷¹⁾ See also **ED₅₀**, **LC₅₀**, **LC₁₀₀**, **LD₅₀** and **LD₁₀₀**.
- ECC** Emergency coordination centre
See **emergency operations centre**.
- ecologically sustainable development (ESD)** Using, conserving and enhancing natural resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.⁽⁶¹⁾ See also **human development** and **sustainable development**.
- economic risk** That risk which, if realised, would result in dollar losses.⁽¹¹⁾
- economic risk analysis** That sub-set of **risk analysis** which is concerned with factors that can be expressed in dollar values.⁽¹¹⁾
- ecosystem** The interacting system of a biological community, both plant and animal, and its non-living surroundings.⁽³⁾ See also **environment**.
- ED₅₀** The median **effective dose** (usually expressed as milligrams/kilogram or milligrams/gram of body weight) producing a designated effect in 50% of the exposed test organisms.⁽⁷¹⁾ See also **EC₅₀**, **LC₅₀**, **LC₁₀₀**, **LD₅₀** and **LD₁₀₀**.
- edge burning** A term used to describe perimeter burning of an area in mid-conditions prior to large scale **prescribed burning**. This practice is used to strengthen buffers and to reduce **mopping-up** operations.⁽³⁾
- EDSC** Exotic Diseases Sub-Committee of the Animal Health Committee.
- effective dose** A measure of **dose** which takes into account both the type of **radiation** involved and the radiological sensitivities of the organs and tissues irradiated.⁽⁵⁷⁾ See also **collective effective dose**.
- effective precipitation** The part of **precipitation** that reaches stream channels as runoff.⁽¹⁰⁸⁾
- effective warning time** The time available after receiving advice of an impending flood and before the floodwaters disable damage-reduction activities. The effective warning time is typically used to move farm equipment, raise furniture and evacuate people.⁽⁶¹⁾
- EIS** See **environmental impact study**.
- ejecta** Material ejected from a **volcano**, including large fragments (bombs), cindery material (scoria), pebbles (**lapilli**) and fine particles (ash).⁽⁹⁵⁾ See also **tephra**.
- El Niño** An anomalous warming of ocean water resulting from the oscillation of a current in the South Pacific, usually accompanied by heavy rainfall in the coastal region of Peru and Chile, and reduction of rainfall in equatorial Africa and Australia.⁽⁹⁵⁾ *Syn.* 'El Niño -Southern Oscillation (ENSO)'. See also **La Niña** and **southern oscillation**.
- electronic distress beacon (EDB)** A beacon used as last resort to alert authorities of a distress situation. See also **emergency locator transmitter**, **emergency position indicating radio beacon** and **personal locator beacon**.⁽²⁰⁾
- elements at risk** The population, buildings and civil engineering works economic activities, public services

- and infrastructure, etc. exposed to hazards.⁽⁹⁵⁾
- elevated dead fuel** Dead fuel forming part of, or being suspended in, the shrub layer.⁽³⁾ See also **aerial fuel**, **coarse fuel**, **fine fuel**, **fuel type**, **slash** and **surface fuel**.
- EMA** See **Emergency Management Australia**.
- embankment flood** The **flood** which, when routed through the reservoir, gives a stillwater level at the **top of dam**.⁽⁹⁾
- emergency** * An event, actual or imminent, which endangers or threatens to endanger life, property or the **environment**, and which requires a significant and coordinated response.⁽⁶⁰⁾
- * Any event which arises internally or from external sources which may adversely affect the safety of persons in a building or the community in general and requires immediate response by the occupants.⁽⁸³⁾
 - * An unplanned situation arising, through accident or error, in which people and/or property are exposed to potential danger from the hazards of **dangerous goods**. Such emergencies will normally arise from vehicle accident, spillage or leakage of material or from a fire.⁽⁸²⁾
 - * In terms of **dam** operation, any condition which develops unexpectedly, endangers the integrity of the dam or downstream property and life and requires immediate action.⁽¹⁰⁾ See also **accident**, **incident** and **disaster**.
- emergency action plan** A plan of action to be taken to reduce the potential for property damage and loss of life in an area affected by a **dam failure** or large flood.⁽⁴⁴⁾ See also **emergency plan**.
- emergency affected persons** People, other than emergency management personnel, who experience losses or injury or are affected by an emergency. Usually understood to exclude the deceased.⁽⁹⁸⁾ *Syn.* 'disaster affected person'. See also **casualty**, **patient** and **victim**.
- emergency care** See **emergency medicine**.
- emergency catering coordinator** The senior person responsible for the coordination of the emergency catering service.⁽³⁶⁾
- emergency catering service** Appointed organisation(s) for catering arrangements in a disaster.⁽³⁶⁾
- emergency colour code** A code used in health care facilities for a specific emergency, as follows: fire/smoke - red; cardiac arrest/medical emergency - blue; bomb threat - purple; internal emergency (failure or threat to essential services or hazardous substances incident, illegal occupancy) - yellow; personal threat (armed or unarmed persons threatening injury to others or themselves) - black; external emergency - brown; evacuation - orange. For 'all clear', the relevant colour code should be stated followed by 'all clear'.⁽⁸⁴⁾
- emergency control centre** See **emergency operations centre**.
- emergency controller** A person in a **health care facility** who is in overall charge of an emergency response. This may or may not be the person in charge of the health care facility, depending upon local circumstances and timing.⁽⁸⁴⁾

emergency control organisation

(ECO) A structured organisation which will organise an appropriate response to emergency situations.⁽⁸³⁾

emergency coordination centre

(ECC) A facility established to coordinate and organise emergency provision of services.⁽⁴⁰⁾ See also **emergency operations centre**.

emergency health kit

Basic drugs and medical equipment calculated for the emergency needs of a population of 10,000 persons over three months. One prepackaged kit contains 10 identical smaller kits, each for 1,000 persons.⁽⁷²⁾ *Previously known as 'WHO Emergency Health Kit'.*

emergency information panel (EIP)

The vehicle placard required by the **Australian Code for the Transport of Dangerous Goods by Road and Rail** for the transportation of dangerous goods in bulk, providing information on proper shipping name, **United Nations class** and **subsidiary risk**, **United Nations Number**, **HAZCHEM Emergency Action Code**, and a contact number for specialist advice.⁽⁴⁵⁾

emergency locator transmitter (ELT)

A self-contained radio transmitter operating on the distress frequencies of 121.5 megahertz or 406 megahertz which is permanently mounted in an aircraft.⁽²⁰⁾ See also **electronic distress beacon**.

emergency management * A range of measures to manage risks to communities and the **environment**.⁽³⁹⁾

* The organisation and management of resources for

dealing with all aspects of emergencies. Emergency management involves the plans, structures and arrangements which are established to bring together the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to deal with the whole spectrum of emergency needs including **prevention**, **response** and **recovery**.⁽⁹⁸⁾

Emergency Management Australia

(EMA) The Commonwealth Government agency within the Department of Defence with the responsibility of reducing the impact of natural and man-made disasters on the Australian community. Also the lead Federal agency responsible for disaster response. EMA's roles are to:

- develop, coordinate and support effective national emergency management arrangements;
- provide advice on emergency management matters to Commonwealth agencies, States and Territories, industry and the international community; and
- as an agent of the **Australian Agency for International Development (AusAID)**, coordinate emergency management assistance to countries in Australia's region of interest.⁽⁹⁷⁾

emergency management liaison officer See **liaison officer**.

emergency management team The team which enables an **incident controller's** response strategy to be carried out by support agencies through their own commanders, and assists the emergency response coordinator in determining resource acquisition needs, and in ensuring a coordinated response to the

- emergency.⁽⁹⁸⁾
- emergency measures** A collective term encompassing the assessment, corrective, and protective actions taken during the course of an emergency condition.⁽⁷¹⁾
- emergency medical services (EMS)** The aggregate of various resources and personnel necessary to deliver medical care to those with an unpredicted immediate need outside a hospital and continued care once in an established emergency facility.⁽⁷²⁾ See also **emergency medicine**.
- emergency medicine** The study of emergency medical conditions and their management.⁽³²⁾ See also **disaster medicine**.
- emergency mitigation** See **mitigation**.
- emergency operations centre (EOC)**
- * A facility, either static or mobile, from which the total operation or aspects of the operation are managed.⁽³⁵⁾
 - * A facility established to control and coordinate the response and support to an incident or emergency. *Syn.* **incident control centre**. See also **agency operations centre** and **forward control centre**.
- emergency operations manual** A document containing specific, step-wise instructions on carrying out emergency operational procedures.⁽⁹¹⁾
- emergency phase** A generic search and rescue term meaning, as the case may be, **uncertainty phase**, **alert phase** or **distress phase**.⁽⁴⁹⁾
- emergency phases** See **comprehensive approach**.
- emergency plan** A documented scheme of assigned responsibilities, actions and procedures, required in the event of an emergency.⁽⁸⁴⁾ See also **emergency procedure**.
- emergency planning committee (EPC)** A committee responsible for establishing an **emergency plan** and setting up an **emergency control organisation**.⁽⁸³⁾
- emergency planning process** The collective and collaborative efforts by which agreements are reached and documented between people and organisations to meet their communities' emergency management needs.⁽⁶⁰⁾
- emergency planning zone (EPZ)** A zone designated around **nuclear powered warship** berths and anchorages for planning purposes to assist in the identification of areas where **hazards** might arise.⁽⁶⁹⁾
- emergency position indicating radio beacon (EPIRB)** A compact, buoyant, self-contained radio transmitter operating on the distress frequencies of 121.5 megahertz or 406 megahertz which is satellite-compatible.⁽²⁰⁾ See also **electronic distress beacon**.
- Emergency Preparedness Canada (EPC)** A Canadian federal government organisation within the Department of National Defence that plays a key role, on behalf of the Minister Responsible for Emergency Preparedness, in the development and maintenance of an appropriate level of civil emergency preparedness across Canada.⁽⁹⁷⁾
- Emergency Preparedness Information eXchange (EPIX)** An information network operated by the Centre for Policy Research on

Science and Technology at Simon Fraser University, Vancouver, Canada. The purpose of EPIX is to facilitate the exchange of ideas and information among Canadian and international public and private sector organisations about the prevention of, preparation for, recovery from and/or mitigation of risk associated with natural and socio-technological disasters.⁽⁹⁷⁾

emergency preparedness See **preparedness**.

emergency prevention See **prevention**.

emergency procedure A set of directions detailing what actions should be taken, as well as how, when, by whom and why, for specific emergency events. A type of 'standard operating procedure'.

emergency procedure guide (EPG) An emergency procedure guide, in relation to dangerous goods or a vehicle fire, is a guide outlining procedures to be taken in the event of an emergency involving the goods or in event of a fire on a road vehicle which is either:
- in the form, or substantially in the form, of the emergency procedure guide for the goods or vehicle fire published by Standards Australia; or
- in a form approved by the competent authority.⁽⁴⁵⁾

emergency recovery See **recovery**.

emergency response See **response**.

emergency response coordination centre (ERCC) See **emergency coordination centre**.

emergency response plan A plan which sets out the roles and responsibilities of agencies in emergency response and the

coordination arrangements which are to be utilised.⁽⁹⁸⁾ See also **emergency plan**.

emergency risk management A systematic process that produces a range of measures which contribute to the well-being of communities and the environment.⁽⁴¹⁾

emergency service An agency responsible for the protection and preservation of life and property from harm resulting from incidents and emergencies. *Syn.* 'emergency services authority' and 'emergency service organisation'.

emergency service liaison officer (ESLO) See **liaison officer**.

emergency shelter Group shelter provided for affected persons in a community hall or similar. It is part of **emergency relief**, and is different from temporary accommodation.⁽⁹⁸⁾

emergency spillway See **auxiliary spillway**.

emergency supply The provision of resources in emergencies to response agencies, by other than their internal resource acquisition systems.⁽⁹⁸⁾

emergency welfare service An organisation to provide all reasonable **welfare** aid and services to people in need due to an emergency or disaster. Such measures include coordination, control and provision of services to be instituted before, during and after the impact of an emergency or disaster.⁽⁵⁸⁾

EMLO Emergency management liaison officer. See **liaison officer**.

EMS See **emergency medical services**.

- en route resources** Resources dispatched to an incident that have not yet checked in. An occurrence or event, that requires action by emergency service personnel to prevent or minimise loss of life or damage to property and/or natural resources.⁽²⁾ See *also* **resources**.
- endemic disease** The usual presence or prevalence of a disease in a given geographical area. Hyperendemic expresses a persistence in excess of expected endemicity. Pandemic is the presence of a disease, at the same time, in important proportions throughout the world.⁽⁷²⁾
- endogenous risks** Those risks arising from the natural world; as distinct from risk arising from man's technology.⁽¹¹⁾ See *also* **natural hazard**.
- ENSO** Acronym for 'El Niño-Southern Oscillation'. See **El Niño**.
- enteric diseases** A general term for a variety of infectious intestinal diseases due to a number of known causes (amoebae, intestinal parasites, worms, bacilli, vibrio cholerae), or unknown causes transmitted through various mechanisms (food, water, direct contact). Can be of sudden diarrhoeal onset, chronic, or in carrier state, all with danger of transmission. Disaster conditions facilitate and aggravate the disease with risk epidemics, especially among children.⁽⁷²⁾
- environment** * The complex of physical, chemical and biological agents and social factors which may impact on a person or a community.⁽³⁶⁾⁽³²⁾
* Conditions or influences comprising social, physical and built elements, which surround and interact with a community.⁽⁴¹⁾
- Environment and Scientific Coordinator (ESC)** Coordinator of scientific and environmental advice to the **on-scene coordinator** in oil spill response.⁽²⁰⁾
- environmental health** The science that aims at creating the environmental conditions most conducive to health.⁽⁷²⁾ See *also* **public health**.
- environmental health officer** Health inspector and surveyors, public health officers, sanitary inspectors and engineers, hygiene officers and preventive health officers.⁽³⁶⁾⁽³²⁾
- environmental impact statement (EIS)** The report on an **environment impact study**.
- environmental impact study (EIS)** A study undertaken in order to assess the effect on a specified **environment** of the introduction of any new factor which may upset the ecological balance.⁽⁵¹⁾
- environmental risk** Risks to natural ecosystems or to the beauty or amenity of the natural world.⁽¹¹⁾
- environmental risk impact assessment** See **environmental impact study**.
- EOC** See **emergency operations centre**.
- EOD** Explosive ordnance disposal.
- EPC** See **Emergency Preparedness Canada**.
- epicentre** The point on the Earth's surface directly above the focus (or hypocentre) of an **earthquake**.⁽⁴²⁾ See *also* **hypocentre**.
- epidemic** • An unusual increase in the

- number of cases of an infectious disease which already exists in an endemic state in the region or population concerned. • The appearance of a more or less important number of cases of an infectious disease introduced in a region or population that is usually free from that disease. *See also* **communicable disease**, **endemic disease**, and **pandemic**.⁽⁷²⁾
- epidemiology** The medical discipline that studies the influence of such factors as the life style, biological constitution and other personal or social determinants on the incidence and distribution of disease.⁽⁷²⁾ *See also* **disaster epidemiology** and **disaster medicine**.
- EPIRB** *See* **emergency positioning indicating radio beacon**.
- EPIX** *See* **Emergency Preparedness Information eXchange**.
- epizootic** A disease temporarily prevalent amongst animals.⁽⁹¹⁾
- EPZ** *See* **emergency planning zone**.
- equivalent dose** A measure of dose in organs and tissues which takes into account the type of radiation involved.⁽⁵⁷⁾ *See also* **collective equivalent dose**.
- eradication** The elimination of a disease and its causative agent from Australia.⁽⁶⁴⁾
- ERCC** *See* **emergency operations centre**.
- error** The deviation which can exist between the actual performance characteristic of a component, equipment or system, and the true or required value of such performance.⁽¹⁸⁾
- error rate** The frequency with which a human, eg. an operator, makes an uncorrected mistake.⁽¹⁸⁾
- escrow account** In relation to **risk analysis**, an account that is kept to cover the losses that would be incurred if risks of concern are realised.⁽¹¹⁾
- ESLO** Emergency service liaison officer. *See* **liaison officer**.
- ESO** Emergency service organisation. *See* **emergency service**.
- ESWG** Review of Government Service Provision Emergency Services Working Group.
- ETA** Estimated time of arrival.
- ETD** Estimated time of departure.
- evacuation** The planned relocation of persons from dangerous or potentially dangerous areas to safer areas and eventual return.⁽⁹⁸⁾
- evacuation centre** Centre that provides affected people with basic human needs including accommodation, food and water. In addition, to enhance the **recovery** process, other welfare/recovery services should also be provided.⁽³⁴⁾ *See also* **assembly area** and **emergency relief**.
- evacuation point** A predetermined place where patients, visitors and staff are taken or are assembled in the event of an evacuation.⁽⁸⁴⁾ *Syn.* 'evacuation assembly area'.
- evaluation** Post-disaster appraisal of all aspects of the disaster and its effects.⁽⁹⁵⁾ *See also* **assessment**.
- evaluation design flood (EDF)** The flood event which, when routed through the reservoir with the existing spillway, just satisfies the normal freeboard requirements applicable to the recommended

design flood for a proposed dam at the site.⁽⁹⁾ See *also* **design flood**.

event An incident or situation, which occurs in a particular place during a particular interval of time.⁽⁸⁸⁾

event tree A diagrammatic means of expressing the logic of sequences of events. In **risk analysis** event trees can be used for such purposes as identifying failure modes.⁽¹¹⁾ See *also* **fault tree**.

event tree analysis A technique which describes the possible range and sequence of the outcomes which may arise from an initiating event.⁽⁸⁸⁾

exceedance probability The **probability** that an event of a given magnitude, or any greater magnitude, will occur. Exceedance probability relates to a given time period, commonly one year.⁽¹¹⁾ See *also* **annual exceedance probability**.

exclusion zone See **hot zone**.

exclusive economic zone (EEZ) An area beyond and adjacent to the territorial sea. The outer limit of the exclusive economic zone cannot exceed 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.⁽²⁰⁾ See *also* **high seas** and **territorial sea**.

exercise Simulation of emergency management events, through discussion or actual deployment of personnel, in order:

- to train personnel;
- to review/test the planning process or other procedures;
- to identify needs and/or weaknesses;
- to demonstrate capabilities; and

- to practice people in working together.⁽³⁶⁾ See *also* **discussion exercise, field exercise, full-scale exercise, table top exercise** and **tactical exercise without troops**.

exercise control The group with the responsibility for monitoring the progress of an **exercise** to ensure objectives are achieved in line with the exercise plan, controlling role players, liaison with external or joint agencies providing support or facilities for the exercise, and all safety measures. In short exercise control is responsible for the total conduct of the exercise and the staff must be separate from the personnel being exercised.⁽⁶⁷⁾ See *also* **directing staff**.

exercise director The exercise director is the person with the overall responsibility to approve, initiate and terminate the exercise. In large scale exercises, s/he may be supported by a deputy and/or assistant exercise directors.⁽⁶⁷⁾ See *also* **directing staff**.

existing flood hazard The hazard a community is exposed to as a result of its location on the floodplain.⁽⁶¹⁾ See *also* **flood hazard**.

exogenous risks Those **risks** arising from the activities of man and from his technology.⁽¹¹⁾

exotic animal disease Disease affecting animals (which may include man) and which does not presently occur in Australia.⁽²⁹⁾

expected loss The expected number of lives lost, persons injured, damage to property and disruption of essential services and economic activity due to the impact of a particular natural or man-made hazard. It includes physical, social,

functional and economic effects.⁽⁹³⁾

expired air resuscitation (EAR) The technique used by the first aider when the **casualty** is unable to breathe.⁽⁷³⁾ *See also cardiopulmonary resuscitation.*

explosion Sudden release of large amounts of energy in a destructive manner; a result of powders, mists, or gasses undergoing instantaneous ignition, or liquids or solids undergoing sudden decomposition, or a pressurised vessel undergoing over-pressure rupture with such force as to generate tremendous heat, cause severe structural damage, occasionally generating a shock wave, and propelling shrapnel.⁽⁷¹⁾

explosion over-pressure The pressure resulting from the blast wave of an explosion. It is referred to as 'positive' when it exceeds atmospheric pressure and 'negative' during the passage of the wave when the resulting pressures are less than atmospheric pressure. It is measured in kilopascals.⁽¹²⁾ *See also peak overpressure.*

explosive A substance, whether or not contained in a device specially prepared, which is manufactured with a view to producing a practical effect by explosion or a pyrotechnic effect, or any other substance which, by reason of the nature of its explosive properties is to be treated as such.⁽⁸²⁾⁽⁷⁵⁾

explosivity index Percentage of pyroclastic **ejecta** among the total product of a volcanic eruption.⁽⁹⁵⁾

exposure Either: the circumstance of being exposed to radiation, or: a defined dosimetric quantity now no longer used for radiation protection

purposes.⁽⁵⁷⁾ *See also dose.*

exposure standard An airborne concentration of a particular substance in a person's breathing zone.⁽¹⁰³⁾⁽¹⁰²⁾ *See also tolerance level value.*

exposure time The time period of interest for seismic risk calculations, seismic hazard calculations, or design of structures. For structures, the exposure time is often chosen to be equal to the design lifetime of the structure.⁽⁹⁵⁾

external cardiac compression Compression of the heart from outside the body by pressing on the breastbone in order to try to provide artificial circulation of the blood.⁽⁷³⁾ *See also cardiopulmonary resuscitation.*

external emergency An event which arises externally to the health care facility and may necessitate a response beyond the normal operational level of the facility.⁽⁸⁴⁾

extra-tropical depression. A mid-latitude, low-pressure cell with inwardly and upwardly spiralling winds. Unlike **tropical cyclones**, the cell can develop over land as well as water, usually in relation to the polar front and with a core of cold air.⁽¹⁴⁾

extreme flood A rare and usually very severe flood, greater in magnitude than the 1% **annual exceedance probability** event and possibly approaching the magnitude of a **probable maximum flood**.⁽³³⁾ *See also flood.*

extrication *See patient extrication and road accident rescue.*

eye (of the storm) The relatively clear and calm area inside the circular wall of convective clouds, the

geometric centre of which is the centre of the **tropical cyclone**.⁽¹⁰⁸⁾

F

f/n curve Curve that relates 'f', the **frequency** per year of causing 'n' or more fatalities, to 'n'. Such curves are used to express **societal risk** criteria and to describe the safety levels of particular facilities.⁽¹¹⁾

FAC Federal Airports Corporation.

factor of safety * The figure by which the minimum breaking force of new rope is divided to determine its **safe working load**.⁽⁸⁵⁾

* In structural and other engineering systems, the ratio of system resistance to the peak design loads.⁽¹¹⁾

fail-safe A **failure mode** where hazardous or otherwise harmful effects are minimal.⁽¹⁸⁾

failure A condition of a component, equipment or system, in which the design intention is not met.⁽¹⁸⁾

failure mode The manner in which a component, equipment or system fails as expressed by the consequences of failure. For example the **fail-safe** mode.⁽¹⁸⁾

failure mode and effects analysis (FMEA) A procedure by which potential failure modes in a technical system are analysed. An FMEA can be extended to perform what is called 'failure modes, effects and criticality analysis (FMECA)'. In a FMECA, each failure mode identified is ranked according to the combined influence of its likelihood

of occurrence and the severity of its consequences.⁽⁸⁸⁾

failure rate The frequency with which a component, equipment or system fails.⁽¹⁸⁾ *Syn.* 'failure frequency'.

fallout The descent of airborne particles of dust, soot, or, more particularly, of radioactive materials resulting from a nuclear explosion.⁽⁵¹⁾

famine A catastrophic food shortage affecting large numbers of people due to climatic, environmental and socio-economic reasons.⁽⁹⁵⁾

FAR Fatal accident rate.

fault A fracture or zone of fractures in rock along which the two sides have been displaced relative to each other parallel to the fracture. The total fault offset may range from one millimetre for very small earthquakes to ten metres for the Earth's largest shocks.⁽⁴²⁾

fault tree The logic diagram used in **fault tree analysis**, that traces an undesirable event back to its cause/s.⁽¹⁸⁾ *See also* **event tree**.

fault tree analysis (FTA) A systems engineering method for representing the logical combinations of various system states and possible causes which can contribute to a specified event (called the 'top event').⁽⁸⁸⁾

FCP *See also* **forward command post**.

FDI *See* **fire danger index**

FDR Fire danger rating. *See* **fire danger index**.

Federal Emergency Management Agency (FEMA) An independent agency of the US federal government, reporting to the President. Its mission is "to reduce

loss of life and property and protect our nation's critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response and recovery".⁽⁹⁷⁾

Federal Sea Safety and Surveillance Centre (FSSSC) The tasks of the now-defunct FSSSC are carried out by AusSAR and COASTWATCH operations.⁽²⁰⁾

FEMA See **Federal Emergency Management Agency**.

fetch The effective **reservoir** length over which winds can build up waves.⁽⁹⁾

field control centre See **forward control centre**.

field exercise An **exercise** activity in which emergency management organisations and agencies take action in a simulated situation, with deployment of personnel and other resources to achieve maximum realism. It is conducted actually on the ground, in real time but under controlled conditions, as though it were a real emergency.⁽³⁶⁾ See also **exercise**.

field medical controller Usually a senior medical officer who commands all medical aspects at the disaster site and liaises with ambulance commander and other emergency services commanders on-site, and the medical controller at a distant medical control centre (when operational).⁽³²⁾

field medical team A team of experienced doctors and nurses, usually sent from a hospital, to provide on-site assessment and emergency treatment of casualties prior to transfer. One member of

each team is appointed medical team leader.⁽³²⁾ *Syn.* 'site medical team'.

field medical team leader A doctor nominated as the leader of each field medical team sent to a disaster site (there may be more than one). Responsible to and reports to the field medical controller.⁽³²⁾ *Syn.* 'medical team leader'.

film badge A pack of one or more photographic films and appropriate filters (absorbers) used for the approximate measurement of **radiation** exposure or quantities related to **absorbed dose**.⁽⁶⁾

fine fuel Grass, leaves, twigs and other small pieces of vegetation under 6 millimetres in diameter.⁽⁸⁶⁾ See also **aerial fuel**, **coarse fuel**, **elevated dead fuel**, **fuel type**, **slash** and **surface fuel**.

finger Long narrow finger of rapidly advancing fire which extends beyond the head or flanks of a fire.⁽²¹⁾

fire access track An access track provided in advance for fire protection purposes, designed to stop or check fires that occur, or to be used as a fire control line from which to work.⁽²¹⁾ See also **fire trail** and **fire break**.

fire alarm system An arrangement of components and apparatus for giving an audible, visible, or other perceptible alarm of fire, and which may also initiate other action.⁽⁸⁰⁾

fire appliance A generic term used to describe any fire fighting vehicle or specialist vehicle used by fire services to combat fires or other emergencies.⁽²¹⁾

fireball A ball of flaming gas.⁽⁵¹⁾

- fireboat** A powered vessel equipped for fighting fires.⁽⁵¹⁾
- fire brand** A piece of burning material, commonly bark from eucalypts.⁽³⁾
- fire break** Any natural or constructed discontinuity in a **fuel bed** used to congregate, stop and control the spread of a **wildfire**, or to provide a **fireline** from which to suppress a fire.⁽³⁾
- fire brigade booster connection** A connecting device enabling the fire brigade to pressurise or pump water in a **fire hydrant** system.⁽⁷⁸⁾
- fire containment** A phase in suppression whereby an identifiable barrier, effective under the conditions prevailing, has been established to bring to a halt a spreading flame from at some time in the immediate future.⁽⁶³⁾ See also **fire suppression**.
- fire control** See **fire suppression**.
- fire control line** See **fireline**.
- fire danger** Factors which determine whether fires start, spread and do damage, and whether and to what extent they can be controlled.⁽³⁾
- fire danger index (FDI)** A relative number denoting an evaluation of rate of spread, or suppression difficulty for specific combinations of fuel, fuel moisture and wind speed.⁽³⁾ Syn. 'fire danger rating'.
- fire danger rating (FDR)** See **fire danger index**.
- fire detection system** An arrangement of detectors and control and indicating equipment employed for automatically detecting fire and initiating other action.⁽⁸⁰⁾
- fire drill** A practice drill for firemen and occupants of a structure to accustom them to their duties in case of a fire.⁽⁵¹⁾ See also **exercise**.
- fire edge** Any part of the boundary of a fire at a given time. Note: The entire boundary is termed the '**fire perimeter**'.⁽³⁾ See also **flame front**.
- fire effects** The physical, biological and ecological impact of fire on the environment.⁽³⁾
- firefighter** One whose activity or employment is to extinguish fires.⁽⁵¹⁾
- fire ground** The area declared by the senior member of the attending fire agency as the 'fire ground'. As a guide, it includes the area involved in the actual fire; the area where fire fighters, appliances, hoses and hydrants are located; and may extend to adjoining properties threatened by the fire. The fire ground is controlled by the fire agency.⁽²³⁾
- fire hazard** Any fuel which if ignited, may be difficult to extinguish.⁽³⁾
- fire hazardous area** An area where the combination of vegetation, topography, weather, and the threat of fire to life and property create difficult and dangerous problems.⁽³⁾
- fire hydrant** An assembly installed in a water pipeline which provides a valved outlet to permit a controlled supply of water to be taken from the pipeline for firefighting.⁽⁷⁸⁾
- fire indicator panel** A panel on which is mounted an indicator or indicators together with associated equipment for the fire alarm or sprinkler system.⁽⁷⁷⁾
- fire intensity** The rate of energy release per unit length of fire front.⁽³⁾
- fireline** A natural or constructed barrier, or treated fire edge, used in

- fire suppression and **prescribed burning** to limit the spread of fire.⁽³⁾
- fireline sector** A defined section of the **fireline** being constructed and/or used to contain or control a **wildfire**, or being constructed as a backup to other lines being used to control a wildfire.⁽³⁾
- fire load** The total amount of combustible material expressed in heat units.⁽⁸⁰⁾
- fire load density** The **fire load** divided by floor area.⁽⁸⁰⁾
- fire main** A water main dedicated for firefighting purposes.⁽⁸⁰⁾
- fire management** All activities associated with the management of fire-prone land, including the use of fire to meet land management goals and objectives.⁽³⁾
- fire perimeter** The entire outer boundary of a fire area.⁽³⁾ *See also* **fire edge** and **flame front**.
- fire plug** *See* **fire hydrant**.
- fire prevention** All pre-fire activities designed to reduce fuel quantities, remove known hazards, and prepare properties for the possibility of fires occurring so that the fire development and spread is minimised and property damage is mitigated.⁽²¹⁾ *See also* **fire protection** and **fire safety**.
- fire proof** *See* **fire resistance**.
- fire protection** Provisions made to detect, suppress or limit the spread of fires and particularly design features of buildings aimed at limiting the spread of fire from the area of origin.⁽²¹⁾ *See also* **fire prevention** and **fire safety**.
- fire rating** The minimum **fire resistance** of a material or method of construction as determined by the method specified in AS 1530.4.⁽⁷⁶⁾
- fire refuge** A community fire refuge is a building where people may seek shelter from the danger of wildfire. A building constructed or designated as a fire refuge should have consideration given to its vulnerability to wildfire, parking for users, availability of water, telephone and electric power, and location and accessibility in relation to its service area.⁽⁹⁸⁾
- fire resistance** The extent to which a material or building is resistant to fire.⁽⁵¹⁾⁽⁸⁰⁾ *See also* **fire rating** and **fire resistance level**.
- fire resistance level (FRL)** The fire-resistance grading periods in minutes, determined for:
- (1) structural adequacy;
 - (2) integrity; and
 - (3) insulation,
- expressed in that order, ie. FRL XX, YY, ZZ.⁽⁷⁸⁾
- fire resistance rating** *See* **fire-resistance level** and **fire rating**.
- fire retardant** A substance or treatment which, under specified conditions, suppresses or delays the combustion of a material.⁽⁸⁶⁾ *See also* **fire rating** and **fire resistance**.
- fire risk** * A building, structure or object considered especially likely to catch fire, or one which would be especially unsafe in a fire.⁽⁵¹⁾
- * The risk of loss by fire.⁽⁵¹⁾
 - * The obligation of an insurer to cover the loss caused by a fire.⁽⁵¹⁾
- fire risk substance** Any readily ignitable solid substance including waste paper, hay, sawdust and wood chips.⁽⁴⁵⁾
- fire safety** Safety against a fire,

- including **fire protection, fire prevention** and **fire fighting**.
- firestorm** An atmospheric phenomenon caused by a large fire, as after the mass bombing of city, in which a rising column of air above the fire draws in strong winds often accompanied by rain.⁽⁵¹⁾
See also **fire whirl** and **fire wind**.
- fire suppression organisation** The management structure, usually shown in the form of an organisation chart, of the personnel collectively assigned to the suppression of a fire.⁽³⁾
- fire suppression plan** See **incident action plan**.⁽³⁾
- fire threat** The impact a fire will have on a community.⁽³⁾
- fire tolerance** * The ability on the part of a biological environment physically to withstand or recover from potentially adverse effects of fire. * The ability on the part of a socio-economic environment to accommodate adverse effects of fire.⁽⁶³⁾
- fire trail** A permanent track cleared through bush to provide firefighters with access to bushfires.⁽⁵¹⁾
- fire trap** Any location or situation in which it is highly dangerous to implement fire suppression activities.⁽³⁾
- fire whirl** A spinning column of ascending hot air and gases rising from a fire and carrying aloft smoke, debris, and flame. Fire whirls range in size from less than a metre in diameter to small tornadoes in intensity.⁽³⁾ See also **fire wind** and **firestorm**.
- fire wind** The inflow of air at the fire source caused by the action of convection. It is not to be confused with a prevailing wind.⁽³⁾ See also **fire whirl** and **firestorm**.
- first aid** Immediate and temporary care given on site to the victims of an **accident** or sudden illness in order to avert complications, lessen suffering and sustain the person until competent services or a physician can be obtained.⁽⁷²⁾⁽⁹⁵⁾ See also **basic life support, advanced life support** and **emergency medicine**.
- flame angle** The angle of the flame in relation to the ground, caused by wind direction or the effect of a slope.⁽³⁾
- flame front** The leading edge of a moving fire.⁽⁸⁶⁾ See also **fire edge** and **fire perimeter**.
- flame height** The vertical distance between the tip of the flame and ground level, excluding higher flame flashes.⁽³⁾
- flammability** The ease with which a substance is set on fire.⁽³⁾
- flammable** Capable of being ignited and of burning. *Syn.* 'inflammable'.
- flammable liquid** A liquid which is capable of being ignited and burning in air and which meets the criteria of the ADG Code.⁽¹⁰²⁾⁽¹⁰¹⁾
- flank attack** Obtaining control of a fire by attacking its side/s (flank).⁽³⁾
- flanks of a fire** Those parts of a fire's perimeter that are roughly parallel to the main direction of spread.⁽³⁾
- flash flood** A **flood** that rises quite rapidly with little or no advance warning, usually as a result of an intense rainfall over a small area or, possibly, an ice jam, a dam failure, etc.⁽¹⁰⁸⁾ See also **flood**.

FLIR See **forward looking infra-red**.

flood The overflowing by water of the normal confines of a stream or other body of water, or the accumulation of water by drainage over areas which are not normally submerged.⁽¹⁰⁸⁾

flood awareness An appreciation of the likely effects of flooding and a knowledge of the relevant flood warning, response and evacuation procedures. In communities with a high degree of flood awareness, the response to flood warnings is prompt and efficient. In communities with a low degree of flood awareness, flood warnings are liable to be ignored or misunderstood, and residents are often confused about what they should do, when to evacuate, what to take and where it should be taken.⁽⁶¹⁾

flood boat Vessel used for rescue, evacuation and resupply purposes.⁽¹⁰⁹⁾

flood-bypass channel Channel built to divert flood flows from a point upstream of a region to a point downstream.⁽⁹⁵⁾

flood classification levels Definitions used in flood warnings to give a general indication of the types of problems expected in a flood, ie. **minor flooding, moderate flooding, and major flooding**.⁽¹⁰⁹⁾

flood control The management of water resources through construction of dams, reservoirs, embankments, etc. to avoid floods.⁽⁹⁵⁾

flood control dam A dam which temporarily stores or controls flood runoff and includes dams used to form flood retarding basins.⁽¹⁰⁾ *Syn.* 'flood mitigation dam'.

flood damage The tangible and intangible costs of **flooding**. Tangible costs can be quantified in monetary terms, eg. damage to goods and possessions, loss of income or services during the flood aftermath, etc. Intangible damages represent the increased levels of physical, emotional and psychological illness in flood affected people attributed to a flooding episode and are less easy to quantify in monetary terms.⁽⁶¹⁾

flood forecast Prediction of the stage, **discharge**, beginning and duration of a **flood**, especially of the peak discharge at a specific point on a stream resulting from **precipitation** and/or snow melt.⁽¹⁰⁸⁾

flood frequency curve A graphical representation of the relationship between peak flood **discharge** and **exceedance probability**.⁽¹¹⁾

flood fringe areas The remaining area of flood **prone land** after floodway and flood storage areas have been defined. See *also* **floodway areas** and **flood storage areas**.⁽⁶¹⁾

floodgate A device to control the flow of water: may be located in or on a dam or weir or in a levee.⁽¹⁰⁹⁾

flood gauge A device used to measure flood depth at a point in relation to a height datum.⁽¹⁰⁹⁾

flood hazard The potential loss of life, property and services which can be directly attributed to a flood.⁽⁹⁾⁽¹¹⁾ See *also* **continuing flood hazard, existing flood hazard, future flood hazard** and **incremental flood hazard**.

flood height The height of a flood on a **flood gauge**.⁽¹⁰⁹⁾

flood hydrograph See hydrograph.

flood mitigation dam See **flood control dam**.

flood mitigation standard The flood level, selected as part of the floodplain management process, that forms the basis for physical works to modify the impacts of flooding.⁽⁶¹⁾

floodplain The land which may be covered by water when the river overflows its banks during floods. The extent of a floodplain will normally be greater than the area covered in a 1% flood.⁽³³⁾

floodplain management measures The full range of techniques available to reduce flood damage and disruption, as canvassed in floodplain management studies.⁽⁶¹⁾

floodplain management options The measures which might be feasible for the management of a particular area of the floodplain. Preparation of a floodplain management plan requires a detailed evaluation of floodplain management options.⁽⁶¹⁾

floodplain management plan The principal means of managing the risks associated with the use of the **floodplain**. A floodplain management plan ... will usually include both written and diagrammatic information describing how particular areas of **flood prone land** are to be used and managed to achieve defined objectives.⁽⁶¹⁾

flood planning area The area of land below the **flood planning level** and thus subject to flood related development controls.⁽⁶¹⁾

flood planning levels (FPL) Flood levels selected for planning purposes, as determined in

floodplain management studies and incorporated in floodplain management plans. Selection should be based on an understanding of the full range of flood behaviour and the associated flood risk. It should also take into account the social, economic and ecological consequences associated with floods of different severities. Different FPLs may be appropriate for different categories of land-use and for flood plans.⁽⁶¹⁾

flood preparedness plan A plan of action that sets out the procedures to be followed for the **warning**, **evacuation** and **welfare** of people in the **event** a flood occurs.⁽¹¹⁾ See *also* **emergency plan**.

flood prone land Land susceptible to inundation by the **probable maximum flood (PMF)** event. Under the merit policy, the flood prone definition should not be seen as necessarily precluding development. Floodplain management plans should encompass all flood prone land, ie. the floodplain.⁽⁶¹⁾

flood proofing A combination of measures incorporated in the design, construction and alteration of individual buildings or structures subject to flooding, to reduce or eliminate flood damages.⁽⁶¹⁾

flood risk * The probability of losses occurring due to flooding.⁽¹¹⁾

* The chance of failure of the dam over its life due to inadequate spillway capacity and freeboard provisions.⁽⁹⁾

flood routing Process of determining progressively the timing and shape of a **flood wave** at successive points along a river or throughout a

reservoir.⁽¹⁰⁸⁾

flood series A record of peak flood heights over a period of time.⁽¹⁰⁹⁾

flood stage That stage, on a fixed river gauge, at which the overflow of the natural banks of a stream begins to cause damage in any portion of the reach for which the gauge is used as an index.⁽¹⁰⁸⁾

flood storage areas Those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood. The extent and behaviour of flood storage areas may change with flood severity, and loss of flood storage can increase the severity of flood impacts by reducing natural flood attenuation. Hence, it is necessary to investigate a range of flood sizes before defining flood storage areas.⁽⁶¹⁾

flood surcharge The maximum rise of stillwater level above reservoir full supply level during a flood.⁽⁹⁾⁽¹¹⁾

flood warning A statement by the Bureau of Meteorology including all or part of the following items for particular catchments:

- a summary of the current meteorological situation and expected developments;
- a summary of the rainfall which has occurred or is expected;
- river heights at key locations;
- the class of flooding that is expected; and/or
- river heights.⁽¹²⁾ See also

preliminary flood warning.

flood warning system A system defining the level of flooding at which a **warning** will be initiated, the physical means by which it will be relayed, and the persons to whom it will be given. The system includes

all necessary hardware such as water level actuators, and radio transmitting and receiving equipment.⁽¹¹⁾

flood wave Rise in streamflow to a crest to such a magnitude that it causes flooding, and its subsequent recession.⁽⁹⁵⁾

floodway areas Those areas of the floodplain where a significant discharge of water occurs during floods. They are often aligned with naturally defined channels. Floodways are areas which, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels. Floodways are often, but not necessarily, areas of deeper flow or areas where higher velocities occur. As for **flood storage areas**, the extent and behaviour of floodways may change with flood severity. Areas that are benign for small floods may cater for much greater and more hazardous flows during larger floods. Hence, ie. is necessary to investigate a range of flood sizes before defining floodway areas that should be zoned accordingly.⁽⁶¹⁾

floor warden See **zone warden**.

FMEA See **failure mode and effect analysis**.

FN curve See **f/n curve**.

focal depth (of earthquakes) The depth of the focus (**hypocentre**) below the surface of the Earth.⁽⁴²⁾⁽¹³⁾

focus (earthquake) See **hypocentre**.

food aid Assistance rendered on an organised basis, either free or on concessional terms, to provide food to a population group, community or country suffering from food shortage

or insufficient development.⁽⁷²⁾

Food and Agriculture Organization

(FAO) The United Nations specialised agency that aims to raise levels of nutrition, to improve the production and distribution of all agricultural and food products from farms, forests and fisheries, and to eliminate hunger. It promotes improved soil and water management, better crop yields, healthier livestock and sound agricultural investment. It has an Office of Special Relief Operations (OSRO) for disaster situations and mobilising resources. *See also World Food Programme.*⁽⁷²⁾

food and nutrition indicators

Quantified data that indicate the quantity and quality of foodstuffs available to a population eg. number calories or proteins.⁽⁷²⁾

food safety The component of food hygiene which deals with the measures necessary to ensure the innocuity, cleanliness, salubrity and intrinsic value of foodstuffs.⁽⁷²⁾

forecast * Statement of expected meteorological conditions for a specific period and for a specific area or portion of air space.⁽¹⁰⁸⁾ *Syn.* 'meteorological forecast' and 'weather forecast'.

* Statement or statistical estimate of the occurrence of a future event. This term is used with different meanings in different disciplines, as well as prediction.⁽⁹⁵⁾

forensic doctor A public officer whose principal duty is to investigate and inquire by an inquest into the cause of any death where there is reason to suppose it was not due to natural causes. The data acquired deals with the relation and application of medical facts to legal

questions.⁽⁴⁷⁾

foreshock Smaller earthquake preceding the largest earthquake of a series concentrated in a restricted crustal volume.⁽⁴²⁾⁽¹³⁾ *See also aftershock, earthquake swarm and main shock.*

forest fire *See bushfire.*

formal debriefing A clinical process conducted by a critical incident stress debriefing trained professionally qualified mental health practitioner.⁽⁶⁶⁾ *Syn.* 'clinical debriefing'. *See also debriefing.*

forward command post (FCP) *See forward control centre.*

forward control centre A facility, where the controller is located, at or near the scene of an emergency to facilitate better control and management of a particular emergency. In emergencies where the impact is widespread there may be the need to locate more than one forward control centre in which case the title of each forward control centre should be preceded by the place name. The forward control centre may be located in an existing building or be a self-contained mobile unit.⁽⁹⁰⁾ *Syn.* 'field control centre', 'forward command centre', 'forward command post', 'forward control point', and 'incident control point'. *See also emergency operations centre.*

forward looking infra-red (FLIR) A helicopter mounted infra-red camera capable of detecting sources of heat or hot spots in fire areas so that ground crews can be more effective in their suppression and mop up activities.⁽²¹⁾

foundation The undisturbed material on which the **dam** structure is

placed.⁽¹⁰⁾

FPP scale See **Fujita-Pearson scale**.

fragility curve A function that defines the probability of failure as a function of an applied load level.⁽¹¹⁾

freeboard * A factor of safety typically used in relation to the setting of floor levels, levee crest levels, etc. It is usually expressed as a height above a flood planning level and/or the adopted flood mitigation standard. Freeboard provides a factor of safety to compensate for wave action, localised hydraulic behaviour, settlement and other effects such as 'greenhouse' and climate change.⁽⁶¹⁾

* The vertical distance between a stated water level and the top of dam.⁽⁹⁾

freeboard, total The vertical distance between **full supply level** and the top of dam. That part of the total freeboard attributable to the depth of flood surcharge is sometimes referred to as 'wet freeboard'; and the freeboard above maximum design flood water level due to wind set-up and wave run-up of specified severity is sometimes referred to as 'dry freeboard'.⁽⁹⁾

frequency A measure of likelihood expressed as the number of occurrences of an event in a given time.⁽⁸⁸⁾ See also **likelihood** and **probability**.

frequency analysis See **probability analysis**.

front (atmospheric) * The interface or transition zone between air masses of different physical properties (temperature, humidity).

* Line of intersection of the surface separating two air masses usually

with the ground.⁽⁹⁵⁾

FSL See **full supply level**.

FTA See **fault tree analysis**.

fuel load The oven dry weight of fuel per unit area. Commonly expressed as tonnes per hectare.⁽³⁾ *Syn.* 'fuel weight'.

fuel management Modification of fuels by **prescribed burning**, or other means.⁽³⁾

fuel modification Any manipulation (including lopping, chipping, crushing, mowing, piling and burning) of fuels for the purpose of reducing their flammability.⁽³⁾

fuel moisture content That water content of a fuel particle expressed as a percentage of the oven dry weight of the fuel particle (%ODW).⁽³⁾ See also **drought index**.

fuel moisture differential The situation where the difference in the moisture content between fuels on adjacent areas results in noticeably different fire behaviour on each area.⁽³⁾

fuel plan A plan showing areas of varying fuel quantities and types and usually indicates past fire history.⁽³⁾

fuel profile The vertical cross section of a fuel bed down to mineral earth.⁽³⁾

fuel quantity See **fuel load**.

fuel reduction The process of removing a fire hazard to reduce its chance of ignition, such as controlled burning.⁽¹⁷⁾ See also **controlled burn** and **prescribed burning**.

fuel separation The action of separating fuel for the purpose of

providing a mineral earth firebreak.⁽³⁾

fuel type An identifiable association of fuel elements of distinctive species, form, size, arrangement, or other characteristics that will cause predictable rate of spread or difficulty of control under specified weather conditions.⁽³⁾ See also **aerial fuel, coarse fuel, elevated dead fuel, fine fuel, slash** and **surface fuel**.

fuel weight See **fuel load**.

Fujita-Pearson scale (FPP scale) A 3-digit scale for **tornadoes** devised by Fujita (F scale) and Pearson (PP scale) to indicate the **tornado** intensity (0-5), path length (0-5), and path width (0-7). For example, a FPP scale of 1, 2, 7 indicates a minimum wind speed of 117 kilometres/hour, a length of 5.1 kilometres and a width of 16 kilometres.⁽¹⁰⁸⁾

full-scale emergency exercise Assembling and utilisation of all the resources that would be available and used in a real emergency.⁽⁴⁷⁾ See also **exercise**.

full supply level (FSL) The level of the water surface when the reservoir is at maximum operating level. Excluding periods of flood discharge.⁽⁹⁾

fume Airborne solid particles formed when the material from a volatilised solid condenses in cool air. Fumes are extremely fine - usually less than 1.0 micrometre in diameter. In most cases the hot vapour reacts with the air to form an oxide. Fumes are often associated with molten metals, especially in processes such as welding. At high fume concentrations, agglomeration of particles may result in particles of

much larger dimensions.⁽¹⁰⁴⁾ See also **dust, gas, mist, smoke** and **vapour**.

functional area A category of services involved in preparations for an emergency, including: agriculture and animal services; emergency finance; emergency supply; engineering services; environmental services; health services; media services; welfare services; and Australian Defence Force.⁽⁶⁸⁾

functional plan A document describing roles and responsibilities and arrangements for the performance of a key response or recovery function. It is in support of the main plan.⁽⁶⁰⁾

Fund Convention International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1992.⁽²⁰⁾

future flood hazard The hazard a community may be exposed to as a result of its placement on the floodplain.⁽⁶¹⁾ See also **flood hazard**.

G

gale Wind with a speed between 34 and 40 knots (Beaufort scale wind force 8).⁽¹⁰⁸⁾⁽⁹⁵⁾ See Annex C for more information.

gale warning Meteorological message intended to warn those concerned of the occurrence or expected occurrence of a wind of Beaufort force 8 or 9 over a specific area.⁽¹⁰⁸⁾

gamma radiation Radiation consisting

of streams of gamma particles, ie. rays similar to x-rays, but of higher frequency and penetrating power, forming part of the radiation of a radioactive substance.⁽⁵¹⁾ *Syn.*

'gamma rays'. See *also* **alpha radiation** and **beta radiation**.

gas A substance consisting of atoms and molecules which are sufficiently mobile for it to occupy the whole space in which it is contained.⁽⁵¹⁾

See *also* **dust**, **fume**, **mist**, **smoke** and **vapour**.

gas free A space is considered to be gas free when the concentration of flammable or toxic vapours in it is within safe limits.⁽⁷⁶⁾

gauge height See **flood gauge** and **flood height**.

Geneva Conventions The body of international agreements consisting of four Conventions (1949) and two Additional Protocols (1977), concerning humanitarian treatment of victims of armed conflict, and put under the responsibility of the **International Committee of the Red Cross**. The first Protocol regulates the care of the wounded and sick soldiers on the battlefield; the second is about the care of the wounded, sick and shipwrecked in naval warfare; the third on the treatment of prisoners of war; the fourth on the protection of civilians in time of war. Additional Protocols I and II ensure more humane consideration not only in international conflicts but also in national strife, such as the treatment of guerilla fighters.⁽⁷²⁾ See *also* **international humanitarian law**.

geographic information system (GIS) A computerised database for the capture, storage, analysis and

display of locationally defined information. Commonly, a GIS portrays a portion of the earth's surface in the form of a map on which this information is overlaid.⁽³³⁾

geohazard A natural earth surface process which may interfere adversely with human activity, including processes of a geological, geomorphological, geophysical, hydrogeological, geographical, physiographical or geotechnical nature.

GIS See **geographic information system**.

global observing system (GOS) The coordinated system of methods, techniques and facilities for making observations on a world-wide scale within the framework of the **World Weather Watch**.⁽¹⁰⁸⁾⁽⁹⁵⁾

global positioning system (GPS) A highly-accurate navigation system based on a constellation of 24 satellites orbiting the earth at 20,000 kilometres that transmit back a set of signals.

GOES Geostationary operational environmental satellites. See **synchronous meteorological satellite**.

going fire Any fire expanding in a certain direction or directions.⁽³⁾

GPS See **global positioning system**.

GR See **grid reference**.

grass fire A fire in predominantly grass vegetation.⁽³⁾

Gray (Gy) The SI unit of radiation **absorbed dose** (replaces the 'rad' - 1 Gy = 100 rad).

greenhouse effect * The increase in temperature in a greenhouse caused by the radiant heat from the

sun passing through the glass, while heat within the greenhouse is trapped there by the glass.⁽⁵¹⁾

* The same effect on the temperature of the earth caused by its atmosphere acting as the glass of a greenhouse does, possibly to be increased as man's pollution adds more and more carbon dioxide to the atmosphere.⁽⁵¹⁾

grid bearing The direction from a point of observation to an object in relation to **grid north**.⁽²⁷⁾ See also **magnetic bearing** and **back bearing**.

grid coordinate See **grid reference**.

grid ignition A method of lighting **prescribed fires** where ignition points are set individually at a predetermined spacing through an area.⁽³⁾

grid map A map of an area overlaid with a grid system of rectangular coordinates that are used to identify ground locations where no other landmarks exist.⁽⁴⁷⁾

grid north The direction of the north-south grid lines on a map.⁽²⁷⁾ See also **magnetic north** and **true north**.

grid reference (GR) A group of numbers (either four, six or eight) that describes a point on a map using a given map grid system by means of distance east and north of an arbitrary zero point.⁽²⁷⁾

groundfire A fire burning in thick layers of humus and vegetation, found in forest, swampy ground or peat. Fires in rubbish dumps could come into this category.⁽²¹⁾

ground motion Seismic vibration of the ground at a particular point, recorded by **accelerograph** or

seismograph in order to determine the vibrational characteristics of an **earthquake** or explosion.⁽⁹⁵⁾

groundwater Water present below the soil surface and occupying voids in the porous subsoil; specifically, the porous layer which is completely saturated with water. Upper surface is referred to as the '**water table**'.⁽⁷¹⁾

groundwater level The level at which soil and porous rock begins to be saturated with water.⁽⁹⁵⁾

group risk See **societal risk**.

group text emergency procedure guide (GTEPG) A particular form of **emergency procedure guide (EPG)** requiring the user to complete specific details for the substance being transported, in blank spaces provided, enabling a wide range of substances or discrete groups having similar properties to be accommodated by a relatively small number of EPGs.⁽⁸²⁾

GTEPG See **group text emergency procedure guide**.

gust Sudden, brief increase of the wind speed over its mean value.⁽⁹⁵⁾

Gy See **Gray**.

H

hachure A method of indicating rising ground on a map by a shading of lines down the line of the slope - the heavier or more numerous the lines the steeper the slope.⁽²⁷⁾

HAG See **HAZMAT Action Guide**.

half life (radioactive) In relation to

radioactive decay, the time required for the quantity of a radionuclide to decrease to one half of its initial value.⁽⁵⁷⁾

ham radio network The international amateur radio network, frequently a valuable contribution by the community to disaster response.⁽⁹⁵⁾

handtrail A **fire line** constructed by hand using simple hand tools.⁽²¹⁾

harm A physical injury or damage to health, property or the environment.⁽⁸⁷⁾

harmful substance See **hazardous substance**.

hazan See **hazard analysis**.

hazard * A source of potential harm or a situation with a potential to cause loss.⁽⁸⁸⁾

* A potential or existing condition that may cause harm to people or damage to property or the environment.⁽³⁶⁾⁽³²⁾⁽⁶⁰⁾

* An intrinsic capacity associated with an agent or process capable of causing harm.⁽¹⁰²⁾⁽¹⁰¹⁾

hazard analysis That part of the overall planning process which identifies and describes hazards and their effects upon the community.⁽⁶⁰⁾
See *also* **risk analysis** and **risk assessment**.

hazard assessment See **risk assessment**.

hazard audit A detailed and comprehensive review of all operational and organisational safety systems and practises.⁽⁶²⁾
See *also* **risk analysis**.

hazard classification The rating for a **dam** based on the potential consequences of failure. The rating is based on potential for loss of life

and damage to property that failure of that dam could cause. Such classification is related to the amount of development downstream of a dam.⁽⁴⁴⁾

hazard identification The process of recognising that a hazard exists and defining its characteristics.⁽⁸⁷⁾

hazard identification word diagram A table describing possible events at given facilities, their cause, possible consequences, and the prevention, detection, and protection systems required.⁽⁶²⁾

hazard management See **mitigation**.

hazard mapping The process of establishing geographically where and to what extent particular phenomena are likely to pose a threat to people, property, infrastructure, and economic activities. Hazard mapping represents the result of hazard assessment on a map, showing the frequency/probability of occurrences of various magnitudes or durations.⁽⁹³⁾

hazard mitigation See **mitigation**.

hazardous chemical See **hazardous material**.

hazardous event An event which can cause **harm**.⁽⁸⁷⁾

hazardous facility A facility which incorporates **hazards** which may pose a significant **risk** to the employees in the facility, the surrounding **community** and **environment**, and/or the facility itself. Sometimes this term is used of facilities which are more properly described as 'potentially hazardous'.⁽⁵⁾ *Syn.* 'hazardous installation' and 'hazardous industry'.

hazardous industry See **hazardous facility**.

hazardous installation See **hazardous facility**.

hazardous location An area where a **flammable atmosphere** may be present continuously or intermittently, or be present due to an abnormal or transient condition.⁽⁷⁶⁾

hazardous material A substance or material which has been determined by an appropriate authority to be capable of posing an unreasonable risk to health, safety and property.⁽¹²⁾⁽⁹⁵⁾ See also **dangerous goods** and **hazardous substance**.

hazardous substance A substance which: (a) is listed on the National Occupational Health and Safety Commission's *List of Designated Hazardous Substances* (b) has been classified as a hazardous substance by the manufacturer or importer in accordance with the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances*.⁽¹⁰³⁾⁽¹⁰²⁾ See also **hazardous material** and **dangerous goods**.

hazardous waste Waste materials or mixtures of waste which require special handling and disposal because of their potential to damage health and the environment.⁽⁷¹⁾

hazardous waste management A program for controlling the generation, storage, collection, transportation, treatment, use, conversion or disposal of **hazardous wastes**; includes administrative, financial, legal and planning activities as well as operational aspects of hazardous

waste handling, disposal and resource recovery systems.⁽⁷¹⁾

hazard reduction See **fuel reduction**.

HAZCHEM emergency action code

A code system indicating the initial emergency actions for incidents involving hazardous materials, as specified in the ADG Code.⁽⁴⁾

HAZMAT See **hazardous material**.

HAZMAT Action Guide (HAG)

A document designed to facilitate the communication by radio of data from a chemical data base to an incident controller.⁽⁴⁾

head * The pressure due to elevation of water, amounting to 9.7 kilopascals/metre.⁽¹⁷⁾ Syn.

'backpressure' and 'static head'.

* The most rapidly advancing edge of a bushfire.⁽¹⁷⁾

health The state of complete physical, mental and social well being, and not merely the absence of disease or infirmity.⁽⁷²⁾

health care facility A hospital, nursing home or other facility which provides health care services to in-patients, out-patients or day patients.⁽⁸⁴⁾

health surveillance The monitoring of individuals for the purpose of identifying changes in health status due to occupational **exposure** to a **hazardous substance**.⁽¹⁰³⁾

heat stress index A four-step index, based on the THI (Temperature Humidity Index) or 'humiture' index, expressing the likelihood of heat stroke, sunstroke, or other acute symptoms of bodily stress.⁽¹⁰⁸⁾

heatwave A long lasting period with extremely high surface

temperature.⁽⁹⁵⁾

height datum See **Australian height datum**.

height of dam Normally the difference in level between the natural bed of the stream or watercourse at the downstream toe of the barrier or, if it is not across a stream channel or watercourse, between the lowest elevation of the outside limit of the barrier, and the **top of dam**. In some instances where a dam has a free-overflow **spillway** only or has a gated spillway, it may be difficult to define the top of dam level as the normal abutment sections may not exist; in such cases the height is to be measured to the level arrived at by adding the **design flood** rise in water level to the level of the spillway crest, or to the **full supply level**.⁽⁹⁾

hierarchy of control Control measures that should be used to reduce the **risk** of a workplace accident, including 'elimination', 'substitution', 'isolation', 'engineering control', 'administrative control', and, 'personal protective equipment'.

high hazard In relation to flooding, possible danger to life and limb; evacuation by trucks difficult; able-bodied adults would have difficulty in wading to safety; potential for significant structural damage to buildings.⁽⁶¹⁾ See also **low hazard**.

high pressure system See **anticyclone**.

high risk enterprise A livestock or livestock-related enterprise with a high potential for disease spread, eg. an abattoir, milk factory, artificial breeding centre or livestock market.⁽²⁹⁾

high seas Those waters between three and two hundred miles from the coast. See also **exclusive economic zone** and **territorial sea**.

HNS Convention See **International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea**.

hospital medical controller Usually a senior medical officer who commands all medical aspects of disaster response in a hospital.⁽³²⁾

hot spot A particularly active part of a fire.⁽³⁾

hot zone The area immediately surrounding a **dangerous goods** incident which extends far enough to prevent adverse effects from dangerous goods releases to personnel outside the zone.⁽⁸⁹⁾ Syn. 'exclusion zone', 'combat zone' or 'restricted zone'. See also **control zone**.

house warden A person who, during an **emergency**, assumes control over a building and its occupants and is the prime contact with the appropriate emergency service(s).⁽⁷⁷⁾ See also **zone warden**.

howling terrors An Australian term for small destructive, **tropical cyclones** with an eye diameter of less than 20 kilometres; also called 'kooinar' by some Aborigines.⁽¹⁴⁾

human development Progress of individuals - and by extension of their community - towards fulfilment of their manual, intellectual and cultural capacities and of their personal potentialities.⁽⁷²⁾ See also **sustainable development**.

humanitarian action Action undertaken for the advancement of the welfare of humanity without regard to race, religion or politics.⁽⁷²⁾

hurricane Name given to a warm core **tropical cyclone** with maximum surface wind of 118 kilometres/hour (64 knots) or greater (hurricane force wind) in the North Atlantic, the Caribbean and the Gulf of Mexico, and in the Eastern Pacific Ocean.⁽¹⁰⁸⁾

hydraulics The study of water flow in a river and across a **floodplain** and the evaluation of the flow characteristics such as height and velocity. This may include assessments of the effects of obstructions such as bridges and buildings on water flow, and changes in the slope of the water surface during the **flood**.⁽³³⁾

hydrograph A graph which shows how the discharge or stage/flood level at any particular location changes with time during a flood.⁽⁶¹⁾

hydrological forecast Statement of expected hydrological conditions for a specified period.⁽⁹⁵⁾ See *also* **flood forecasting**.

hydrological warning Emergency information on an expected hydrological phenomenon which is considered to be dangerous.⁽⁹⁵⁾ See *also* **flood warning**.

hydrology The study of the rainfall-runoff process as it relates to the development of flooding and the derivation of **hydrographs** at different locations in a river system for given floods.⁽³³⁾

hyperbaric chamber See **decompression chamber**.

hyperglycaemia High blood sugar.⁽⁷³⁾

hyperthermia The severe accidental over-heating of the body.

hypocentre (focus) The point beneath the earth's surface where an earthquake rupture starts and from which waves radiate.⁽⁹⁵⁾ See *also* **epicentre**.

hypoglycaemia Low blood sugar.⁽⁷³⁾

hypothermia The severe accidental cooling of the body.⁽⁷³⁾

IAEA See **International Atomic Energy Agency**.

IAOA Institute of Ambulance Officers (Australia).

IATA International Air Transport Association.

IATA Regulations The dangerous goods regulations published by the International Air Transport Association.⁽⁴⁵⁾

ICA See **Insurance Council of Australia**.

ICAO See **International Civil Aviation Organisation**.

ICAO recommended practice Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognised as desirable in the interest of safety, regularity of efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

ICAO rules The *Technical Instructions*

- for the Safe Transport of Dangerous Goods by Air* published by the **International Civil Aviation Organisation.**⁽⁴⁵⁾
- ICAO standard** Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognised as necessary for the safety or regularity of international air navigation and to which Contracting States will confirm in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.
- ICC** See **incident control centre.**
- ICDO** See **International Civil Defence Organization.**
- ice storm** Intense formation of ice on objects by the freezing, on impact, of rain or drizzle.⁽⁹⁵⁾ *Syn.* 'glaze storm'.
- ICOLD** International Committee on Large Dams.
- ICRC** International Committee of the Red Cross. See **Red Cross.**
- ICS** See **incident control system.** See also **Australian Inter-service Incident Management System.**
- ICU** See **intensive care unit.**
- IDLH** See **immediate danger to life and health.**
- IDNDR** See **International Decade for Natural Disaster Reduction.**
- IED** Improvised explosive device.
- IFF** See **imminent failure flood.**
- IFHC** See **incremental flood hazard category.**
- IFRC** See **International Federation of Red Cross and Red Crescent Societies.**
- ignition** Setting fire to or being set fire to.⁽¹⁰²⁾
- ignition source** This includes heat, sparks, flames, static electricity and friction.⁽⁸⁹⁾
- IHL** See **international humanitarian law.**
- IMDG Code** See **International Maritime Dangerous Goods Code.**
- immediate danger to life and health (IDLH)** An atmospheric concentration of a hazardous material that can cause irreversible health effects within a short time period.
- imminent failure flood (IFF)** The **flood** event which, when routed through the **reservoir**, with the existing **spillway**, just threatens failure of the **dam.**⁽⁹⁾
- immunisation** Rendering a person or animal immune to certain infections by the process of injecting either antigen or a serum containing specific antibodies.⁽⁷²⁾ See also **communicable disease.**
- IMO** See **International Maritime Organisation.**
- impact** A sudden occurrence without prior warning.⁽²⁴⁾
- impact area** Any area which is likely to bear, is bearing, or has borne the full impact of any disaster and in which major lifesaving operations are necessary.⁽⁵⁸⁾
- incidence** The number of new cases of a disease or injury or of sick persons or casualties, in a given population in a specified period of time. It should not be confused with

'prevalence'.⁽⁷²⁾

incident * An event, accidentally or deliberately caused, which requires a response from one or more of the statutory emergency response agencies.⁽³⁾

* A sudden event which, but for mitigating circumstances, could have resulted in an accident.⁽¹⁰⁶⁾

* An emergency event or series of events which requires a response from one or more of the statutory response agencies.⁽⁴⁰⁾ *See also* **accident, emergency** and **disaster**.

incident action plan * A statement of objectives and strategies to be taken to control or suppress an incident, and approved by the **incident controller**.⁽³⁾

* Describes the actions to be taken to control or suppress an incident. There are three incident action plan formats:

- **incident action plan - type 1** The unwritten or oral format for small incidents where the **incident controller** can talk individually to all actively concerned in the incident.

- **incident action plan - type 2** Incident action plan type 2 is used for medium incidents and includes a summary of actions taken, current situation information and the control objectives for the incident. The type 2 plan is also very useful for briefing incoming personnel or providing a situation report.

- **incident action plan - type 3** Incident action plan type 3 used for large incidents is a more substantial document which lists the intentions and actions of the various functional units of the incident control system.⁽²⁾

incident control centre (ICC) The location where the **incident**

controller and, where established, members of the **incident management team** provide overall direction of response activities in an emergency situation.⁽³⁾ *Syn.* **emergency operations centre**.

incident control system (ICS) * A command structure to systematically and logically manage suppression of emergency incidents including wildfires, from small, simple incidents to large, difficult or multiple situations. It is designed to develop in a modular fashion from the top (**incident controller**) downwards.⁽³⁾

* The combination of facilities, equipment, personnel, procedures, and communications operating within a common organisational structure with responsibility for the management of **allocated resources** to effectively accomplish stated objectives relating to an incident.⁽²⁾ *See also* **Australian Inter-Service Incident Management System**.

incident controller The individual responsible for the management of all incident operations.⁽²⁾⁽³⁾

incident management The process of controlling the incident and coordinating resources.⁽⁴⁰⁾

incident management point The location from which the **incident manager** controls and coordinates the activities of the response agencies.⁽⁴⁰⁾

incident management team * A group of incident management personnel comprising the **incident controller**, and the personnel he or she appoints to be responsible for the functions of operations, planning and logistics.⁽³⁾

* The team headed by the incident

- manager which is responsible for the overall control of the incident.⁽⁴⁰⁾
- incident manager** The person responsible for the overall control of an incident.⁽⁴⁰⁾
- incident objective** A goal statement indicating the desired outcome of the incident. The incident objective guides the development of the **incident action plan** and must reflect the policies and needs of the combat agency and supporting agencies. All factors affecting the incident must be considered before determining the objective.⁽²⁾
- incident plan** The plan of action developed by the incident manager, usually in conjunction with the **incident management team**, to deal with an incident. The plan may be issued orally or in writing.⁽⁴⁰⁾ See also **incident action plan**.
- incident sequence analysis** The tracing of a primary event forwards in order to define its consequences.⁽¹⁸⁾ See also **fault tree analysis**.
- incident strategies** The incident strategies will be developed from the **incident objective** and will describe how the **incident management team** plan to combat the incident. There is a requirement for strategies to be developed throughout the incident and they should be reviewed for each operational period.⁽²⁾
- incompatibility** A situation where any substance or residue which, by combining chemically with the incompatible substances or promoting self-reaction or decomposition of the incompatible substances, may create a hazard.⁽¹⁰²⁾
- incremental flood hazard** The potential incremental loss of life, property and services which can be directly attributable to the failure of a dam due to inadequate **spillway** capacity.⁽⁹⁾⁽¹¹⁾ See also **flood hazard**.
- incremental flood hazard category (IFHC)** Categories of incremental losses and effects as a consequence of **dam failure** due to inadequate **spillway** capacity; used for selection of the recommended **design flood annual exceedence probability**.⁽⁹⁾ See also **flood hazard**.
- indirect attack** The use of **backburning** as a method of suppression to confine the fire within a defined area bounded by existing or prepared **control lines**. Control lines may be a considerable distance ahead of the fire.⁽³⁾
- individual risk** The frequency at which an individual may be expected to sustain a given level of harm from the realisation of specified hazards.⁽²⁸⁾ See also **societal risk**.
- individual risk criteria** Criteria which can be used to determine the acceptability of a given **individual risk** level at a given site. See also **societal risk** and **risk criteria**.
- induced seismicity** Earthquake activity resulting from man-made activities such as mining, large explosions, or forcing large quantities of liquid deep into the ground, eg. oil-fields, waste disposal or reservoir filling.⁽⁹⁵⁾
- induced wind** See **fire wind**.
- infected premises (IP)** A defined area (which may be all or part of a property) in which an **exotic animal**

- disease** exists, is believed to exist, or in which the infective agent of that **exotic animal disease** exists or is believed to exist. An infected premises is subject to quarantine served by notice and to eradication or control procedures.⁽²⁹⁾
- infectious disease** See **communicable disease**.
- inflammable** See **flammable**.
- in-flight emergency** An emergency which affects the occupants or operational integrity of an aircraft while in flight.⁽⁴⁷⁾
- informal debriefing** A structured meeting of emergency workers, coordinated by a trained 'peer debriefer', conducted in an informal environment, to: a. provide an information briefing on the event, including a status report on the condition of victims, etc; b. offer support; c. provide an opportunity to express feelings and demystify reactions associated with response to the event; d. enable the team leader to monitor the reactions of his/her teams members; and e. enable the opportunity to assess the need for **formal debriefing**.
- information centre** A facility established near an **emergency operations centre** (to protect the emergency operations centre from interruptions and general inquiries) to provide visitors with, and answer inquiries for, information concerning the emergency or operation in progress. It includes the supply of information of a general nature to assist the victims.⁽⁶⁵⁾
- information report** See **situation report**.
- initial attack** The first suppression work on a fire.⁽³⁾
- injury** Harm of any kind done or sustained.
- inner perimeter** That area which is secured to allow effective command, communication and coordination control, and to allow for safe operations while dealing with an emergency, including the immediate ingress and egress needs of emergency response personnel and vehicles.⁽⁴⁷⁾ *Syn.* 'inner cordon'. See also **outer perimeter**.
- inquiry** The facility established to provide information gathered in the **registration** process, to concerned persons seeking such information.⁽⁵⁸⁾ See also **tracing**.
- Insurance Council of Australia (ICA)** An independent, non-profit organisation that represents the interests of the general insurance industry.⁽⁹⁷⁾
- integrated approach** See **all-agencies approach**.
- intelligence** Information that has been evaluated.⁽³²⁾
- intensive care** Medical therapy for the critically ill, usually given under hospital supervision and for a short period of time.⁽⁵¹⁾
- intensive care unit (ICU)** That section of a hospital in which **intensive care** is given.⁽⁵¹⁾
- internal emergency** A sudden event which arises internally and which may be caused by an internal or external source, and may adversely affect the safety of persons in a health care facility, requiring an immediate response by the occupants.⁽⁸⁴⁾
- International Atomic Energy Agency (IAEA)** United Nations specialised agency for the peaceful uses of

atomic energy; promotes the contribution of this energy to peace, health and prosperity, and ensures that it is not used for military purposes. Supervises the safety and monitors accidents of nuclear installations, but is not involved in non-peaceful nuclear (weapons) questions.⁽⁷²⁾

International Civil Aviation

Organisation (ICAO) A world-wide organisation formed for the primary purpose of administering the Convention on International Civil Aviation, which was designed to promote the safe, orderly and efficient growth of international civil aviation, including both commercial and general aviation.⁽⁸⁾

International Civil Defence

Organization (ICDO) Inter-governmental organisation with major role in society's response to serious emergencies. It develops, strengthens and coordinates civil protection for all people in different countries, collaborates with governments and other organisations in preparedness and response to natural and man-made disasters, and promotes safer environment conducive to development.⁽⁷²⁾

International Committee of the Red Cross (ICRC) See Red Cross.

International Decade for Natural Disaster Reduction (IDNDR) A decade declared by the United Nations, aiming to reduce loss of life, property damage and economic and social disruption from natural disasters, especially in developing countries, through concerted international action. Many countries have established funded programmes to support the Decade.

The Australian IDNDR goals are:

- to improve community awareness of risk, preparedness and response;
- to develop and implement programs to assist community understanding of vulnerability to hazards;
- to foster partnerships within communities to pursue the IDNDR vision;
- to ensure IDNDR activities are adequately resourced; and,
- to develop a framework that will generate quality programs based on IDNDR principles able to continue beyond the year 2000.⁽⁹⁷⁾ See also **Australian International Decade for Natural Disaster Reduction (IDNDR) Coordination Committee.**

International Federation of Red Cross and Red Crescent Societies (IFRC) An international humanitarian organisation that is part of the International Red Cross and Red Crescent Movement. Its mission is to improve the situation of the world's most vulnerable people.⁽⁹⁷⁾ See also **Red Cross.**

international humanitarian law (IHL)

A set of international rules, whether treaty based or customary, specifically intended to govern the humanitarian problems which are the direct consequences of international and non-international armed conflicts. These rules limit, for humanitarian reasons, the right of parties to a conflict to use whatever means and methods of warfare they choose, and protect persons and the objects which could be affected by the conflict.⁽²²⁾

International Maritime Dangerous Goods Code (IMDG Code) A document on the transport of dangerous goods published by the

- International Maritime Organization.**
- International Maritime Organisation (IMO)** An international organisation interested primarily in shipping matters, and is comparable in purpose and scope to ICAO. It is concerned with administering the International Convention for Safety of Life at Sea (SOLAS).⁽⁸⁾
- International Organisation for Standardisation (ISO)** An international standards-writing body headquartered in Geneva, Switzerland, composed of national standards associations from some 55 countries. All member countries are given equal status and are entitled to one vote regardless of size or economic development. Technical work is carried on in committees.⁽⁷¹⁾
- International Rescue Committee (IRC)** A non-profit, nonsectarian voluntary organisation providing relief, protection, and resettlement services for refugees and victims of oppression or violent conflict.⁽⁹⁷⁾
- International Society for Traumatic Stress Studies (ISTSS)** An organisation that provides a forum for the sharing of research, clinical strategies, public policy concerns and theoretical formulations on trauma in the United States and around the world.⁽⁹⁷⁾
- International Telecommunication Union (ITU)** United Nations specialised agency for international cooperation in the rational use and improvement of all telecommunications, including radio, television, telegraph, telephone and satellite space communications.⁽⁷²⁾
- interplate earthquake** Earthquake with its focus on a plate boundary.⁽¹³⁾
- intraplate earthquake** Earthquake with its focus within a plate.⁽¹³⁾
- inundation map** A map delineating the area that would be flooded by a particular **flood** event.⁽⁴⁴⁾ *Syn.* 'flood map'.
- inventory** A list of the type and quantity of hazardous materials in transport, stored or in process. See *also* **register**.
- inversion layer** Atmospheric layer in which the temperature increases or remains constant with height.⁽¹⁰⁸⁾
- involuntary risk** A **risk** imposed on people by a controlling body without their consent.⁽¹¹⁾ See *also* **voluntary risk**.
- ion** An atom in a charged state following **ionisation**.⁽⁵⁷⁾
- ionisation** The process by which one or more **electrons** are removed from, or sometimes added to, an atom leaving the atom in a charged state.⁽⁵⁷⁾
- ionising radiation** Radiation which is capable of causing **ionisation**, either directly (for example: for radiation in the form of gamma rays and charged particles) or, indirectly (for example: for radiation in the form of neutrons).⁽⁵⁷⁾
- IP** See **infected premises**.
- IRC** See **International Rescue Committee**.
- ISDM** International Society for Disaster Medicine.
- ISM** International Safety Management (International Management Code for the Safe Operation of Ships and Pollution Prevention).

ISO See **International Organization for Standardization**.

isobar A line represented on a map or chart, connecting points on the surface that have equal barometric pressure over a given time or period.⁽⁹⁵⁾

isohyet A line drawn on a map or chart connecting points with equal amounts of precipitation, for equal periods of time.⁽⁹⁵⁾

isoseismal Contour lines drawn to separate one level of seismic intensity from another.⁽¹³⁾⁽⁴²⁾

isotherm Line drawn on a map or chart connecting points with equal temperature.⁽⁹⁵⁾

isotope Atoms of an element having the same number of protons but different numbers of neutrons in the nuclei. Isotopes usually have very nearly the same chemical properties, but somewhat different physical properties.⁽⁶⁾

ISTSS See **International Society for Traumatic Stress Studies**.

ITAB Industry training advisory board.

ITU See **International Telecommunication Union**.

J

JMA See **Modified Mercalli Scale**.

job card A written list of tasks to be carried out by an individual as part of an emergency response.⁽²⁹⁾

joint probability The probability that two or more variables will assume certain values simultaneously or

within particular time intervals.⁽¹¹⁾

K

katabatic wind Downslope wind caused by greater air density on the slope than at some distance, horizontally, from it. The wind is associated with surface cooling of the slope.⁽¹⁰⁸⁾ See also **anabatic wind**.

kilogram-force (kgf) A non-SI unit of force, equal to 9.806,65 newtons. See **newton**.⁽⁵¹⁾

knot Unit of speed equal to one nautical mile per hour (1.852 kilometres per hour).⁽¹⁰⁸⁾

L

La Niña The opposite of an **El Niño** event, during which waters in the west Pacific are warmer than normal, trade winds or Walker circulation is stronger and, consequently, rainfalls heavier in Southeast Asia.⁽¹⁴⁾ See also **El Niño** and **southern oscillation**.

lahar A mudslide induced by volcanic eruption either at the time of the eruption (by the mixing of hot gases, melted ice or water, and ash) or years later (by the failure of volcanic ash deposits in the presence of heavy rain).⁽¹⁴⁾ See also **ejecta**, **landslide** and **pyroclastic flow**.

landslide The general term given to

movement of material downslope in a mass.⁽¹⁴⁾

landslide stabilisation Measures to prevent a **landslide**.⁽⁹⁵⁾

lapilli Volcanic fragments, about 2-60 millimetres in diameter.⁽¹⁴⁾ See also **ejecta**.

large dam The minimum requirements adopted for determining whether a **dam** qualifies for inclusion in the **ICOLD World Register of Dams** are as follows:

- All dams above 15 metres in height, measured from the lowest portion of the general foundation area to the **top of the dam**.
 - Dams between 10 and 15 metres in height (as above) are included, provided they comply with at least one of the following conditions:
 - the length of crest, ie. the top of the dam, to be not less than 500 metres;
 - the capacity of the reservoir formed by the dam to be not less than 1,000,000 cubic metres;
 - the maximum flood discharge dealt with by the dam is not less than 2,000 cubic metres per second;
 - the dam has specifically difficult foundation problems;
 - the dam is of unusual design.⁽¹⁰⁾⁽⁹⁾
- See also **referable dam**.

lava Molten rock. Different terms are used to describe the nature of the lava, mainly as determined by viscosity.⁽¹⁴⁾ See also **magma**.

lava flow Molten rock which flows down-slope from a volcanic vent, typically moving at between a few metres to several tens of kilometres per hour.⁽⁹⁵⁾

LC₅₀ A concentration of a substance (usually in air) that is estimated to produce death in 50% of a

population of experimental animals on inhalation for a short period of time.⁽¹⁰²⁾ See also **EC₅₀**, **ED₅₀**, **LC₅₀**, **LC₁₀₀**, and **LD₁₀₀**.

LD₅₀ A dose of a substance that produces death in 50% of a population of experimental animals. It is usually expressed as milligrams per kilogram of body weight.⁽¹⁰²⁾ See also **EC₅₀**, **ED₅₀**, **LC₅₀**, **LC₁₀₀**, and **LD₁₀₀**.

LD₁₀₀ The dose of an active ingredient taken by mouth or absorbed by the skin which is expected to cause death in 100% of the test animals so exposed.⁽⁷¹⁾ See also **EC₅₀**, **ED₅₀**, **LC₅₀**, **LC₁₀₀**, and **LD₅₀**.

LDCC See **Local Disease Control Centre**.

lead agency An organisation which, because of its expertise and resources, is primarily responsible for dealing with a particular hazard.⁽⁴⁰⁾

lead combat agency/authority See **combat agency**.

lead time The period which elapses between the time and date of determining that an item is required until it is actually received by the user or the time for events to occur before an action can be taken.⁽¹²⁾

lesion Any discontinuity of tissue or loss of function of a part of the body as a result of disease or trauma.⁽¹⁰¹⁾ See also **injury**.

lethality The lethality of a **flood** is the potential that flood has to cause deaths and injuries for those within its boundaries. This potential varies as a function of water depth, velocity, temperature and amount of debris carried.⁽¹¹⁾

levee * Water-retaining earthwork used to confine streamflow within a specified area along the stream or to prevent flooding due to waves or tides.⁽¹⁴⁾

* When a river overflows its banks, there is an immediate decrease in velocity. This results in deposition of suspended mud and, eventually the buildup of an embankment that can contain the river above the elevation of its adjacent floodplain.⁽¹⁴⁾
Syn. 'bund', 'dike', 'embankment', 'stop bank'.

liaison The process of sharing information between services responding to an **incident**.⁽²⁴⁾

liaison officer * A representative of an agency/organisation. Liaison officers should have the capability to communicate with the agency they represent. They should have the authority to commit their agencies' resources.⁽⁴⁰⁾

* A representative from an agency involved in the incident response who works with the **incident coordinator** as part of the **incident management team** and is in communication with the officer in charge of his or her respective agency. Liaison officers must have the authority to commit resources of the organisation they represent.⁽²³⁾
 See also **agency representative**.

lifelines * The public facilities and systems that provide basic life support services such as water, energy, sanitation, communications and transportation.⁽⁹⁵⁾

* Systems or networks that provide services on which the well-being of the community depends.⁽⁴¹⁾

likelihood A qualitative description of probability and frequency.⁽⁸⁸⁾⁽⁴¹⁾

liquefaction Process of soil and sand behaving like a dense fluid rather than a wet solid mass during an **earthquake**.⁽¹³⁾

liquefied natural gas (LNG) Liquefied natural gas is natural gas and other gaseous hydrocarbons that have been cooled under high pressure and converted into liquid form, shrinking considerably in volume, so they can be more easily transported by ship. Upon delivery at the destination, the liquefied gas is regasified and the gas is distributed to the consumer by pipeline.⁽⁵⁴⁾ See also **liquefied petroleum gas, natural gas** and **town's gas**.

liquefied petroleum gas (LPG or LP gas) A material composed predominantly of any one or more of the following hydrocarbons: propane, propylene, butanes or butylenes.⁽⁸¹⁾ See also **liquefied natural gas, natural gas** and **town's gas**.

LNG See **liquefied natural gas**.

local disease control centre (LDCC) The field centre from which all operations in the centre's **restricted area** are controlled.⁽²⁹⁾

local overland flooding Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.⁽⁶¹⁾

local standby To be instituted when an aircraft approaching the airport is known or is suspected to have developed some defect but the trouble is not such as would normally involve any serious difficulty in effecting a safe landing.

logistics The range of operational activities concerned with supply, handling, transportation, and

distribution of materials. Also applicable to the transportation of people.⁽⁹⁵⁾

loss Any negative consequence, financial or otherwise.⁽⁸⁸⁾

low hazard In relation to flooding, should it be necessary, people and their possessions could be evacuated by trucks; able-bodied adults would have little difficulty in wading to safety.⁽⁶¹⁾ *See also high hazard.*

LPG *See liquefied petroleum gas.*

M

macroseismic effects Those effects that can be observed on a large scale in the field without instrumental aid.⁽⁴²⁾ *See also earthquake and earthquake intensity.*

magma The molten matter including liquid rock and gas under pressure which may emerge from a volcanic vent.⁽⁹⁵⁾ *See also lava.*

magnetic bearing The direction from a point of observation to an object in relation to **magnetic north**.⁽²⁷⁾ *See also grid bearing and back bearing.*

magnetic north The direction from any point on the earth's surface to the magnetic north pole; the direction a compass points.⁽²⁷⁾ *See also true north and grid north.*

magnetic variation The angle between the magnetic north line and the grid north line at any given place - this varies over time and from

place to place.⁽²⁷⁾

magnitude source The seismological centre whose methods or results are used for magnitude determination.⁽⁴²⁾

main plan A document describing roles/responsibilities and management arrangements (including specific control and coordination arrangements) for community emergency management.⁽⁶⁰⁾ *See also emergency plan, functional plan and sub-plan.*

main shock The biggest of a particular sequence of earthquakes.⁽⁹⁵⁾ *See also aftershock, earthquake swarm and foreshock.*

mainstream flooding Inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.⁽⁶¹⁾

major accident A sudden occurrence (including in particular a major emission, loss of containment, fire, explosion or release of energy) leading to serious danger or harm to people, property or the built or natural environment, whether immediate or delayed.⁽¹⁰⁶⁾ *See also incident and emergency.*

major flooding Flooding where appreciable urban areas are flooded and/or extensive rural areas are flooded. Properties, villages and towns can be isolated.⁽⁶¹⁾ *See also flood, minor flooding and moderate flooding.*

major hazard facility The whole area under the control of an operator:

- upon or within which an activity takes place involving or likely to

involve the processing, production, disposal, handling, use or storage, either temporarily or permanently, of a quantity of materials which exceeds the threshold or aggregate quantity, as determined in accordance with Schedule 1 of the *National Standard for the Control of Major Hazard Facilities, The Identification of a Major Hazard Facility*; or

- that the relevant public authority classifies, in accordance with section 5.6 of the *National Standard for the Control of Major Hazard Facilities*, to be a major hazard facility; and also includes all areas, such as associated production equipment, permanent or in-transit storage, ancillary equipment or processes, marshalling yards, docks, piers, jetties, depots, pipelines or similar structures whether floating or not. ⁽¹⁰⁶⁾ See also **hazardous industry** and **hazardous facility**.

major hazards Hazardous activities with a potential for causing more than a few fatalities at once, especially among people who are not employees of the plant. ⁽⁹²⁾

major incident An event which requires response by police, emergency services and the community which may affect a wider area over a longer period of time but is not a declared disaster. ⁽²³⁾

malnutrition A diseased state resulting from an absence or deficiency in the diet of one or more essential nutrients, either manifest or detectable by tests. Malnutrition can also be due to an excess of the wrong food. ⁽⁹⁵⁾

man-made disaster See **technological disaster**.

man-made hazard See **technological hazard**.

management by objectives A process of consultative management where the **incident management team** determine the desired outcomes of the incident. These outcomes or objectives are then communicated to the commander and crews involved in the operation. ⁽²⁾

management structure A framework for **control** and **coordination** arrangements, during multi-service operations, normally prescribed through legislation or government direction. ⁽⁶⁰⁾

manifest See **inventory**.

Manual of Diagnostic Procedures A manual which is a part of **AUSVETPLAN** that defines diagnostic procedures to confirm the presence of **exotic animal disease**. ⁽⁹¹⁾

Marine Oil Spill Equipment System (MOSES) A computer-based register of selected oil spill equipment in Australia accessible via AMSA's external web site. *Previously known as 'selected pollution equipment availability register (SPEAR)'*. ⁽²⁰⁾

marine pollutants Substances which are potentially harmful to the **environment** and, if released, could cause serious damage. These substances are prescribed under the **International Maritime Dangerous Goods Code**. ⁽⁸⁹⁾

marine search and rescue incident An imminent or actual incident when any of the following conditions exist: i) A surface vessel has requested assistance. ii) A surface vessel has

transmitted a distress signal. iii) It is apparent that a surface vessel is in distress. iv) A surface vessel is reported to be sinking or to have sunk. v) The crew is reported to have abandoned ship or is about to do so. vi) Reports indicate that the operating efficiency of the craft is so impaired that the craft may sink or the crew may be forced to abandon. vii) The surface vessel is overdue or unreported.⁽⁸⁾

MARPOL 73/78 International Convention for the Prevention of Pollution from Ships.

marshalling area The designated area where evacuees are assembled, and organised for onward movement.⁽⁶⁵⁾

mass casualty incident (MCI) An incident where, in the first instance, casualties outnumber the trained responders, and where the local health infrastructure is unable to cope. See also **disaster medicine** and **emergency medicine**.

mass explosion A mass explosion which affects almost the entire load virtually instantaneously.⁽⁸⁹⁾

material needs Clothing, bedding and other personal requisites provided to **emergency affected persons**.⁽⁹⁸⁾

material safety data sheet (MSDS) A document that describes the properties and uses of a substance, that is, identity, chemical and physical properties, health hazard information, precautions for use and safe handling information.⁽¹⁰²⁾⁽¹⁰⁰⁾

maximum credible earthquake The most severe earthquake that can be expected to occur at a given site on the basis of geologic and seismological evidence.⁽⁴⁴⁾

maximum design earthquake A postulated seismic event, specified in terms of specific bedrock motion parameters at a given site, which is used to evaluate the seismic resistance of manmade structures or other features at the site.⁽⁴⁴⁾

MCI See **mass casualty incident**.

MCS Mercalli-Cancani-Sieberg Scale. See **Modified Mercalli Scale** and **earthquake intensity**.

MCV See **mobile communications vehicle**.

mean breaking load The averaged ultimate breaking point of rope. Expressed in kilograms (kg) or kilonewtons (kN) following rigorous testing.⁽⁵⁹⁾ Syn. 'breaking strain'.

mean return period See **recurrence interval**.

Medvedev-Sponheuer-Karnik Scale (MSK) See **Modified Mercalli Scale**.

media liaison officer A **liaison officer** delegated the task of dealing with the media.⁽²³⁾

medical care Examination and/or treatment of victims by a medical practitioner or other qualified person such as a **paramedic**.⁽⁸⁹⁾

medical commander See **field medical controller**.

medical command post A command post situated near to the **patient treatment post** at which **medical** and **ambulance commanders** can liaise and communicate with receiving hospitals and any remote medical control centre. Syn. 'forward command post', or 'mobile field control unit'.⁽³²⁾

medical control centre A control and

- coordination centre** normally remote from the disaster site and the location of the **medical controller**.⁽³²⁾
- medical controller** Usually a senior medical officer, located distant from the disaster site at a **medical control centre**, responsible for controlling all medical aspects of the disaster.⁽³²⁾
- medical emergency** Any event in which trained personnel are required to respond effectively to a medical crisis beyond the accepted routine of a **health care facility**.⁽⁸⁴⁾
- medical team** See **field medical team**.
- medical transportation area** That portion of the **triage** area where injured persons are staged for transportation to medical facilities under the direct supervision of a medical transportation officer.⁽⁴⁷⁾
- medical triage officer** The most appropriately experienced health professional, appointed by the **field medical controller**, who undertakes triage of patients entering the **patient treatment post**.⁽³²⁾
- medivac** Medical evacuation.
- meizoseismal region** The area of strong shaking and significant damage in an **earthquake**.⁽⁴²⁾
- Mercalli Scale** See **Modified Mercalli Scale**.
- merit approach** That social, economic and ecological impacts of land use options and not just flooding behaviour need to be taken into account in determining the floodplain management plan and the appropriate types of land use for different areas of the floodplain.⁽⁶¹⁾
- METTAG** Medical emergency **triage** tag.
- microburst** **Downburst** with a short lateral extent, about 1 to 4 kilometres, and lasting only a short time.⁽¹⁰⁸⁾
- microseism** Very small **earthquake** that can only be detected by sensitive instruments.⁽¹⁴⁾
- microzonation** Subdivision of a region into areas where similar hazard-related effects can be expected. Seismic microzonation is the mapping of a local seismic hazard using a large scale (order of magnitude from 1/5000 to 1/10 000).⁽⁹⁵⁾ *Syn.* **microzoning**. See also **zonation**.
- mil** A unit of direction from a given point used in the defence forces - there are 6400 mils in a circle. See **degree**.
- mineral earth** A term used to describe the ideal condition of a constructed **firebreak**, being completely free of any vegetation or other combustible material.⁽³⁾
- minor flooding** Flooding that causes inconvenience such as closing of minor roads and the submergence of low level bridges. The lower limit of this class of flooding on the reference gauge is the initial flood level at which landholders and townspeople begin to be flooded.⁽⁶¹⁾ See also **flood**, **major flooding** and **moderate flooding**.
- miscellaneous dangerous goods** Dangerous goods class 9 substances or articles which present a danger not covered by other classes. Class 9 includes a number of substances and articles which present a relatively low hazard and environmentally hazardous

- substances that do not meet the criteria for another Class.⁽⁸⁹⁾
- mist** Airborne droplets of substances that are normally liquid at ambient temperatures. Mists may form through condensation of **vapour** or through spraying of liquids.⁽¹⁰⁰⁾ See also **dust, fumes, gas, smoke, and vapour.**
- mitigation** Measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment.⁽⁹⁵⁾ See also **prevention.**
- MM scale** See **Modified Mercalli Scale.**
- mobile communications vehicle** A vehicle equipped with a range of communication equipment including radios, telephones, facsimile, data links, etc. that enables it to provide vital communications links in support of an **incident management team** at a forward command or control point.⁽²¹⁾
- mobile emergency hospital** A specialised, self-contained vehicle that can provide a clinical environment in which a physician may provide definitive treatment for serious injuries at the accident scene.⁽⁴⁷⁾
- mobile field control unit** See **forward control centre.**
- mobile quarters** Shelters which are designed to be rapidly conveyed to the accident site and quickly activated to protect casualties from exposure to the elements. Their accessories would include provisions for light and heat. Means of transportation must be considered as an integral element of these shelters.⁽⁴⁷⁾
- mobile satellite communication system (SATCOM)** Used after breakdown of other communication facilities in disaster-affected areas by disaster aid teams to perform via satellite exchange of detailed information by telex, phone, fax with their headquarters concerning detailed requirements ensuring a most effective way for the delivery of appropriate relief supplies.⁽⁹⁵⁾
- mobile welfare teams** A mobile team of trained workers (with their own transport and a required amount of equipment) who can be used to start unplanned **welfare centres** or to boost existing welfare centres.⁽⁵⁸⁾
- mobility-impaired person** A person with physical, mental or sensory impairment, either temporary or permanent, who requires assistance during emergency **evacuation.**⁽⁸³⁾
- moderate flooding** Flooding where low-lying areas are inundated requiring removal of stock and/or evacuation of some houses. Main traffic bridges may be covered.⁽⁶¹⁾ See also **flood, major flooding and minor flooding.**
- Modified Mercalli (MM) scale** An earthquake intensity scale that defines intensity by the effects observed on the surface. The Mercalli-Cancani-Sieberg Scale (MCS) and the Medvedev-Sponheuer-Karnik Scale (MSK) are derived from the Modified Mercalli Scale, and have slightly different descriptive texts. A scale with 7 levels of intensity (JMA) is being used in Japan.⁽⁵⁵⁾ See Annex C for more information.
- monitor** To check, supervise, observe critically, or record the progress of an activity, action or system on a

- regular basis in order to identify change.⁽⁸⁸⁾
- monsoon** Seasonally heavy rains and wind the direction of which varies from one season to another. They occur particularly in the Indian Ocean and South Asian areas.⁽⁹⁵⁾
- mopping up** Making a fire safe after it has been controlled, by extinguishing or removing burning material along or near the **fireline**, felling stags, trenching logs to prevent rolling, and the like.⁽³⁾
- morbidity** * The number of sick persons or of diseases in a given period among a given population. * The pathological or morbid conditions that characterise a disease, as opposed to **mortality** that characterises the killing potentialities of a disease.⁽⁷²⁾
- morbidity rate** * For a given disease, the ratio of individuals having that disease to the total number of the population. * For a given population, the ratio of all individuals sick from any disease to the total number of the population. In both cases the ratio can be expressed as incidence or prevalence.⁽⁷²⁾
- mortality** * The number, magnitude or frequency of deaths over a period of time among the total sick and well population of an area. * The numerical expression of deaths, usually given as a **mortality rate**. See *also* **morbidity** and **mortality rate**.⁽⁷²⁾
- mortality rate** The ratio of the number of deaths in a given population to the total number of that population.⁽⁷²⁾ *Syn.* 'death rate'.
- MOSC** The Marine Oil Spills Committee of the Australian Institute of Petroleum.
- motor vehicle rescue** See **road accident rescue**.
- moulage** A reproduction of a skin tumor, wound, or other pathological state which is applied to volunteer victims to simulate realistic injuries in emergency **exercises**.⁽⁴⁷⁾
- movement control** Restrictions placed on movement of animals, people and things to prevent dissemination of disease.⁽²⁹⁾
- MRCC** Maritime Rescue Coordination Centre. See **Rescue Coordination Centre**.
- MSDS** See **material safety data sheet**.
- MSK** Medvedev-Sponheuer-Karnik Scale. See **Modified Mercalli Scale**.
- mudflow** The down-slope transfer of fine earth material mixed with water.⁽⁹⁵⁾ See *also* **landslide**. *Syn.* **mudslide**.
- mudslide** See **mudflow**.
- multi-modal redundant communications** Communications which use multiple modes (eg. radio, telephone, microwave, satellite) and have in-built redundancy (if one link fails there are alternative routes), eg. telephone lines through separate exchanges.⁽³²⁾
- multisectorial** Action or discipline that implies and needs coordination at all levels between and among the various activities involved in managing a situation, eg. a disaster, such as the health sector, transport agriculture, housing, public works, water supply, communications, finance etc.⁽⁷²⁾
- mutagen** An agent capable of

producing a **mutation**.⁽¹⁰²⁾ *See also carcinogen and teratogen.*

mutagenic Able to produce a **mutation**.⁽¹⁰²⁾

mutation A change in the genetic material of cells.⁽¹⁰²⁾

mutual aid emergency agreements

Agreements established with appropriate agencies in the surrounding community, defining initial notification and response

assignments.⁽⁴⁷⁾

N

n-year event Magnitude of an event, the mean return period of which is N years.⁽⁹⁵⁾ *See also recurrence interval.*

National Airport Emergency

Planning Committee (NAEPC) A committee comprising airport operators, airlines, Defence Force, police and State Emergency Services which addresses emergency planning at airports.

National Animal Health Emergency

Centre (NAHEC) A centre from which national disease control actions are coordinated in an **exotic animal disease** emergency.⁽²⁹⁾

National Civil Defence Advisory

Group (NCDAG) The purpose of the NCDAG is to examine, develop and provide guidance on civil defence. The tasks of NCDAG are to:

- develop and review civil defence policy;
- develop civil defence operational concepts and civil defence plans for Australia;
- develop specific aspects of civil defence sub-plans and advise on civil defence-related legislative requirements;
- identify civil defence training needs and awareness requirements;
- provide technical advice on civil defence; and,
- contribute to the National Emergency Management Strategy.⁽³⁸⁾ *See also National Emergency Management Committee.*

National Community Awareness Advisory Group (NCAAG)

The purpose of the NCAAG is to identify means of fostering and enhancing community awareness of relevant aspects of emergency management. The tasks of NCAAG are to:

- propose and develop hazard and disaster awareness strategies covering prevention and preparedness for the whole community and school students, in particular;
- coordinate and contribute to the implementation of these strategies on a national basis;
- assist with Australia's IDNDR contribution by proposing and encouraging proposals from States and Territories for awareness-related projects and by assisting with their implementation and promotion;
- promote awareness of Australian emergency management arrangements and including the role of volunteer-based organisations;
- facilitate exchange of ideas for improved community awareness and

education at State and Territory level; and,

- contribute to the National Emergency Management Strategy.⁽³⁸⁾ See also **National Emergency Management Committee**.

National Control Strategy A documented strategy for the control of a single **exotic animal disease**.⁽⁹¹⁾

National Emergency Management Committee (NEMC) As the peak national emergency management body, the NEMC will provide advice and direction on the coordination and advancement of Commonwealth and State/Territory interests in emergency management arrangements and procedures, through:

- development of joint policies;
- advancement of nationwide capability for the management of emergencies and disasters;
- identification of national/multi-state needs and formulation of strategies to meet those needs;
- provision of strategic guidance on national emergency management training needs and implementation policies;
- provision of civil defence policy guidance; and,
- provision of advice to the Director General, Emergency Management Australia, on the effectiveness of, or need for changes to, Commonwealth support programs.⁽³⁸⁾ See also **National Emergency Management Executive Group, National Civil Defence Advisory Group, National Community Awareness Advisory Group, National Emergency Management Curriculum Advisory Group, and National Emergency**

Management Principles and Practice Advisory Group.

National Emergency Management Competency Standards A description of the skills and knowledge, and their application, required by workers in emergency management.

National Emergency Management Coordination Centre (NEMCC) The operations centre of Emergency Management Australia headquarters in Canberra. It is the focal point for the coordination of Commonwealth Government assistance during emergencies or disasters. *Previously known as 'National Emergency Operations Centre (NEOC)'*.

National Emergency Management Curriculum Advisory Group (NEMCAG) The purpose of the NEMCAG is to oversight the development of the curriculum and training materials derived from the National Emergency Management Competency Standards. It is to provide advice to the agencies undertaking curriculum development on education and training requirements, and to advise the **National Emergency Management Committee** on progress towards the implementation of competency-based education and training. The tasks of the NEMCAG are to:

- coordinate the development of an integrated national emergency management education and training framework which: (1) reflects the particular education and training needs of each State and Territory, (2) provides recognition of State and Territory training, and (3) provides appropriate credentials and qualifications;

- ensure the quality of national emergency management education and training through monitoring the development of the competency standards and their development into training products;
- ensure that appropriate access to education and training products is provided for personnel; and,
- contribute to the National Emergency Management Strategy.⁽³⁸⁾ See also **National Emergency Management Committee**.

National Emergency Management Executive Group (NEMEG) The purpose of the NEMEG is to provide advice to the **National Emergency Management Committee (NEMC)** on relevant emergency management matters and to take executive action where appropriate. The tasks of NEMEG are to:

- develop and review submissions to the NEMC; and
- take action on relevant emergency management matters which require collective consideration and decision below NEMC level.⁽³⁸⁾ See also **National Emergency Management Committee**.

National Emergency Management Principles and Practice Advisory Group (NEMPPAG) The purpose of the NEMPPAG is to oversight the development of a series of manuals which describe best practice in all facets of emergency management. The tasks of the NEMPPAG are to:

- review the proposed structure for principles and practice manuals to ensure that it is appropriate;
- identify topics for each level of the principles and practice structure;
- agree on the content to be included in each manual;

- review the briefs prepared for authors for individual manuals;
- identify prospective authors for individual manuals;
- comment on the content of selected draft manuals;
- conduct a periodic review of each manual contained in the principles and practice series;
- brief the **National Emergency Management Committee** of progress in the development of national emergency management principles and practice; and,
- contribute to the National Emergency Management Strategy.⁽³⁸⁾ See also **National Emergency Management Committee**.

National Health and Medical Research Council (NHMRC) A statutory authority within the portfolio of the Australian Commonwealth Minister for Health and Family Services. The strategic intent of the NHMRC is to work with others for the health of all Australians, by promoting informed debate on ethics and policy, providing knowledge-based advice, fostering a high quality and internationally-recognised research base, and applying research rigour to health issues.⁽⁹⁷⁾

National Occupation Health and Safety Commission See **Worksafe Australia**.

National Plan to Combat Pollution of the Sea by Oil (National Plan) A plan to combat ship-sourced oil spills in the Australian marine environment, utilising the combined efforts of the Commonwealth and State governments and the oil industry.⁽³⁰⁾

National Registration and Inquiry

- System (NRIS)** The Commonwealth/ State arrangements for the recording details of evacuees and for handling inquiries about the location of registered persons.⁽⁹⁸⁾ See *also* **inquiry, registration** and **tracing**.
- National Safety Council of Australia (NSCA)** A non-profit, independent, member-based organisation that is committed to continuous improvement of health and safety in all work places across Australia.⁽⁹⁷⁾
- NATP** National Anti-Terrorist Plan.
- Natural Disaster Relief Arrangements (NDRA)** The arrangements under which the Commonwealth Government assists the State and Territory governments to provide approved financial assistance to eligible persons and organisations following natural disasters.⁽⁹⁸⁾
- natural disaster** Any emergency defined by the Commonwealth for the purposes of the Natural Disaster Relief Arrangements: bushfires, cyclones, earthquakes, floods and storms including hail.⁽⁹⁸⁾
- Natural Disasters Organisation (NDO)** See **Emergency Management Australia**.
- natural gas** Gaseous hydrocarbons (mainly methane) from underground deposits, the production of which may be associated with the production of crude petroleum. The gas is described as 'wet' or 'dry' according to the proportion of readily condensable hydrocarbons which it contains. This term also applies to the purified product.⁽⁸¹⁾ See *also* **liquefied natural gas, liquified petroleum gas** and **town's gas**.
- natural hazard** Geologic, meteorological, or biological **hazard**. See *also* **geohazard**.
- NBCD** Nuclear, biological and chemical defence.
- NCAAG** See **National Community Awareness Advisory Group**.
- NCDAG** See **National Civil Defence Advisory Group**.
- NCISAG** National Communications and Information Systems Advisory Group.
- NDCHQ** See **National Disease Control Headquarters**.
- NDO** Natural Disasters Organisation. *Now known as* **Emergency Management Australia**.
- NDRA** See **Natural Disaster Relief Arrangements**.
- near miss** Any sudden event which, but for mitigation effects, actions or systems, could have escalated to a major accident.⁽¹⁰⁶⁾
- NECWG** National Emergency Calltaking Working Group.
- negative triage** In a disaster situation, the least seriously injured are evacuated before the most seriously injured.⁽⁷³⁾ *Syn.* 'reverse triage'. See *also* **triage**.
- negligence** Failure to do a job or duty; an act or state of neglectfulness.⁽⁷¹⁾
- negligible risks** Risks that are so small that there is no cause for concern about them, and no reason to take action to reduce them.⁽⁹²⁾
- NEMC** See **National Emergency Management Committee**.
- NEMCAG** See **National Emergency Management Curriculum Advisory Group**.

NEMCC See **National Emergency Management Coordination Centre**.

NEMEG See **National Emergency Management Executive Group**.

NEMPPAG See **National Emergency Management Policy and Practises Advisory Committee**.

NEOC National Emergency Operations Centre. *Now known as National Emergency Management Coordination Centre*.

nerve agent A very toxic chemical that interferes with the transmission of nerve impulses and disrupts vital bodily functions such as breathing.⁽³⁷⁾ See also **chemical warfare agent**.

newton The derived **SI unit** of force; the force required to give an acceleration of one metre per second to a mass of one kilogram.⁽⁵¹⁾ See **kilogram-force**.

NFPA US National Fire Protection Agency.

NGO See **non-governmental organisation**.

NHMRC See **National Health and Medical Research Council**.

no duff A code indicating that an emergency is real and not an **exercise**.

NOAA US National Oceanic and Atmospheric Administration.

non-governmental organisation (NGO) Non-profit making organisation operating at the local, national, or international levels. Distinct from a governmental organisation, having no statutory ties with a national government.⁽⁹⁵⁾

non-persistent pesticide A pesticide that breaks down almost

immediately or only lasts for a few weeks or less and turns into non-toxic by-products; may be broken down by light, moisture or micro-organisms, or may evaporate.⁽⁷¹⁾

non-structural elements Those parts of a building (eg. partitions, ceilings, etc.) which do not belong to the load-bearing system.⁽⁹⁵⁾

non-structural flood mitigation System for reduction of the effects of floods using non-structural means, eg. land-use planning, advance warning systems, flood insurance.⁽⁹⁵⁾

northing A horizontal line on a map which runs from east to west. See also **easting**.⁽²⁷⁾

nowcast A description of current weather and a short-period (0-2 hours) **forecast**.⁽⁹⁵⁾

NPAC National Plan Advisory Committee (for oil pollution).

NPW See **nuclear-powered warship**.

NRIS See **National Registration and Inquiry System**.

NSCA See **National Safety Council of Australia**.

nuclear accident Accidental release of **radiation** occurring in civil nuclear facilities, exceeding the internationally-established safety levels.⁽⁹⁵⁾

nuclear hazard All hazards existing from the use of, and exposure to, **radioactive substances**.⁽³⁶⁾⁽³²⁾

nuclear radiation See **ionising radiation**.

nuclear-powered warship (NPW) A vessel, either surface or submarine, which has a primarily nuclear-powered propulsion system.

nuee ardente See **pyroclastic flow**.

nutritional deficiency Absence or insufficiency, in the food or in the organism, of elements indispensable for nutrition.⁽⁷²⁾

nutrition indicators Calculations that permit to evaluate in quantified terms the nutritional changes that have occurred in a given population. Two kinds of indicators can be distinguished: **food and nutrition indicators** and indicators of the state of nutrition.⁽⁷²⁾

O

odour threshold The minimum concentration of a substance in air which is capable of being detected by the human sense of smell. This is normally expressed in parts per million or milligrams per cubic metre.⁽¹⁰²⁾

OECD Organisation for Economic Cooperation and Development.

oedema An accumulation of an excessive amount of watery fluid in cells and tissues. Pulmonary oedema is an excessive build-up of water in the lungs, eg. after inhalation of corrosive gas.⁽⁸⁹⁾

off-site Outside of the boundaries of a hazardous industry.

oil pollution See **oil spill**.

oil spill An incident involving the accidental or intentional release of oil into the marine environment, or the slick produced by such an incident.⁽³⁰⁾

okta A measure of **cloud cover**, one

okta being one-eighth cover.

on-scene commander In airport emergencies, the person designated to take charge of the over-all emergency operation.⁽⁴⁷⁾

on-scene coordinator (OSC) The person appointed to take direct charge of operations to combat an oil pollution incident.⁽³⁰⁾

on-scene spill model (OSSM) A computerised simulation model utilising forecasts of wind, tide and current to predict oil spill movement.⁽³⁰⁾

one-stop shop A relief service centre established to provide a range of short- and intermediate-term services.⁽³⁴⁾

operating procedures Prescribed routine action to be followed by staff during operations.⁽⁶⁰⁾

operation See **emergency operation**.

operational period The period of time scheduled for execution of the **incident action plan**.⁽²⁾

operational procedure Description of methods of carrying out disease control operations such as valuation, slaughter, decontamination.⁽²⁹⁾

operations manual Document containing specific, step-wise instructions on carrying out **operational procedures**.⁽²⁹⁾

OPRC International Convention on Oil Pollution, Preparedness, Response and Cooperation.

OPREX Operational **exercise**.

oral rehydration salts (ORS) Convenient and effective means of providing fluids and electrolytes to a dehydrated person. The proven WHO/UNICEF formula of ORS

comes in 27.5 gram sachets, as follows: Sodium chloride (common salt), 3.5 grams; Glucose 10.0 grams; Sodium bicarbonate 2.5 grams; Potassium chloride 1.5 grams. To be diluted in 1 litre of clean drinking water.⁽⁷²⁾

oral toxicity How poisonous a substance is to an animal or person when taken by the mouth. *See also toxicity.*

ORS *See oral rehydration salts.*

OSC *See on-scene coordinator.*

OSSM *See on-scene spill model.*

outer cordon A physical area surrounding an incident which has been secured by some means to effectively control the entry or exit of persons and equipment from that area. The area boundary is established at a sufficient distance around the outside of the inner cordon to provide a safety zone around the incident site. Entry to the area between the outer cordon and the inner cordon is strictly controlled and the area usually contains combat and support units. The command post should be established in this area.⁽²³⁾

outer perimeter That area outside of the **inner perimeter** which is secured for immediate support operational requirements, free from unauthorised or uncontrolled interference.⁽⁴⁷⁾ *See also inner perimeter.*

outer warning placard The type of placard to be displayed at entrances to chemicals store premises comprising the warning HAZCHEM and emergency contact telephone numbers.⁽¹⁰⁰⁾

oven dry weight (ODW) A technique

used to measure the weight of wood or other cellular material which has been dried in an oven at 105°C until it ceases to lose moisture.⁽³⁾

overpressure *See explosion overpressure.*

OWG Operational Working Group of the **National Plan Advisory Committee.**

oxidising property A property of substances which, although not necessarily combustible, may readily liberate oxygen or be the cause of an oxidation process and which, as a result, may start a fire in other materials or promote the combustion of other materials.⁽¹⁰²⁾

P

PACIA *See Plastics and Chemicals Industries Association.*

Pacific Tsunami Warning Centre An organisation, based in Honolulu, which monitors a number of seismographs and tidal monitoring stations around the Pacific, and issues warning messages concerning possible **tsunamis**, as part of the **Tsunami Warning System.**⁽³⁷⁾

pandemic Prevalent throughout an entire country or continent, or the whole world, as in a disease.⁽⁵¹⁾ *See also endemic disease and epidemic.*

parallel attack A method of suppression in which a **fireline** is constructed approximately parallel to and just far enough from the fire edge to enable firefighters and

- equipment to work effectively. The line may be shortened by cutting across unburnt fingers. The intervening strip of unburnt fuel is normally burnt out as the control line proceeds, but may be allowed to burn out unassisted where this occurs without undue delay or threat to the line.⁽³⁾ *Syn.* 'parallel fire suppression' and 'parallel method'.
- paramedic** An ambulance officer with advanced life support skills. See *also ambulance officer*.
- partial exercise** An **exercise** of one or more participants of the airport emergency plan as required to improve efficiency.⁽⁴⁷⁾
- passenger reception centre** The centre on airport for victims involved in the emergency not taken to hospital, where **triage** and **disaster victim registration** is undertaken and welfare support is provided prior to reuniting with relatives.⁽⁴³⁾
- patch burning** **Prescribed burning** for the purpose of forming a barrier to subsequent burning or for conservation management.⁽³⁾
- patient** A **casualty** in receipt of medical care.⁽³²⁾
- patient extrication** Disentanglement or release of a patient from confinement or difficulty.
- patient treatment post** An area located at the disaster site, but in a safe location, for undertaking **triage**, emergency treatment of casualties prior to transport away from the disaster scene.⁽³²⁾ *Syn.* 'casualty treatment post', 'casualty clearing post' and 'casualty clearing area'.
- peak discharge** The maximum **discharge** occurring during a flood event. *Syn.* 'maximum discharge', 'peak flow'.⁽⁶¹⁾
- peak overpressure** The maximum value of **explosion overpressure** at a given location which is generally experienced at the instant the shock (or blast) wave reaches that location.⁽¹²⁾
- perceived risk** The level of **risk** that is thought to exist by an individual or group of individuals.
- perimeter** See **inner perimeter** and **outer perimeter**.
- personal hardship and distress (PHD) payment** A grant for the provision of emergency food, clothing and accommodation made under State or Territory government arrangement to those affected by emergencies.
- personal locator beacon (PLB)** A portable, self-contained radio transmitter operating on the distress frequencies of 121.5 megahertz or 406 megahertz which is carried on the person.⁽²⁰⁾ See *also electronic distress beacon*.
- personal protective equipment** The equipment necessary to shield or isolate a person from the chemical, physical and thermal hazards that may be encountered at a dangerous goods incident. Personal protective equipment includes both personal protective clothing and respiratory protection. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing.⁽⁸⁹⁾ See **protective clothing**.
- personal support services** The process of assisting the diverse, immediate as well as longer-term personal needs of people affected by a disaster. Such needs may

- encompass provision of information, practical advice on a range of issues and emotional support.⁽³⁴⁾ *See also* **community recovery services**, **psychological services**, and **recovery**.
- petrochemical** A chemical made from **petroleum**.⁽⁵¹⁾
- petroleum** Any naturally occurring hydrocarbon or mixture of hydrocarbons in a gaseous or liquid state and which may contain hydrogen sulphide, nitrogen, helium, and carbon dioxide.⁽⁸¹⁾ *See also* **liquefied petroleum gas**.
- phytotoxic** Poisonous to plants.⁽⁷¹⁾
- piezometer** An instrument used for measuring fluid pressure (air or water) within soil, rock, or concrete.⁽⁴⁴⁾
- plague** *See* **epidemic**.
- plan** A formal record of agreed emergency management roles, responsibilities, strategies, systems, and arrangements.⁽⁶⁰⁾ *See* **emergency plan**.
- planning meeting** A meeting to prepare the **incident action plan**, attended by the **incident management team** and others and held as required.⁽²⁾
- planning process** The collective and collaborative efforts by which agreements are reached and documented between people and organisations to meet their communities' emergency management needs. It is a sequence of steps which allows emergency management planning to take place.⁽⁶⁰⁾
- Plastics and Chemicals Industries Association (PACIA)** The peak national industry association representing the interests of the plastics and chemicals industries nationwide. PACIA works with member companies to continuously improve the environmental performance of plastics and chemicals, and safeguard the industry's long-term viability. *Previously known as* 'Australian Chemical Industry Council (ACIC)'.⁽⁹⁷⁾
- plate tectonics** The concept that the earth's upper layers are made up of several large rigid plates whose boundaries are fault zones along which slippage takes place.⁽⁹⁵⁾
- plume** * The column of non-combustible products emitted from a fire (smoke).
* A vapour cloud formation having shape and buoyancy.
* The airborne radioactive material released from a nuclear power plant and carried by the prevailing winds which may effect radiologically those downwind areas over which it passes.⁽⁷¹⁾
- plume exposure pathway** Route by which the radioactive material released from a nuclear facility may expose the population-at-risk to radiation; exposure may be external from the passing plume, from contaminated surfaces, or from inhalation of the passing plume.⁽⁷¹⁾
- pluviograph** **Rain gauge** which includes an apparatus for continuously recording the depth of water from precipitation.⁽¹⁰⁸⁾
- pluviometer** Instruments used to measure the rate at which rain falls over very short timespans.⁽¹⁴⁾
- PMF** *See* **probable maximum flood**.
- PMP** *See* **probable maximum precipitation**.

poison A substance that, when introduced in sufficient quantity into an animal organism by ingestion, inhalation or absorption, destroys or threatens to destroy life or injures health.⁽⁷⁵⁾ See *also* **toxic**.

poisonous substances Substances which are liable to cause death or serious injury to health if swallowed, inhaled or by skin contact or by direct infection through organisms.⁽⁸²⁾ Syn. 'toxic substances'.

poisons schedule See **Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)**.

polar front Quasi-permanent atmospheric front of great extent, in middle latitudes, which separates polar air and tropical air.⁽⁹⁵⁾

polder A mostly low-lying area artificially protected from surrounding water and within which the water table can be controlled.⁽⁹⁵⁾

pollutant A harmful chemical or waste material discharged into the water, soil, or atmosphere; an agent that makes something dirty or impure.⁽⁷¹⁾

pollute To add an unwanted material which may do harm or damage; contaminate, make unclean or unsafe for use.⁽⁷¹⁾

pollution Degradation of one or more elements or aspects in the environment by noxious industrial, chemical or biological wastes, from debris of man-made products and from mismanagement of natural and environmental resources.⁽⁹⁵⁾

population at risk * A well-defined population whose lives, property, and livelihoods are threatened by given hazards. Used as a denominator.⁽⁹⁵⁾

* All those persons who would be directly exposed to floodwaters within the **dambreak-affected zone** if they took no action to evacuate.⁽¹¹⁾

post-emergency assistance measures Financial and other assistance provided to emergency affected persons, communities or organisations to assist their recovery from an emergency.⁽⁹⁸⁾

post-traumatic stress disorder (PTSD) An anxiety disorder, beyond the normal response to stress, caused by exposure to a highly traumatic event that has been excessively demanding.⁽⁵³⁾ Syn.

critical incident stress syndrome. See *also* **psychological trauma**.

potable water Water which is safe for human consumption.⁽³⁶⁾ Syn. 'drinking water'.

potentially hazardous facility A facility or installation which, in the absence of mitigating land use, technical or management controls, would impose a significant risk on employees, the public or the built or natural environment. If significant risk remains, even after mitigating measures, the facility would be considered hazardous rather than potentially hazardous.⁽⁵⁾ See *also* **hazardous facility** and **major hazard facility**.

potentially hazardous food Foods that consist entirely, or in part, of milk, eggs, meat, poultry, fish or shellfish; or that are for other reasons capable of supporting the growth of microorganisms causing food borne illness.⁽³⁶⁾

pour point The lowest temperature at which a substance, such as oil, will flow under specified conditions; important in terms of clean-up since

free-flowing oils rapidly penetrate most substrates, whereas semi-solid oils tend to be deposited on the surface and will only penetrate if material is coarse or the ambient temperature high.⁽⁷¹⁾

PPRR An abbreviation for **prevention, preparedness, response and recovery**. See **comprehensive approach**.

precipitation gauge See **rain gauge**.

precipitation intensity Amount of precipitation collected in unit time interval.⁽⁹⁵⁾ *Syn.* 'rainfall intensity'.

precursor Phenomenon indicating a probable occurrence of an earthquake or a volcanic eruption.⁽⁹⁵⁾ See also **foreshock**.

prediction A statement of the expected time, place and magnitude of a future event (for earthquakes and volcanic eruptions).⁽⁹⁵⁾ See also **forecast**.

predictor Meteorological or hydrological element, or an index compiled from several elements, which is known (often empirically) to be highly correlated with a quantity which is to be forecast and is used to forecast it.⁽⁹⁵⁾

preliminary flood warning A warning issued by the Bureau of Meteorology when flood-producing rains are occurring or are expected over particular river catchments. The warning is normally of a general nature and is issued to the public. It includes advice on the current meteorological situation and expected developments, together with an assessment of the class of flooding that can be expected in a particular river basin.⁽¹²⁾ See also **flood warning**.

preparation See **preparedness**.

prepared community A community which has developed effective emergency management arrangements at the local level, resulting in:

- an alert, informed and active community which supports its voluntary organisations;
- an active and involved local government; and,
- agreed and coordinated arrangements for prevention, preparedness, response, and recovery.

preparedness * Arrangements to ensure that, should an emergency occur, all those resources and services which are needed to cope with the effects can be efficiently mobilised and deployed.⁽⁶⁰⁾

* Measures to ensure that, should an emergency occur, communities, resources and services are capable of coping with the effects.⁽⁴¹⁾ See also **comprehensive approach**.

prescribed burning The deliberate and **controlled burning** of vegetation growing close to, or on the ground to minimise the fuel supply for future bush or forest fires. Also called (in Australia especially) 'burning off'.⁽¹⁴⁾

prescription A written statement defining the objectives to be attained during **prescribed burning**. This statement considers the condition of temperature, humidity, wind direction and speed, fuel moisture, and soil moisture under which the fire will be allowed to burn. This is generally described within acceptable ranges of the various indices, and the limit of the geographic area to be covered.⁽³⁾

pressure burst See **boiling liquid expanding vapour explosion**.

pressure point Point where pressure can be applied to control bleeding.⁽⁷³⁾ See also **direct pressure**.

prevention * Regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated.⁽⁶⁰⁾

* Measures to eliminate or reduce the incidence or severity of emergencies.⁽⁴¹⁾ See also **comprehensive approach**.

probability The likelihood of a specific outcome, measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible outcome and 1 indicating an outcome is certain.⁽⁸⁸⁾ See also **frequency**, **likelihood** and **conditional probability**.

probability analysis The derivation of both the likelihood of incidents occurring and the likelihood of particular outcomes (or effects) should those events occur.⁽⁶²⁾

probability density function A function describing the relative **likelihood** that a random variable will assume a particular value in contrast to taking on other values.⁽¹¹⁾

probability of exceedence The probability or likelihood, expressed in the range of 0-1, of an event with a certain magnitude or size occurring.⁽¹⁴⁾

probable maximum flood (PMF) The flood resulting from the **probable maximum precipitation**, and where applicable, snow melt, coupled with

the worst flood-producing catchment conditions that can be realistically expected in the prevailing meteorological conditions.⁽¹⁰⁾ See also **probable maximum precipitation**.

probable maximum precipitation (PMP) The theoretical greatest depth of **precipitation** for a given duration that is physically possible over a particular catchment area.⁽¹⁰⁾ See also **probable maximum flood**.

probit Probability unit.

procedures Pre-planned detailed directions for dealing with specific occurrences.⁽⁷¹⁾ See also **emergency procedures** and **standard operating procedures**.

profile moisture content See **fuel moisture content**.

protective clothing Equipment designed to protect the wearer from heat and/or dangerous goods contacting the skin or eyes. Protective clothing is divided into four types, being:

- structural fire fighting protective clothing;
- splash suit;
- gas-tight suit; and
- high temperature protective clothing.

PSCC Protective Security Coordination Centre.

psychological services The specific forms of assistance, ranging from initial support through to longer-term clinical treatment, provided by trained personnel within this framework.⁽³⁴⁾ See also **community recovery services**, **personal support services** and **recovery**.

psychological trauma An acute

emotional state of discomfort due to an extraordinary stressful event or situation which was overwhelming for the person involved.⁽⁹⁴⁾ *See also* **critical incident stress** and **post-traumatic stress disorder**.

PTSD *See* **post-traumatic stress disorder**.

PTWC Pacific Tsunami Warning Centre.

public awareness The process of informing the community as to the nature of the hazard and actions needed to save lives and property prior to and in the event of disaster.⁽⁹⁵⁾

public health The discipline in health sciences that, at the level of the community or the public, aims at promoting prevention of disease, sanitary living, laws, practices and healthier environment.⁽⁷²⁾ *See also* **environmental health**.

pumper A firefighting vehicle equipped with a large capacity pump, water tank and hose. Generally intended to be operated when stationary, from reticulated or static water supplies.⁽³⁾ *See also* **tanker**.

PVO Principle Veterinary Officer.

pyroclastic flow High density flow of solid volcanic fragments suspended in gas which flows down-slope from a volcanic vent (at speeds up to 200 kilometres per hour) which may also develop from partial collapse of a vertical eruption cone, subdivided according to fragment composition and nature of flowage into: ash flow, glowing avalanche, **nuee ardente**, pumice flow.⁽⁹⁵⁾ *See also* **lahar**.

pyrophoric A substance which spontaneously and immediately

ignites on exposure to air or oxygen.⁽⁸⁹⁾

Q

QRA *See* **quantified risk assessment**.

quantified risk assessment (QRA) A **risk assessment** that is based essentially on quantified inputs.⁽¹¹⁾ *See also* **risk assessment**.

quarantine Legal restrictions imposed on a place or tract of land by the serving of a notice and limiting access or egress of specified animals, persons or things.⁽²⁹⁾

quick fill pump A high volume water pump used for filling tankers.⁽³⁾

quicksand Saturated sandy deposits which, under the influence of hydrostatic pressures, are buoyant and are able to flow.⁽⁹⁵⁾

R

RACON Radar transponder beacon.

rad *See* **Gray**.

radar Radio method of determining at a single station the direction and distance of an object.⁽⁹⁵⁾

radiation Electromagnetic waves or quanta, and atomic or sub-atomic particles, propagated through space or through a material medium.⁽⁵⁷⁾

radioactive Exhibiting or pertaining to

- radioactivity.**⁽⁷¹⁾
- radioactive decay** The spontaneous transformation of the nucleus of an atom into another state accompanied by the emission of radiation; for a quantity of such atoms, the expectation value of the number of atoms present decreases exponentially with time.⁽⁵⁷⁾
- radioactive material** Material which spontaneously emits ionising radiation as a consequence of radioactive decay.⁽⁵⁷⁾
- radioactive substances** Substances or combinations of materials which spontaneously emit radiation with activity exceeding 70 kilobecquerels/kilogram (dangerous goods class 7).⁽⁸⁹⁾
- radioactive wastes** Conventional materials that have been contaminated with radiation.
- radioactivity** The property of certain radionuclides of spontaneously emitting particles or gamma radiation or of emitting x-radiation following orbital electron capture or of undergoing spontaneous fission.⁽⁶⁾
- radioisotope** An isotope which is radioactive. Most natural isotopes lighter than lead-208 are not radioactive.⁽⁶⁾
- radionuclide** A species of atomic nucleus which undergoes radioactive decay.⁽⁵⁷⁾
- rain gauge** Instrument for measuring the depth of water from **precipitation** supposedly distributed over a horizontal impervious surface and not subject to evaporation.⁽¹⁰⁸⁾
Syn. precipitation gauge. See also pluviometer and pluviograph.
- RAR** See **road accident rescue.**
- rate of spread** The forward progress per unit time of the head fire or another specified part of the fire perimeter.⁽³⁾
- rating curve** Curve showing the relation between water stage and discharge of a stream at a flow gauging station. If digitised, it is a 'rating table'.⁽⁹⁵⁾
- RCC** Radio Consultative Committee (Spectrum Management Agency), and **Rescue Coordination Centre.**
- RDF** See **recommended design flood.**
- reaction time** The time taken between the report of a fire or incident, and the departure of the crew.⁽³⁾
- readiness** See **preparedness.**
- rear** The section of the perimeter opposite to and generally upwind (or downslope), from the head of the fire.⁽³⁾
- reburn** Burning of an area over which a fire has previously passed but left fuel which can be ignited.⁽³⁾
- reception centre** That centre established for the immediate receipt of evacuees and as such will be the initial source for the delivery of welfare services to those evacuees.⁽⁵⁸⁾
- recommended design flood (RDF)** The **flood** event which has the recommended **annual exceedance probability** or proportion of **probable maximum precipitation** inflow and which produces the highest flood for the **dam.**⁽¹⁰⁾
- reconnaissance** Inspection of a fire area for the purpose of obtaining information about current and probable fire behaviour and fire suppression information.⁽³⁾

reconstruction Actions taken to re-establish a community after a period of rehabilitation subsequent to a disaster. Actions would include construction of permanent housing, full restoration of all services, and complete resumption of the pre-disaster state.⁽⁹⁵⁾ See *also* **recovery**.

recovery * The coordinated process of supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being.⁽³⁴⁾ See **comprehensive approach**.

* Measures which support emergency-affected individuals and communities in the reconstruction of the physical infrastructure and restoration of emotional, economic and physical well-being.⁽⁴¹⁾

* In oil spills, the entire process of the physical removal of spilled oil from land, water or shoreline environments. General methods of oil recovery from water use mechanical skimmers, sorbents and manual recovery by the clean-up work force; the main method of recovering oil spilled on land or shorelines is excavation of contaminated materials.⁽⁷¹⁾

recovery information management Recovery information management develops timely, effective communication channels to gather, process and disseminate information relevant to the recovery of the affect community.⁽³⁴⁾

recovery management (principles of) Disaster recovery is most effective when:

- management arrangements recognise that recovery from disaster is a complex, dynamic and

protracted process;

- agreed plans and management arrangements are well understood by the community and all disaster management agencies;
- recovery agencies are properly integrated into disaster management arrangements;
- community service and reconstruction agencies have input to key decision making;
- conducted with the active participation of the affected community;
- recovery managers are involved from initial briefings onwards;
- recovery services are provided in a timely, fair, equitable and flexible manner; and,
- supported by training programs and exercises.

recurrence interval The average time interval at which events equal to or greater than a certain magnitude would recur if existing natural regimes continued without change. Recurrence interval is a function of **exceedance probability**.⁽¹¹⁾ *Syn.* 'mean return period' and 'return period'.

Red Crescent The counterpart of the **Red Cross** in Islamic countries.

Red Cross Red Cross, or International Red Cross, are general terms used for one or all the components of the worldwide organisation active in humanitarian work. The official overall name is the International Red Cross and Red Crescent Movement, which has 3 components. 1. International Committee of the Red Cross (ICRC): acts mainly in conflict disasters as neutral intermediary in hostilities and for the protection of war victims. Guardian of the Geneva Conventions. 2. International

Federation of Red Cross and Red Crescent Societies (IFRC); international federation of the National Societies, active in non-conflict disasters and natural calamities. 3. The individual National Red Cross organisations.⁽⁷²⁾

referable dam A **dam** which either:

- is 10 metres or more in height and has a storage capacity of 20,000 cubic metres or more, or
- has a storage capacity of 50,000 cubic metres or more **and** is 5 metres or more in height.⁽¹⁰⁾ See **also large dam**.

refuge See **fire refuge**.

refugee Persons having a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion mostly outside the country of nationality and unable to return or avail himself of the protection of that country. Includes mass exodus of people for reasons of conflict and natural disasters moving outside their country of origin.⁽⁹⁵⁾

regeneration burn The **controlled burning** of bushland to encourage new growth.⁽⁵¹⁾

register A listing of all **hazardous substances** which are used or produced in the workplace and the available **material safety data sheets**.⁽¹⁰³⁾ See **also inventory** and **manifest**.

registered training provider An organisation or individual registered by the appropriate State and Territory vocational education and training recognition authorities to deliver education and training according to an accredited training program or course. 'Registration'

means the process by which a certifying authority registers a certificate assessor.⁽¹⁰⁵⁾

registration The process of accurately recording onto disaster registration cards details of all persons affected by disaster whether they are evacuated or remain in the disaster area.⁽⁵⁸⁾ See **also inquiry, National Registration and Inquiry System** and **tracing**.

rehabilitation *The operations and decisions taken after a disaster with a view to restoring a stricken community to its former living conditions, whilst encouraging and facilitating the necessary adjustments to the changes caused by the disaster.⁽⁹⁵⁾

* Process of adjustment to circumstances prevailing in the aftermath of an **exotic animal disease** outbreak.⁽²⁹⁾ See **also reconstruction**.

relative humidity (RH) The amount of water vapour in a given volume of air, expressed as a percentage of the maximum amount of water vapour the air can hold at that temperature.⁽³⁾

relatives reception centre The centre on an airport for those persons waiting to meet victims, where identification is undertaken and care provided prior to reuniting with their relatives.⁽⁴³⁾

relief The provision of immediate shelter, life support and human needs of persons affected by, or responding to, an emergency. It includes the establishment, management and provision of services to emergency relief centres.⁽⁹⁸⁾ See **also recovery**.

REM See **Sievert**.

remedial action Any action required to rectify a deficiency to an adequate safety standard.⁽¹⁰⁾

remote area An area where, because of distance, time or circumstance, the medical resources required to adequately manage the event are delayed to the potential detriment of the casualties.⁽³²⁾

remote sensing The observation and/or study of an area, object or phenomenon from an aerial distance, frequently using data collected by satellite.⁽⁹⁵⁾

rendezvous point A pre-arranged reference point, ie. road junction, cross-road or other specified place, to which personnel/vehicles responding to an emergency situation initially proceed to receive directions to staging areas and/or the accident/incident site.⁽⁴⁷⁾

request for disaster assistance Official approach made by the authorities of a disaster-stricken country to other governments, international organisations or voluntary agencies requesting aid in fact of the calamity.⁽⁷²⁾

Rescue Coordination Centre (RCC) A unit responsible for promoting efficient organisation of **search and rescue** services and for coordinating the conduct of search and rescue operations within a **search and rescue region**.⁽²⁰⁾ *Previously known as 'Maritime Rescue Coordination Centre (MRCC)'.*

rescue The safe removal of persons or animals from actual or threatened danger of physical harm.⁽⁶⁸⁾ *See also search and rescue.*

reservoir An artificial lake, pond or basin for storage, regulation and control of water, silt, debris or other

liquid or liquid-borne material.⁽¹⁰⁾⁽⁹⁾
See also dam.

reservoir capacity The total or gross storage capacity of the **reservoir** at **full supply level**.⁽¹⁰⁾

resettlement Actions necessary for the permanent settlement of persons dislocated or otherwise affected by a disaster to an area different from their last place of habitation.⁽⁹⁵⁾ *See also recovery.*

residual risk The remaining level of **risk** after **risk treatment** measures have been taken.⁽⁸⁸⁾

resiliency A measure of how quickly a system recovers from failures.⁽¹¹⁾

resources All personnel and equipment available, or potentially available, for incident tasks.⁽²⁾ *See also allocated resources, available resources, en route resources and unserviceable resources.*

respiration Breathing; inhalation.⁽⁷¹⁾

response * Actions taken in anticipation of, during, and immediately after an emergency to ensure that its effects are minimised, and that people affected are given immediate relief and support.⁽⁶⁰⁾

*** Measures taken in anticipation of, during and immediately after an emergency to ensure its effects are minimised.**⁽⁴¹⁾ *See also comprehensive approach.*

restricted area A declared area in which defined rigorous conditions apply to the movement into, out of, and within, of specified animals, persons or things.⁽²⁹⁾ *See also control area.*

resuscitation Reviving one who is seriously injured or apparently

- dead.⁽⁷³⁾ See also **expired air resuscitation**.
- return period** See **recurrence interval**.
- reverse triage** See **negative triage**.
- RICE** Rest; ice; compression; elevation - the method used by first aiders to manage soft-tissue injuries.⁽⁷³⁾
- Richter scale** An open-ended logarithmic scale used to express the magnitude or total energy of a seismic disturbance (or earthquake). In this scale an increase of 1 indicates a thirty-fold increase in energy.⁽⁵¹⁾ See **earthquake magnitude** and **Modified Mercalli Scale**.
- risk** * A concept used to describe the likelihood of harmful consequences arising from the interaction of hazards, communities and the environment.⁽⁴¹⁾
 * The chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood.⁽⁸⁸⁾
 * A measure of harm, taking into account the consequences of an event and its likelihood. For example, it may be expressed as the likelihood of death to an exposed individual over a given period.⁽⁵⁾
 * Expected losses (of lives, persons injured, property damaged, and economic activity disrupted) due to a particular hazard for a given area and reference period. Based on mathematical calculations, risk is the product of hazard and vulnerability.⁽⁹⁵⁾
- risk acceptance** An informed decision to accept the likelihood and the consequences of a particular risk.⁽⁸⁸⁾
- risk analysis** * A systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences.⁽⁸⁸⁾
 * The systematic use of available information to study risk.⁽⁴¹⁾
- risk assessment** The process used to determine risk management priorities by evaluating and comparing the level of risk against predetermined standards, target risk levels or other criteria.⁽⁸⁸⁾
- risk avoidance** An informed decision not to become involved in a risk situation.⁽⁸⁸⁾
- risk communication** Interactive processes involving the exchange of information and opinion about risk among individuals, groups, and institutions.⁽⁵⁶⁾
- risk control** That part of risk management which involves the provision of policies, standards and procedures to eliminate, avoid or minimise adverse risks facing an enterprise.⁽⁸⁸⁾
- risk criteria** Standards by which the results of **risk assessments** can be assessed. They relate quantitative risk estimates to qualitative value judgements about the significance of the risks. They are inexact and should be seen as guidelines rather than rules.⁽⁹²⁾ See also **individual risk criteria** and **societal risk criteria**.
- risk engineering** The application of engineering principles and methods to **risk management**.⁽⁸⁸⁾
- risk estimation** The process used to produce a measure of the level of risks being analysed. Risk estimation consists of the following

- steps: frequency analysis, consequence analysis and their integration.⁽⁸⁷⁾
- risk evaluation** * The process in which judgements are made on the tolerability of the risk on the basis of **risk analysis** and taking into account factors such as socio-economic and environmental aspects.⁽⁸⁷⁾
- * The process used to prioritise risks.⁽⁴¹⁾
- risk financing** The methods applied to fund **risk treatment** and the financial consequences of risk. Note: In some industries risk financing only relates to funding the financial consequences of risk.⁽⁸⁸⁾
- risk identification** The process of determining what can happen, why and how.⁽⁸⁸⁾
- risk management** The systematic application of management policies, procedures and practices to the tasks of identifying, analysing, evaluating, treating and monitoring **risk**.⁽⁸⁸⁾
- risk phrase** A phrase describing the **hazard** of a substance as provided in the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances*.⁽¹⁰³⁾
- risk reduction** A selective application of appropriate techniques and management principles to reduce either likelihood of an occurrence or its consequences, or both.⁽⁸⁸⁾
- risk retention** Intentionally or unintentionally retaining the responsibility for loss, or financial burden of loss within the organisation.⁽⁸⁸⁾
- risk transfer** Shifting the responsibility or burden for loss to another party through legislation, contract, insurance or other means. Risk transfer can also refer to shifting a physical risk or part thereof elsewhere.⁽⁸⁸⁾
- risk treatment** Selection and implementation of appropriate options for dealing with risk.⁽⁸⁸⁾
- risk treatment options** Measures which modify the characteristics of hazards, communities, or environments.⁽⁴¹⁾
- road accident rescue (RAR)** The freeing and extrication of trapped people from motor vehicles.
- road block** Road check point or barricade to maintain compliance with movement control restrictions.⁽²⁹⁾
- rockfall** Free-falling or precipitous movement of a newly detached segment of bedrock of any size from a cliff or other very steep slope.⁽⁹⁵⁾ See also **landslide**.
- rockslide** A downward, usually sudden and rapid movement of newly detached segments of bedrock over an inclined surface or over preexisting features.⁽⁹⁵⁾ See also **landslide**.
- roentgen** An old unit of exposure to X or **gamma** radiation, based upon the capacity of the radiation to produce **ionisation** in air.⁽⁶⁾ *Superseded by gray and Sievert.*
- rolling boil** Vigorously boiling hot water, a term used to denote water at 1,000°C for the purpose of sterilisation.⁽³²⁾
- Romer scale** A device for accurately measuring the position of a point within a grid square for **grid reference**.⁽²⁷⁾

Ross-Forel (RF) scale A numerical index describing the effects of an **earthquake** (in common use before the adoption of the **Modified Mercalli scale** in about 1931).⁽⁴²⁾
See also **earthquake magnitude**.

runoff That part of precipitation which flows towards a river on the ground surface (surface runoff) or within the soil (subsurface runoff or interflow).⁽¹⁰⁸⁾

run-up height The elevation of the water level above the immediate tide level when a **tsunami** runs up onto the coastal land.⁽¹³⁾

run-up wave The maximum vertical height attained by a wave running up a **dam** face. Measured from the stillwater level.⁽⁹⁾

rupture zone Area of fault breakage corresponding to a particular **earthquake** sequence.⁽⁹⁵⁾

S

SAC-PAV See **Standing Advisory Committee for Protection Against Violence**.

safe holding area An area, isolated from fire and smoke, in which **mobility-impaired persons** may be temporarily held whilst awaiting evacuation.⁽⁸³⁾

safe oxygen level A minimum oxygen content in air of 19.5% by volume under normal atmospheric pressure (equivalent to a partial pressure of oxygen of 19.8 kilopascals (148 millimetres of mercury)), and a maximum oxygen content in air of 23.5% by volume under normal

atmospheric pressure. At pressure significantly higher or lower than the normal atmospheric pressure, expert guidance should be sought.

safety audit See **hazard audit**.

safety evaluation flood The largest flood for which the safety of a **dam** or appurtenant structure is to be evaluated.⁽⁴⁴⁾

safety management system The comprehensive integrated system for managing safety at a **major hazard facility** and which sets out:

- the safety objectives;
- the systems and procedures by which these are to be achieved;
- the performance standards which are to be met; and
- the means by which adherence to these standards is to be maintained.⁽¹⁰⁶⁾

safety phrase A phrase describing the safe handling, storage or use of **personal protective equipment** for a substance.⁽¹⁰³⁾

safety report A written presentation of the technical, management and operational information covering the **hazards** and **risks** of a **major hazard facility** and their control, and which provides justification for the measures taken to ensure the safe operation of the facility.⁽¹⁰⁶⁾

safe working load The maximum working load which should be applied to a rope consistent with the **factor of safety** recommended for the conditions under which the rope is to be used.⁽⁸⁵⁾

salmonellosis Infection of the gastrointestinal tract caused by germs of the Salmonella group. It presents as a variety of diseases, the infection appearing as an acute

- gastroenteritis, enteric fever, or a focal disease with or without septicaemia. It includes **typhoid fever**.⁽⁷²⁾
- sanitary land-fill** Controlled deposition of waste on land.⁽³²⁾
- sanitation** * Of food pertains to the wholesomeness and cleanliness of food.⁽³⁶⁾
* The application of measures and techniques aimed at ensuring and improving environmental health in a community, including the collection, evacuation and disposal of rain and used liquid and solid wastes, with or without prior treatment.⁽³²⁾
- sanitising** Reducing numbers of pathogenic micro-organisms on surfaces or in substances to levels accepted as safe by regulatory authorities.⁽³⁶⁾
- SAR incident** See **search and rescue incident**.
- SAR operation** See **search and rescue operation**.
- SAR** See **search and rescue**.
- scarp (fault)** A cliff or steep slope formed by displacement of the ground surface.⁽⁴²⁾
- SCBA** See **self-contained breathing apparatus**.
- scientific support coordinator** See **environment and scientific coordinator**.
- scrub fire** A fire burning in land of low economic value from a forestry point of view.⁽²¹⁾
- SDCHQ** See **State Disease Control Headquarters**.
- SDI** Soil dryness index. See **drought index**.
- sea surge** A rise in sea level that results in the inundation of areas along coastlines. These phenomena are caused by the movement of ocean and sea currents, winds and major storms.⁽⁹⁵⁾ See also **storm surge**.
- search and rescue (SAR)** The process of locating and recovering disaster victims and the application of first aid and basic medical assistance as may be required.⁽⁹⁵⁾ See also **rescue** and **urban search and rescue**.
- search and rescue incident** The specific situation that causes the search and rescue system to be activated.⁽⁸⁾
- search and rescue operation** In whole or in part the action taken during the currency of a search and rescue incident.⁽⁸⁾
- search and rescue region (SRR)** An area of defined dimensions within which **search and rescue** services are provided. The Australian SRR covers approximately one ninth of the world's surface from mid-Indian Ocean to New Zealand and from Indonesia to the Antarctic. See the *National Search and Rescue Manual* for coordinates of area.⁽²⁰⁾
- secondary hazard** A hazard that occurs as a result of another hazard or disaster, ie. fires or landslides following earthquakes, epidemics following famines, food shortages following drought or floods.⁽⁹⁵⁾
- section** That organisation level having functional responsibility for primary segments of incident operations such as: operations, planning, logistics, finance.⁽²⁾
- sector** A specific area of a fire which is under the control of a sector commander who is supervising a

- number of crews.⁽³⁾
- seen area** The ground, or vegetation, that is directly visible from an established or proposed lookout point, or **aerial detection** flight route.⁽³⁾
- segregation** The isolation within a storage area of **dangerous goods** from any other any goods with which they are not compatible, including other dangerous goods, combustible liquids, and other goods and Class 1 Explosives, Class 6.2 Infectious Substances and Class 7 Radioactive Substances.⁽¹⁰⁷⁾ *See also separation.*
- seiche** Oscillation (having a period from a few minutes to several hours) of the surface of a lake or other small body of water caused by minor earthquakes, winds, or variations in the atmospheric pressure.⁽¹⁰⁸⁾
- seismic** Related to sudden and usually large movement of the Earth's crust.⁽¹⁴⁾
- seismic activity rate** The mean number per unit time of earthquakes with specific characteristics (eg. magnitude 6) originating on a selected fault or in a selected area.⁽⁹⁵⁾
- seismic belt** An elongated **earthquake** zone; usually located along the boundaries of tectonic plates.⁽⁹⁵⁾
- seismic isolation** Systems used to limit the transfer of strong ground motion to a structure.⁽⁹⁵⁾
- seismic risk** The probability of **earthquakes** of given magnitude occurring in a region.⁽¹⁴⁾
- seismic sea wave** *See tsunami.*
- seismic zone** A region within which there is an obvious grouping of **earthquake epicentres**.⁽¹²⁾
- seismicity** The distribution of earthquakes in space and time.⁽⁴²⁾⁽⁹⁵⁾
- seismograph** An instrument for recording as a function of time the motions of the Earth's surface that are caused by seismic waves.⁽¹³⁾⁽⁴²⁾
- seismology** The study of **earthquakes**. seismic sources and wave propagation through the Earth.⁽⁴²⁾
- seismometer** The sensor part of the **seismograph** usually a suspended pendulum.⁽¹³⁾
- seismoscope** A simple **seismograph** recording on a plate without time marks.⁽¹³⁾
- self-contained breathing apparatus (SCBA)** Breathing apparatus, including positive pressure full face piece, air tank, connecting hose and other fittings.⁽⁸⁹⁾ *See also breathing apparatus.*
- sensitivity analysis** Examines how the results of a calculation or model vary as individual assumptions are changed.⁽⁸⁸⁾
- sensitivity mapping** An aspect of oil spill emergency planning involving survey of coastal areas to identify resources that might be adversely affected by spilt oil.⁽³⁰⁾
- sentinel animals** Animals used for the express purpose of detecting the presence of a specific **exotic animal disease** agent.⁽²⁹⁾
- separation** The isolation of **dangerous goods** from protected works, on premises facilities, boundaries, other dangerous goods storage areas or filling and decanting points.⁽¹⁰⁷⁾ *See also*

- segregation.**
- SES** State Emergency Service.
- set-up wind** The rise in stillwater level caused by wind stress on the surface of the body of water.⁽⁹⁾
- severe weather** Any atmospheric condition potentially destructive or hazardous to human beings. It is often associated with extreme convective weather (**tropical cyclones, tornadoes, severe thunderstorms, squalls, etc.**) and with storms of freezing precipitation or **blizzard** conditions.⁽¹⁰⁸⁾
- severe weather threat index (SWEAT index)** Convective index used to predict **thunderstorms** and **tornadoes**.⁽¹⁰⁸⁾
- SEWS** See **Standard Emergency Warning Signal**.
- shigellosis** See **bacillary dysentery**.
- short term exposure limit (STEL)**
See **threshold limit value**.
- SI** International System of Units.
- SI Number** Substance Identification Number. See **United Nations Number**.
- Sievert** The **SI unit** of radiation **dose** equivalence (replaces the 'REM'; 1 Sievert = 100 REM); also replaces 'roentgen').
- signal words** Word(s) prominently displayed on labels of **hazardous substances** to indicate the relative severity of **hazard**.⁽¹⁰¹⁾
- signs** The features of the casualty's condition that can be seen; felt; heard; or smelt.⁽⁷³⁾
- simplex** A radio signal transmitted on a single frequency. See *also* **duplex**.
- simulation exercise** Decision making **exercise** and disaster drills within threatened communities in order to represent disaster situations to promote more effective coordination of response from relevant authorities and the population.⁽⁹⁵⁾
- site medical team** See **field medical team**.
- SITREP** See **situation report**.
- situation analysis** A deliberate process where the current **incident** situation, the factors that are relevant to the incident, the courses open and their consequences are reviewed and alternative strategies are assessed and an **incident action plan** is recommended.⁽²¹⁾
- situation report (SITREP)** A brief report that is published and updated periodically during an emergency which outlines the details of the emergency, the needs generated, and the responses undertaken as they become known.
- skill** May be perceptual, manual, cognitive or social. Tasks ... usually require a combination of these, indicating the application of cognitive and psychomotor functions together with appropriate knowledge. A 'skill' is: (a) cumulative; that is, it is built up through gradual experience; and (b) sequential; that is, each part is dependent on the previous part and influences the next.⁽¹⁰⁵⁾
- skimmer** Any mechanical device that physically removes oil from the surface of water.⁽²⁰⁾
- slash** Unusual concentrations of fuel resulting from such natural events as wind, fire, snow breakage, or from such human activities as logging, cutting or road construction.⁽³⁾ See *also* **aerial fuel**,

- coarse fuel, elevated dead fuel, fine fuel, fuel type and surface fuel.**
- slash burn** A **prescribed burn** conducted to consume **slash** for fire **hazard reduction** or silvicultural purposes.⁽³⁾
- sleeper** A fire that starts up again after appearing to have been extinguished.⁽³⁾
- slow onset disaster** See **creeping disaster**.
- SMAUG** A method for prioritising hazards by assessing the relative importance of each hazard in terms of seriousness, manageability, acceptability, urgency and growth.
- smoke** Carbon or soot particles or tarry droplets less than 0.1 micrometre in size, and suspended in air, which result from the incomplete combustion of carbonaceous materials such as coal or oil. Smoke usually contains **gas** and **vapour** in addition to solid particles.⁽¹⁰⁴⁾ See also **dust, fumes, gas, mist** and **vapour**.
- SMS** See **synchronous meteorological satellite**.
- societal risk** The risk of a number of fatalities occurring. The societal risk concept is based on the premise that society is more concerned with incidents which kill a larger number of people than incidents which kill fewer numbers.⁽⁶²⁾ Syn. 'group risk'. See also **risk criteria** and **individual risk criteria**.
- societal risk criteria** See **societal risk**.
- societal risk curve** See **f/n curve**.
- socio-technological hazard** See **technological hazard**.
- SOI** See **southern oscillation index**.
- soil amplification** Growth in the amplitude of **earthquakes** when seismic waves pass from rock into less rigid material such as soil.⁽¹³⁾
- soil conditions** The conditions of earth (moisture content, disaggregation, density, etc.) that may mitigate or intensify disaster agents, such as drought, flooding, or seismic movement.⁽⁹⁵⁾
- soil dryness index (SDI)** See **drought index**.
- soil moisture** Content of water in the portion of the soil which is above the water table including water vapour present in the soil pores. In some cases refers strictly to moisture within the root zone of plants.⁽⁹⁵⁾ See also **drought index**.
- SOLAS (International Convention for Safety of Life at Sea)** A convention that, amongst other things, establishes requirements for merchant vessels to be equipped with radios fitted with an automatic alarm device and to carry emergency and survival equipment. SOLAS also establishes requirements for merchant vessels to respond to a distress signal from any craft or person.⁽⁸⁾
- SOP** See **standard operating procedure**.
- sorbent** A natural organic, mineral-base or synthetic organic material used to recover spilt oil by absorption or adsorption.⁽²⁰⁾
- southerly buster** The term given in Australia to a cold front moving rapidly northwards along the eastern coastline.⁽¹⁴⁾
- southern oscillation** A swaying of pressure on a large scale backwards

and forwards between the Pacific and Indian Oceans. Associated with this swaying of mass between the hemispheres are remarkable changes in wind, temperatures and rainfall regime.⁽¹⁰⁸⁾ See also **El Niño** and **La Niña**.

southern oscillation index (SOI) A measure of the strength and phase of the **southern oscillation**, which indicates the status of the Walker circulation. The SOI is calculated from the monthly or seasonal fluctuations in the air pressure difference between Tahiti and Darwin. The 'typical' Walker circulation pattern has an SOI close to zero.⁽¹⁵⁾

span of control A concept which relates to the number of groups or individuals controlled by one person - a factor of 1:5 is recommended.⁽²⁾

SPEAR Selected Pollution Equipment Availability Register. *Now known as Marine Oil Spill Equipment System (MOSES)*.

special plan A plan, complete in itself, for the emergency management of special or high-risk hazards.⁽⁶⁰⁾ See also **emergency plan** and **main plan**.

spillage control See **bund**.

spillway A weir, conduit, tunnel, channel or other structure designed to permit discharges from the **reservoir** when water levels rise above the crest controlling flow down or into the spillway structure. The spillway is principally to discharge **flood** flows safely past a **dam** but may be used to release water for other purposes. The spillway may be ungated or uncontrolled (a 'free-overflow spillway') in which case discharge

occurs when the reservoir rises above the crest. If a gate or gates are used to control the uppermost level of the reservoir the spillway is referred to as a 'gated' or 'controlled' spillway.⁽⁹⁾

spillway crest The uppermost portion of the overflow cross section.⁽⁹⁾

spontaneously combustible Liable to burst into flame and burn, under the conditions encountered, without the external application of heat.⁽⁷⁵⁾

spot elevation An approximate height measurement of a feature marked on a map. See also **bench mark**.

spot fire Isolated fire started ahead of the main fire by sparks, embers or other ignited material, sometimes to a distance of several kilometres.⁽³⁾ See also **spotting**.

spotting The ignition of **spot fires** from sparks and embers.⁽³⁾

squall Atmospheric phenomenon characterised by an abrupt and large increase of wind speed with a duration of the order of minutes which diminishes rather suddenly. It is often accompanied by showers or **thunderstorms**.⁽¹⁰⁸⁾

St John Ambulance Australia A national charitable organisation dedicated to the relief of persons in sickness, distress, suffering or danger. In all States it provides first aid training and volunteer first aid and community care services, and in Western Australia and the Northern Territory it also runs the public ambulance service.⁽⁹⁷⁾

stabilisation Use of medical measures used to restore basic physiologic equilibrium to a patient to insure survival and facilitate future definitive care.⁽⁴⁷⁾ See also

advanced life support.

stage Equivalent to 'water level'. Both are measured with reference to a specified **height datum**.⁽⁶¹⁾

stage hydrograph A graph which shows how the water level at a particular location changes with time during a **flood**. It must be referenced to a particular **height datum**.⁽⁶¹⁾

stages of activation Investigation, alert, operational, stand-down:

- investigation exists when a report assessed as being a low probability of an **exotic animal disease** is being investigated by animal health authorities;
- alert exists when the CVO notifies key members of the animal health authority and the coordinator of the State Emergency Plan that an animal disease emergency may be imminent, or exists in another State;
- operational exists when the CVO notifies the coordinator of the State Emergency Plan that an animal disease emergency exists in the State;
- stand-down exists when the CVO notifies the coordinator of the State Emergency Plan that an animal disease emergency no longer exists.⁽²⁹⁾

staging area A prearranged, strategically placed area where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.⁽⁴⁷⁾

stamping out Eradication procedures based on quarantine and slaughter of all infected animals and animals exposed to infection.⁽²⁹⁾

stand-by The period normally following an alert when deployment

of resources is imminent. Personnel are placed on stand-by being ready to respond immediately.⁽³²⁾ See also **alert** and **stand-down**.

stand-down That phase where an agency's response is no longer required, and services are wound back. Site teams are returned to base, and additional staff called in are released from duty.⁽³²⁾ See also **alert** and **stand-by**.

Standard Emergency Warning

Signal (SEWS) A sound designed to alert the community to the need to listen to an announcement concerning an actual or imminent emergency.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)

A listing of substances requiring specific labelling and precautions in use. The standard for the uniform scheduling of drugs and poisons is published by the national health and medical research council and is the basis for state and territory poisons legislation.⁽¹⁰²⁾ *Syn.* 'poisons schedule'.

standard operating procedure

(SOP) A set of directions detailing what actions could be taken, as well as how, when, by whom and why, for specific events or tasks. *Syn.*

standing operating procedure. See also **emergency procedure.**

Standing Advisory Committee on Commonwealth/State

Cooperation for Protection Against Violence (SAC-PAV) A committee established to achieve a set of national arrangements and agreements to respond to threats or acts of politically-motivated violence.⁽³⁷⁾

standing operating procedure See

- standard operating procedure.**
- standpipe** A portable item of equipment used to connect a discharge hose to an underground **hydrant** outlet.⁽⁸⁰⁾
- state central registry** The central registry established at State level for receiving and processing disaster **registration** cards and dealing with **inquiries** relating to the tracing of people.⁽¹²⁾ See also **National Registration and Inquiry System.**
- State Disease Control Headquarters (SDCHQ)** The office from which all State emergency exotic disease control actions of that State are coordinated and in which all significant decisions are taken or confirmed.⁽²⁹⁾
- state medical controller** A senior medical officer, usually a representative of, or nominated by, state health departments, responsible for liaison and providing resources to meet all medical needs of a disaster.⁽³²⁾
- STEL** Short term exposure limit. See **threshold limit value.**
- stochastic effect** An effect known to occur sometimes as a consequence of exposure to **radiation**, but which may or may not be expressed in a particular exposed person, the likelihood of the effect occurring being a function of the **dose** received.⁽⁵⁷⁾
- stockpiling** The process of prior identification, availability and storage of supplies likely to be needed for disaster response.⁽⁹⁵⁾
- storm** 1. An atmospheric disturbance involving perturbations of the prevailing pressure and wind fields, on scales ranging from **tornadoes** (1 kilometre across) to **extratropical cyclones** (2,000-3,000 kilometres across). 2. Wind with a speed between 48 and 55 knots (**Beaufort scale wind force 10**).⁽¹⁰⁸⁾⁽⁹⁵⁾
- storm surge** The difference between the actual water level under influence of a meteorological disturbance (storm tide) and the level which would have been attained in the absence of the meteorological disturbance (ie. astronomical tide).⁽¹⁰⁸⁾ *Syn.* 'storm wave' and 'storm tide'. See also **sea surge.**
- storm tide** The combination of a **storm surge**, tidal peaks, a shallow coastal gradient, and on-shore winds. A storm tide effect may be increased by funnelling due to coastal terrain.⁽³⁷⁾
- storm warning *** Meteorological message intended to warn those concerned of the occurrence or expected occurrence of a wind of Beaufort force 10 or 11 over a specific area. * Any forecast of severe weather conditions.⁽¹⁰⁸⁾ See also **weather alert.**
- strike teams** A set number of resources of the same type that have an established minimum number of personnel. Strike teams always have a leader (usually in a separate vehicle), and have a common communications system. Strike teams are usually made up of five resources of the same type such as: vehicles, crews, earth moving machinery, etc.⁽²⁾
- strong gale** Wind with a speed between 41 and 47 knots (**Beaufort scale wind force 9**).⁽¹⁰⁸⁾
- strong ground motion** The shaking of the ground near an **earthquake**

- source made up of large amplitude seismic waves of various types.⁽⁴²⁾
- structural flood mitigation** Structural system for reduction of the effects of **floods** using physical solutions, including **reservoirs**, **levees**, dredging, diversions, and flood-proofing.⁽⁹⁵⁾
- sub-plan** An annex to an existing plan, with additional statements of control/coordination arrangements and roles/responsibilities.⁽⁶⁰⁾ See also **emergency plan** and **main plan**.
- subsidence** Collapse of a considerable area of land surface, due to the removal of liquid or solid underlying or removal of soluble material by means of water.⁽⁹⁵⁾
- subsidiary risk** A risk in addition to the class to which **dangerous goods** are assigned and which is determined by a requirement to have a subsidiary risk label under the ADG Code⁽¹⁰²⁾
- subsidiary risk label** A label of a type specified in the **ADG Code** for the **subsidiary risk** of the **dangerous goods**.⁽¹⁰⁷⁾
- Substance Identification Number (SI Number)** See **United Nations Number**.
- supercell thunderstorm** A particularly large, convective **thunderstorm** cell with a diameter of 50-100 kilometres. Such a storm has a greater chance of producing hail, **tornadoes**, strong wind or copious rainfall.⁽¹⁴⁾
- supplementary plans** Plans which augment the specific responses described in the **emergency plan**, with information about patient dependency, the types of hazards prevalent in a particular area or specific responses necessary in relation to particular hazards or emergencies.⁽⁸⁴⁾ See also **emergency plan** and **main plan**.
- support agency** An agency which provides essential services, personnel, or material to support or assist a **control agency** or affected persons.⁽⁹⁸⁾ *Syn.* 'assisting agency'. See also **combat agency** and **support agency**.
- surface fuel** The loose surface litter on the forest floor, normally consisting of fallen leaves or needles, twigs, bark, cones and small branches that have not yet decayed sufficiently to lose their identity. Also grasses, shrubs and tree reproduction less than one metre in height, heavier branchwood, down logs, stumps, seedlings and forbs (simple plant structures) interspersed with or partially replacing the litter.⁽³⁾ See also **aerial fuel**, **coarse fuel**, **elevated dead fuel**, **fine fuel**, **fuel type** and **slash**.
- surveillance** A systematic program of inspection and examination of animals or things to determine the presence of absence of an **exotic animal disease**.⁽²⁹⁾
- survey** A program of investigation designed to establish the presence, extent of, or absence of disease.⁽²⁹⁾
- SUSDP** See **Standard for the Uniform Scheduling of Drugs and Poisons**.
- suspect animal** An animal which is likely to have been exposed to an **exotic animal disease** such that its quarantine and intensive surveillance, but not pre-emptive slaughter, are warranted, or; an

animal not known to have been exposed to a disease agent but showing clinical signs requiring differential diagnosis.⁽²⁹⁾

suspect materials or things

Materials or things suspected of being contaminated by an **exotic animal disease agent**.⁽²⁹⁾

suspect person A person who is likely to have been contaminated by an **exotic animal disease agent**.⁽²⁹⁾

suspect premises Premises containing **suspect animals** which will be subject to quarantine and intensive surveillance.⁽²⁹⁾

sustainable development

Development in the present that does not destroy the resources needed for future development.⁽⁹³⁾

See also **ecologically sustainable development** and **human development**.

SWEAT index See **severe weather threat index**.

synchronous meteorological satellite/geostationary operational environmental satellites (SMS/GOES)

Satellites orbiting over the equator at the same rate as Earth's rotation and providing images of visible and infra-red portions of the spectrum for the same area every 30 minutes. The satellites can collect and distribute environmental data from remote unattended data collection platforms on land, in water, or in the atmosphere and rapidly transmit these data to ground receiving stations.⁽⁹⁵⁾

synoptic chart Geographical map on which meteorological data, analysed or forecast for a specific time, are presented to describe the

atmospheric conditions at the synoptic scale.⁽⁹⁵⁾ *Syn.* 'weather chart' and 'weather map'.

systemic A description of poisons that include **toxic** metals, such as lead and mercury, and carbon compounds, such as methyl alcohol and carbon disulphide, which affect different organs of the body.⁽⁹⁹⁾

T

table top exercise An umbrella term for some types of indoor discussion exercise. They may feature a model of the area on which a prepared scenario is played out, or simply using a projected map, not in real time. The model or map is used to illustrate the deployment of resources, but, no resources are actually deployed. Additionally, responses may be prepared in syndicate, in plenary, or under the guidance of a facilitator who maintains the pace and asks probing questions. A cost effective, and highly efficient, exercise method that should be conducted as a prelude to a field exercise as part of a graduated series.⁽³⁶⁾ See also **exercise**.

tactical exercise without troops

(TEWT) TEWTs are used to relate theory and/or emergency management arrangements to a simulated operational situation on the ground. This allows controllers, operations officers, etc. to be practised and tested in problem solving and decision making techniques as well as applying operational procedures without

actually deploying their resources to a field situation.⁽⁶⁷⁾ See also **exercise**.

tactics These are the tasking of personnel and resources to implement the **incident strategies**. Incident control tactics are accomplished in accordance with appropriate agency procedures and safety directives. Tactics are normally determined at division/sector level with a corresponding allocation of resources and personnel.⁽²⁾

tagging Method used to identify casualties as requiring immediate care (Priority I), delayed care (Priority II) minor care (Priority III), or as deceased.⁽⁴⁷⁾ See also **triage**.

tail fire See **backing fire**.

tanker A mobile firefighting vehicle equipped with a water tank, pump, and the necessary equipment for spraying water and/or foam on wildfires. Can be designated as follows:

- heavy tanker - a firefighting unit often on a 4 x 4 chassis with a large water tank (over 2000 litres), a pump, a number of lengths of hose and a range of equipment to assist with wildfire suppression;
- light patrol unit - a vehicle equipped with a small tank and pump designed for rapid initial attack and the patrol of fires;
- light tanker - a firefighting unit often on a 4 x 4 tray body vehicle with a small water tank (400-650 litres), a pump and short length of hose; and,
- slip on tanker - a tank, a live hose reel or tray, an auxiliary pump, and an engine combined into a single one-piece assembly that can be slipped onto a truck bed or trailer.⁽³⁾

See also **pumper**.

task force A combination of resources assembled for a specific purpose. Task forces always have a leader (usually in a separate vehicle) and have a common communications system. Task forces are established to meet tactical needs and may be demobilised as single resources.⁽³⁾

TC See **tropical cyclone**.

TCWC Tropical Cyclone Warning Centre.

technological disaster Disaster arising from other than natural causes (including biological, chemical, nuclear, transport and terrorist-instigated disaster).⁽³⁶⁾ Syn. 'man-made disaster'.

technological hazard A hazard of a technological origin, as opposed to a hazard of a natural origin.

telemetry The use of data communications devices from the sensors in situ, to a receiving station.⁽⁹⁵⁾

teleseism An **earthquake** recorded by a seismograph at a great distance from the source, ie. over 1000 kilometres.⁽⁴²⁾

temperature danger zone The temperature range between 5°C and 60°C (40°F-140°F) within which most bacteria experience their best growth and reproduction.⁽³⁶⁾

temporary accommodation Accommodation provided over an extended period of days, weeks or months, for individuals or families affected by an emergency. It is different from **emergency shelter**.⁽⁹⁸⁾

temporary housing See **emergency shelter**.

tephra Volcanic ash which is disaggregated and blown by the force of eruption, usually vertically, into the atmosphere.⁽¹⁴⁾ See also **ejecta**.

teratogen An agent capable of causing abnormalities in a developing foetus, that is, causing birth defects.⁽¹⁰²⁾ See also **mutagen** and **carcinogen**.

teratogenic Able to produce abnormalities in a developing foetus, that is, causing birth defects.⁽¹⁰²⁾

territorial sea Australia's territorial sea extend 12 nautical miles from the territorial sea baseline. The greater part of this baseline is the low water line along the coast. The remainder of the baseline consists of straight lines as follows: lines across the mouths of rivers which flow directly into the sea; bay-closing lines to enclose certain bays not more than 24 miles wide at their mouths; and straight baselines to enclosed waters where the coastline is deeply indented and cut into, or where there is a fringe of islands along the coast in its immediate vicinity.⁽⁷⁾ See also **exclusive economic zone** and **high seas**.

terrorism The calculated use of violence or the threat of violence to attain goals that are political, religious, or ideological in nature. This can be done through intimidation, coercion, or instilling fear. Terrorism includes a criminal act against persons or property that is intended to influence an audience beyond the immediate victims.⁽⁹³⁾

TES Territory Emergency Service.

TEWT See **tactical exercise without troops**.

threat analysis See **hazard analysis**.

threat assessment See **hazard analysis**.

threat See **hazard**.

threshold limit value (TLV) A type of exposure standard promulgated by the American Conference of Governmental Industrial Hygienists, including:

- the 'threshold limit value-time weighted average' (TLV-TWA);
- the 'threshold limit value-short term exposure limit' (TLV-STEL); and,
- the 'threshold limit value-ceiling' (TLV-C).⁽¹⁰²⁾

threshold quantity That quantity, prescribed in Schedule 1 of the *National Standard for the Control of Major Hazard Facilities*, of a material which, if exceeded, identifies a **major hazard facility**.⁽¹⁰⁶⁾

thunderstorm Sudden electrical discharges manifested by a flash of light (lightning) and a sharp or rumbling sound (thunder). Thunderstorms are associated with convective clouds (Cumulonimbus) and are, more often, accompanied by **precipitation** in the form of rainshowers or hail, or occasionally snow, snow pellets, or ice pellets.⁽¹⁰⁸⁾

tidal bore An abrupt rise of tidal water (caused by atmospheric activities) moving rapidly inland from the mouth of an estuary.⁽⁹⁵⁾ See also **storm surge**.

tidal wave A misnomer applied to tsunami. In a truer sense it refers to the amplification of a tidal cycle because of the effects of **seiching** or resonance induced by the passage of a low-pressure **storm**.⁽¹⁴⁾ See also **storm surge**.

time-weighted average (TWA) See **threshold limit value**.

TLV See **threshold limit value**.

tolerable risk A risk which the exposed people are expected to bear without undue concern, once all reasonable practicable reduction measures have been adopted. 'Tolerable' is sometimes used interchangeably with 'acceptable', but its more negative connotations make it more appropriate for risks which are reluctantly accepted.⁽⁹²⁾ See also **risk criteria** and **tolerated risk**.

tolerated risk A risk which is borne without people actively campaigning to reduce it. This may be because its tolerable, but it may also be because its true levels are unknown. It is possible that a risk which is at present tolerated would, given better information, be judged intolerable.⁽⁹²⁾ See also **risk criteria** and **tolerable risk**.

tongues Long narrow fingers of rapidly advancing fire which extend beyond the head or flanks of the main fire.⁽²¹⁾

top of dam The elevation of the uppermost surface of the **dam** proper not taking into account any camber allowed for settlement or kerbs, parapets, guardrails or other structures that are not a part of the main water retaining structure. This elevation is usually the roadway or walkway or the non-overflow section of the dam.⁽⁹⁾

tornado A violently rotating storm of small diameter; the most violent weather phenomenon. It is produced in a very severe thunderstorm and appears as a funnel cloud extending from the base of a cumulonimbus to

the ground.⁽¹⁰⁸⁾ *Syn.* 'twister'.

town's gas Gas made for domestic or industrial use.⁽⁵¹⁾ See also **liquefied petroleum gas**, **liquefied natural gas** and **natural gas**.

toxic Poisonous; relating to or caused by toxin; able to cause injury by contact or systemic action to plants, animals or people.⁽⁷¹⁾

toxic effect The property of an agent producing damage to an organism. This usually refers to functional (**systemic**) damage but may be developmental in respect of tissue and skeleton in the case of the embryo. The damage may be permanent or transient.⁽¹⁰²⁾

toxicity The degree of being poisonous; the capability of a poisonous compound to produce deleterious effects in organisms such as alteration to behavioural patterns or biological productivity or death.⁽⁷¹⁾ See also **acute toxicity**.

toxicology The science of poisons, harmful chemical substances, organic toxins, and of their detection, effects, elimination and antidotes.⁽⁷²⁾

toxic substance See **poisonous substance**.

Toxnet A computer database on chemicals produced by the US National Library of Medicine, containing information on over 4,000 chemicals including chemical nomenclature and **CAS numbers**, manufacturing information, uses and processes, chemical and physical properties, safe handling information, fire hazards, and hazardous reactions, toxic effects in humans and animals, emergency treatment, pharmacology, exposure limits, analytical and monitoring

methods. It is available on-line through the National Library of Australia.

tracing * The ongoing process providing information regarding the whereabouts of missing persons.⁽⁵⁸⁾ See also **inquiry** and **registration**.

* The process of locating animals, persons or things which may be implicated in the spread of disease, so that appropriate action be taken.⁽²⁹⁾

traffic management point A point established to control and limit access to a fire area. It provides a means of managing the entry of residents of the fire affected area so that they can secure their property and extinguish fires caused by the ember attack after the passage of the fire front.⁽²¹⁾

trauma Injury of any nature.⁽⁹⁵⁾

treatment area See **patient treatment post**.

tremor A shaking movement of the ground associated with an **earthquake** or explosion.⁽⁹⁵⁾

triage The process by which casualties are sorted, prioritised and distributed according to their need for **first aid**, **resuscitation**, emergency transportation and definitive care.⁽³²⁾ See also **negative triage**.

triage area An area which may be set aside at the entrance to the **patient treatment post** specifically for **triage** of casualties as they are brought to the area.⁽³²⁾

triage label See **triage tag**.

triage tag A form of casualty medical documentation, usually in the form of labels which can be attached to

the **casualty**, which clearly identify the individual's priority for treatment and transport, and on which basic details of assessment and treatment are recorded.⁽³²⁾

tropical cyclone (TC) Generic term for a non-frontal synoptic scale **cyclone** originating over tropical or sub-tropical waters with organised convection and definite cyclonic surface wind circulation including:

- tropical disturbance: light surface winds with indications of cyclonic circulation;
- tropical depression: wind speed up to 33 knots;
- tropical storm: maximum wind speed of 34 to 47 knots;
- severe tropical storm: maximum wind speed of 48 to 63 knots;
- hurricane: maximum wind speed of 64 knots or more;
- typhoon: maximum wind speed of 64 knots or more;
- tropical cyclone (South-West Indian Ocean): maximum wind speed 64 to 90 knots;
- tropical cyclone (Bay of Bengal, Arabian sea, South-East Indian Ocean, South Pacific): maximum wind speed of 34 knots or more.⁽¹⁰⁸⁾

tropical storm See **tropical cyclone**.

true north The direction from any point on the earth's surface to the north pole.⁽²⁷⁾ See also **magnetic north** and **grid north**.

tsunami A Japanese word for 'harbour wave'. It is used to define a water wave generated by a sudden change in the sea bed resulting from an **earthquake**, volcanic eruption or **landslide**.⁽¹⁴⁾ See also **tidal wave**.
Syn. **seismic sea wave**.

Tsunami Intensity Scale An intensity scale providing descriptions of six

levels of **tsunami** intensity. See Annex C for more information.

tsunami warning bulletin A message issued to all participants in the Tsunami Warning System in the Pacific on a Pacific-wide basis after confirmation has been received that a **tsunami** has been generated that poses a threat to the population in part or all of the Pacific. A tsunami warning will be followed by additional bulletins with updated information until the tsunami warning is cancelled.⁽⁴⁶⁾

TWA Time-weighted average. See **threshold limit value**.

typhoid fever A serious enteric **infectious disease**, transmitted by patients, carriers, water or food, such as contaminated shellfish. It is characterised by fever, slow pulse, skin eruption, abdominal signs, enlarged spleen and prostration. Many enteric diseases are labelled typhoid fever, but the latter only is caused by *Salmonella typhi*. It is a popular belief that typhoid frequently follows floods and other disasters; it is in fact unusual, and mass vaccination is not recommended. Personal hygienic practices constitute the best prevention. (Do not confuse 'typhoid' with 'typhus'.)⁽⁷²⁾

typhoon The name given to a **tropical cyclone** with maximum sustained winds of 64 knots or more near the centre in the western North Pacific.⁽¹⁰⁸⁾

typhus One of the serious rickettsial fevers, the classically notorious epidemic typhus, transmitted by lice. Immunisation and louse control are highly effective (not to be confused with 'typhoid').⁽⁷²⁾

U

UN See **United Nations**.

UN-DMT United Nations Disaster Management Team.

uncertainty phase A situation wherein apprehension exists as to the safety of a vessel or aircraft and of the persons on board.⁽⁴⁹⁾ See also **alert phase** and **distress phase**.

UNCHS United Nations Center for Human Settlements.

UNDP See **United Nations Development Programme**.

UNDRO United Nations Disaster Relief Organization. *Now known as United Nations Office for the Coordination of Humanitarian Affairs*.

UNEP See **United Nations Environment Programme**.

UNESCO See **United Nations Educational, Scientific and Cultural Organization**.

UNHCR See **United Nations High Commissioner for Refugees**.

UNICEF See **United Nations Children's Fund**.

UNIDO United Nations Industrial Development Organization.

UNIENET United Nations International Emergency Network.

unified command A method for all agencies or individuals who have jurisdictional responsibility, or in some cases who have functional responsibilities at the **incident**, to

contribute to: • determination of overall objectives for the incident, and • selection of strategies to achieve the objectives.⁽⁷²⁾

United Nations (UN) The supreme intergovernmental world body established in 1945 with the purposes of: 1. maintaining international peace and security, 2. developing friendly relations among nations, 3. solving international problems through international cooperation, and 4. harmonising the actions of all nations for these common ends. The United Nations acts through various mechanisms, such as: specialised agencies; centres; other constituted bodies; committees; peace keeping forces; institutes; etc.⁽⁷²⁾

United Nations Children's Fund (UNICEF) Special fund created to help underprivileged children worldwide. From the beginning UNICEF has been engaged in emergency aid, and now its activities extend to all the fields of child welfare, especially child development, health and protection of children in disaster situations.⁽⁷²⁾

United Nations Development Programme (UNDP) The major United Nations programme for multilateral technical and pre-investment cooperation for development; the funding source for most of the technical assistance provided by the United Nations.⁽⁷²⁾

United Nations Disaster Relief Organisation (UNDRO) *Now known as United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA).*

United Nations Educational, Scientific and Cultural

Organization (UNESCO) The United Nations specialised agency for these fields of endeavour. In the sector of disasters it is the depository of studies and information on earthquakes.⁽⁷²⁾

United Nations Environment Programme (UNEP) Special programme of the United Nations to promote a harmonious interrelationship between environment and development, by wise and technically sound utilisation of resources and by reducing the degradation and pollution of the environment. Acts in natural environmental catastrophes (earthquake, drought, deforestation) and man-made disasters (chemical explosion, oil spill, pollution).⁽⁷²⁾

United Nations High Commissioner for Refugees (UNHCR) Office of United Nations High Commissioner specifically established to protect and assist refugees, with the goal of finding permanent solutions to the refugee problem. It designs and administers programmes of assistance to countries of asylum in providing emergency relief to refugees arriving there, and facilitates repatriation, orderly departure, local integration or resettlement. Has an active programme of refugee-related disaster management.⁽⁷²⁾

United Nations Number (UN Number) A system of four digit numbers assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. United Nations Numbers are assigned to one substance or to a group of substances with similar characteristics. They are not necessarily unique to one chemical,

and may cover a group of chemicals with similar hazardous properties, for example, Organophosphorus pesticides, liquid, toxic - United Nations No. 3018.⁽¹⁰²⁾

United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) The United Nations organisation responsible for coordination of humanitarian emergency response, policy development, and advocacy on humanitarian issues. *Previously known as 'United Nations Disaster Relief Organisation (UNDRO)' and 'United Nations Department of Humanitarian Aid (UNDHA)'.*⁽⁹⁷⁾

United Nations Pesticide List The latest revision of Table 6.1 'Grouping of Pesticides according to the Percentage of Active Substances' as adopted by the United Nations Committee of Experts on the Transport of Dangerous Goods.⁽⁴⁵⁾

universal precautions Precautions for prevention of transmission of HIV, Hepatitis B and other blood-borne pathogens and to prevent contamination of health care workers by all blood and body substances from all patients (including faeces, urine, vomitus and other secretions).⁽³²⁾

unserviceable resources Resources at an incident but unable to respond for mechanical, rest or personal reasons.⁽²⁾ *See also resources.*

urban search and rescue (USAR) An integrated multi-agency response, which is beyond the capability of normal rescue arrangements, to locate, provide initial medical care, and remove entrapped persons from damaged structures and other environments in a safe and expeditious manner.

USAR *See urban search and rescue.*

UVCE Unconfined vapour cloud explosion. *See also boiling liquid expanding vapour explosion.*

V

vaccination *See immunisation.*

vapour The gaseous form of a substance which is normally in the solid or liquid state at room temperature and pressure.⁽¹⁰⁴⁾ *See also dust, fume, gas, mist, smoke and fume.*

VCANZ *See Veterinary Committee of Australia and New Zealand.*

vector Insects capable of transmitting disease. Includes flies, fleas, lice, mites, mosquitoes and ticks.⁽³²⁾ *See also vermin.*

vector control Control of insects capable of transmitting disease.⁽³²⁾

venom A poison normally from a snake; insect; marine creature; or other animal.⁽⁷³⁾

vermin Rodents and animals capable of transmitting disease, eg. rats, mice.⁽³⁶⁾⁽³²⁾ *See also vector.*

vesicular disease Any **exotic animal disease** characterised by vesicles, which are surface cysts containing fluids - any vesicular disease is assumed to be foot-and mouth disease until proven otherwise.⁽⁹¹⁾

Veterinary Committee of Australia and New Zealand (VCANZ) A committee which provides technical advice and develops national

standards on animal and veterinary public health and animal welfare for the Standing Committee on Agriculture and Resource Management (SCARM) and the Australian Animal Health Council (AAHC). *Previously known as* Animal Health Committee.⁽⁹⁷⁾

victim * A person directly affected by a disaster.* A person who is killed. See also **casualty**, **emergency-affected person** and **patient**.

victim-rescuer syndrome In disasters where survivors are at the mercy of outside support for survival or their daily requirements, a strong dependence can develop between a **victim** and those who are providing the aid. This dependency may not be easily terminated when the necessity for relief has ended.⁽¹⁴⁾

Visiting Ships Panel (Nuclear) (VSP(N)) A Commonwealth interdepartmental committee tasked with overseeing the arrangements for visits to Australian ports by nuclear-powered warships.

VO Veterinary Officer.

volcanic eruption The discharge (aerially explosive) of fragmentary **ejecta**, **lava** and gases from a volcanic vent.⁽⁹⁵⁾

volcano An opening in the crust that has allowed **magma** to reach the surface.⁽¹³⁾

volunteer emergency worker A volunteer worker who engages in emergency activity at the request (whether directly or indirectly) or with the express or implied consent of the chief executive (however designated), or of a person acting with the authority of the chief executive, of an agency to which

either the State emergency response or recovery plan applies.⁽⁹⁸⁾

VSP(N) See **Visiting Ships Panel (Nuclear)**.

vulnerability * The degree of susceptibility and resilience of the community and environment to hazards.⁽³⁹⁾
* The degree of loss to a given element at risk or set of such elements resulting from the occurrence of a phenomenon of a given magnitude and expressed on a scale of 0 (no damage) to 1 (total loss).⁽⁹⁶⁾

vulnerability analysis See **hazard analysis**.

vulnerability assessment See **hazard analysis**.

vulnerable groups Categories of displaced persons with special needs, variously defined to include: unaccompanied minors, the elderly, the mentally and physically disabled, victims of physical abuse or violence and pregnant, lactating or single women.⁽⁹³⁾

W

WADEM See **World Association for Emergency and Disaster Medicine**.

warm zone The area where personnel and equipment decontamination and **hot zone** support takes place. It includes control points for the access corridor and thus assists in reducing the spread of contamination. *Syn.*

- 'decontamination zone', 'contamination reduction zone', or 'limited access zone'.⁽⁸⁹⁾ See also **control zone**.
- warning** Dissemination of message signalling imminent **hazard** which may include advice on protective measures.⁽⁹⁵⁾ See also **alert** and **alarm**.
- water jet** A method to apply or distribute water from a hose. The water is delivered under pressure for penetration. Water jets are frequently used to keep tanks and other equipment exposed to flammable liquid fires cool, or for washing burning spills away from danger points. However, water jets will cause a spill fire to spread if improperly used and will only serve to spread a fire when directed into open containers of flammable or combustible liquids.⁽⁸⁹⁾
- water point** Natural or artificial water storage of value in fire operations. Generally indicated by a signpost with 'W', 'WP' or 'WATER'.⁽²¹⁾
- water reactive materials** Substances that react in varying degrees when mixed with water or when they come in contact with humid air; generally flammable solids.⁽⁷¹⁾
- watershed** All land within the confines of a drainage divide. This is also called a 'catchment', or 'drainage basin'. All surface water has a common outlet.⁽⁹⁵⁾
- watershed divide** Boundary line separating adjacent drainage basins.⁽⁹⁵⁾
- water spray** A method of applying or distributing water. The water is finely divided to provide for high heat absorption.⁽⁸⁹⁾ Syn. **fog**.
- water surface profile** A graph showing the flood stage at any given location along a watercourse at a particular time.⁽⁶¹⁾
- watertable** In an aquifer (a layer of rock which holds water or allows water to percolate through it), the upper limit of the portion of ground saturated with water. See also **groundwater**.
- weather alert** A warning broadcast on radio or television of an approaching **storm** or **gale**, or of an impending cold change.⁽⁵¹⁾
- welfare** The provision of immediate and continuing care of **emergency affected persons** who may be threatened, distressed, disadvantaged, homeless or evacuated; and, the maintenance of health, well-being and prosperity of such persons with all available community resources until their rehabilitation is achieved.⁽⁵⁸⁾
- welfare assembly centre** The initial point, within or just outside the disaster area, to which and from which **emergency affected persons** shall be directed as appropriate.⁽⁵⁸⁾
- welfare centre** Location where **temporary accommodation** is actually available for **emergency affected persons** containing the usual amenities necessary for living and other welfare services as appropriate.⁽⁵⁸⁾
- welfare information centre** Any centre established within or near the disaster area to meet the immediate needs of **emergency affected persons** which will be the focal point for the delivery of welfare services to the community but does not provide accommodation.⁽⁵⁸⁾

wetting agent A chemical added in low concentration to water. It is used in firefighting to break down the surface tension of the water and to improve its penetration into fuels.⁽³⁾

WFP See **World Food Programme**.

WHO See **World Health Organization**.

whole body counter An assembly for measuring the total **gamma radiation** emitted by the human body and using one or more radiation detectors heavily shielded against natural ambient radiation.⁽⁶⁾

whole dose The total **radiation** dose to the body received from all sources. This usually is for external radiation only as opposed to organ doses which can be received by inhalation or ingestion.⁽⁶⁹⁾ See also **dose**.

WICEN Wireless Institute Civil Emergency Network.

wildfire An unplanned fire. A generic term which includes grass fires, forest fires and scrub fires.⁽³⁾ Syn. 'bushfire'.

wildfire control plan See **incident action plan**.

wind chill factor See **wind chill index**.

wind chill index Index used to determine the relative discomfort resulting from a specific combination of wind speed and air temperature, expressed by the loss of body heat in watts per square metre (of skin).⁽¹⁰⁸⁾ Syn. **wind chill factor**.

wind direction The direction from which the wind blows.⁽³⁾

wind fetch The horizontal distance in the direction of wind over which wind waves are generated.⁽⁶¹⁾

wind force Number on a **Beaufort scale** corresponding to the effects produced by winds within a range of speeds.⁽⁹⁵⁾

wind load See **wind pressure**.

wind pressure The total force exerted upon a structure by wind. For a flat surface it is the sum of the dynamic pressure exerted on the windward side and the pressure decrease, or suction, produced on the sheltered side.⁽¹⁰⁸⁾ Syn. 'wind load'.

wind rose A star-shaped diagram indicating the relative frequencies of the wind directions, and sometimes the frequencies of the wind speeds for different directions, recorded at a station for a specific period of time.⁽¹⁰⁸⁾

wind strength See **wind force**.

windrow A long line of piled **slash** or debris resulting from forest or scrub clearing.⁽³⁾

WMO See **World Meteorological Organization**.

woodland A plant community in which the trees form only an open canopy, the intervening area being occupied by lower vegetation, usually grass or scrub.⁽³⁾

Worksafe Australia The National Occupation Health and Safety Commission, a Federal Government body working to the Minister for Industrial Relations. Worksafe aims to lead national efforts to provide healthy, safe and productive working environments, and to reduce the incidence and severity of occupational deaths, injuries and disease, through cooperation with unions, employers and the State, Territory and Commonwealth governments.

World Association for Emergency and Disaster Medicine (WADEM)

Major worldwide organisation of professionals from a wide range of health disciplines engaged in or promoting better knowledge and practice of all aspects of **emergency medicine** and **disaster medicine**.⁽⁷²⁾

World Food Programme (WFP) The organisation of the United Nations**World Health Organization (WHO)**

The health arm of the United Nations, aiming at “the attainment by all peoples of the highest possible level of health”. Coordinates efforts to raise health levels worldwide and promotes the development of primary health. Besides multiple public health programmes and actions, it is engaged in disaster preparedness and relief both at headquarters and at six Regional Offices, and coordinates the health sector of any United Nations involvement in major emergencies.⁽⁷²⁾

World Meteorological Organization (WMO) Specialised agency of the **United Nations Organization** for coordinating, standardising and improving meteorological activities throughout the world and for encouraging the efficient exchange of information between countries, in the interest of various human activities.⁽¹⁰⁸⁾

World Weather Watch (WWW) The world-wide, coordinated, developing system of meteorological facilities and services provided by **World Meteorological Organization** Members for the purpose of ensuring that all Members obtain the meteorological information required both for operational work

system for food aid, both for development projects and emergency relief in drought or famine, by mobilisation of bulk foodstuffs (while the **Food and Agriculture Organization** mobilises resources). Has a food-for-work mechanism for **refugee** and disaster situations.⁽⁷²⁾

and research. The essential elements of the WWW are: the Global Observing System, the Global Data-processing System and the Global Telecommunication System (used also for transmission of seismic information in the Far East).⁽⁹⁵⁾

WWW See **World Weather Watch**.

X

X-ray Ionising electromagnetic **radiation** emitted during the transition of an atomic **electron** to a lower energy state or during the rapid deceleration of a charged particle.⁽⁵⁷⁾

Z

zonation The subdivision of a geographical entity (country, region, etc.) into homogenous sectors with respect to certain criteria (for example, intensity of the hazard, degree of risk, same overall

protection against a given hazard, etc.).⁽⁹⁵⁾ See also **microzonation**.

zone warden A person who, during an emergency, assumes control over a particular floor or evacuation zone under the direction of the **house warden**.⁽⁷⁷⁾ *Syn.* 'floor warden'.

zoonosis Diseases transmitted from animal to human.⁽³²⁾ See also **exotic animal disease**.

zoonotic disease See **zoonosis**.

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CORE EMERGENCY MANAGEMENT TERMS

- all-hazards approach
- all-agencies approach
 - => command
 - => control
 - => coordination

- comprehensive approach
 - => prevention
 - => preparedness
 - => response
 - => recovery

- prepared community

- emergency risk management
 - => community environment hazard risk
 - => vulnerability
 - => risk analysis
 - => emergency planning process
 - => emergency
 - => disaster
 - => warning

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TABLES

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Table C. 1 - Beaufort scale

No.	Wind Speed		Descriptive Term	Effects Observed	
	Km/h	knots		On land	On sea
0	<1	<1	Calm	Calm; smoke rises vertically	Sea like a mirror
1	1-5	1-3	Light air	Smoke drift indicates wind direction	Ripples are formed but without foam crests
2	6-11	3-6	Light breeze	Leaves rustle; wind vanes move	Small wavelets; crests have a glassy appearance and do not break
3	12-19	6-10	Gentle breeze	Leaves, small wigs in constant motion	Large wavelets; crests begin to break; foam of glassy appearance
4	20-28	11-15	Moderate breeze	Dust, leaves and loose paper raised from ground; small branches move	Small waves, becoming longer; fairly frequent white horses
5	29-38	16-21	Fresh breeze	Small trees in leaf begin to sway	Moderate waves; many white horses formed
6	39-49	21-27	Strong breeze	Larger tree branches in motion; whistling heard in wires	Large waves begin to form; white foam crests everywhere (probably some spray)
7	50-61	27-33	Near gale	Whole trees in motion; difficulty in walking	Sea heaps up; white foam from breaking waves begins to be blown in streaks
8	62-74	33-40	Gale	Twigs and small branches broken off trees; walking impeded	Moderately high waves of greater length; foam is blown impeded in well-marked streaks
9	75-88	41-48	Strong Gale	Slight damage to structures; slate blown from roofs	High waves; crests of waves begin to topple, tumble and roll over
10	89-102	48-55	Storm	Trees broken or uprooted; considerable damage to structures	Very high waves with long over-hanging crests; on the structures whole the surface of the sea takes a white appearance; the tumbling of the sea becomes heavy and shock like; visibility affected
11	103-117	56-63	Violent Storm	Usually widespread damage	Exceptionally high waves; visibility affected
12	>117	>63	Hurricane	Usually widespread damage	The air is filled with foam and spray; sea completely white with driving spray; visibility seriously affected

Table C.2 - Cyclone severity categories

Category	Strongest gust (km/h)	Typical effects (indicative only)
1	less than 125	Negligible house damage. Damage to some crops, trees and caravans. Craft may drag moorings.
2	125-169	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small craft break moorings.
3 (eg. Winifred)	170-224	Some roof and structural damage. Some caravans destroyed. Power failure likely.
4 (eg. Tracy)	225-279	Significant roofing loss and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures.
5 (eg. Orson)	More than 280	Extremely dangerous with widespread destruction.

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Table C.3 - Hurricane disaster potential scale

No.	Central pressure	Winds	Surge	Damage	
	millibars	km/in	m	on land	at sea
1	>980	120-150	1.2-1.5	Damage to shrubbery, trees, foliage and poorly anchored mobile homes. Some damage to signs.	Some low-lying coastal roads flooded. Limited damage to piers and exposed small craft.
2	965-979	151-175	1.6-2.4	Trees stripped of foliage and some of them broken down. Exposed mobile homes suffer major damage. Poorly constructed signs are severely damaged. Some roofing material ripped off; windows and doors might be affected.	Coastal roads and escape routes flooded 24 hours before hurricane centre arrives. Piers suffer extensive damage and small unprotected craft are torn loose. Some evacuation of coastal areas is necessary.
3	945-964	175-210	2.5-3.6	Foliage stripped from trees and many blown down. Great damage to roofing material, doors and windows. Some small buildings are structurally damaged.	Serious coastal flooding and some coastal buildings may be damaged. Battering of waves might affect large buildings, but not severely. Coastal escape routes cut off 3-5 hours before hurricane centre arrives. Flat terrain 1.5 m or less above sea level is flooded as far inland as 13km. Evacuation of coastal residents for several blocks inland may be necessary.
4	920-944	211-250	3.7-5.5	Shrubs, trees and signs are all blown down. Extensive damage to roofing materials, doors and windows. Many roofs on smaller buildings may be ripped off. Mobile homes destroyed.	Flat land up to 3 m above sea level might be flooded to 10 km inland. Extensive damage to the lower floors of buildings near the coast. Escape routes cut 3-5 hours before hurricane centre passes. Beaches suffer major erosion, and evacuation of homes within 500m of coast may be necessary.
5	<920	>250	>5.5	Increase on the extensive damage of the previous level. Glass in windows shattered and many structures blown over.	Lower floors of structures within 500m of coast extensively damaged. Escape routes cut off 3-5 hours before hurricane centre arrives. Evacuation of low lying areas within 8-16 km of coast may be necessary. Eg: Gilbert, 1988

Table C.4 - Frequency of Tropical Storms

Basin and Stage	Jan	Feb	Mar	Apr						Oct	Nov	Dec	Annual
					May	June	July	Aug	Sept				
North Atlantic													
Tropical storms	*	*	*	*	0.1	0.4	0.3	1.0	1.5	1.2	0.4	*	4.2
Hurricanes	*	*	*	*	*	0.3	0.4	1.5	2.7	1.3	0.3	*	5.2
Tropical storms and hurricanes	*	*	*	*	0.2	0.7	0.8	2.5	4.3	2.5	0.7	0.1	9.4
Eastern North Pacific													
Tropical storms	*	*	*	*	*	1.5	2.8	2.3	2.3	1.2	0.3	*	9.3
Hurricanes	*	*	*	*	0.3	0.6	0.9	2.0	1.8	1.0	*	*	5.8
Tropical storms and hurricanes	*	*	*	*	0.3	2.0	3.6	4.5	4.1	2.2	0.3	*	15.2
Western North Pole													
Tropical storms	0.2	0.3	0.3	0.2	0.4	0.5	1.2	1.8	1.5	1.0	0.8	0.6	7.5
Typhoons	0.3	0.2	0.2	0.7	0.9	1.2	2.7	4.0	4.1	3.3	2.1	0.7	17.8
Tropical storms and typhoons	0.4	0.4	0.5	0.9	1.3	1.8	3.9	5.8	5.6	4.3	2.9	1.3	25.3
Southwest Pacific and Australian Area													
Tropical storms	2.7	2.8	2.4	1.3	0.3	0.2	*	*	*	0.1	0.4	1.5	10.9
Typhoons/cyclones	0.7	1.1	1.3	0.3	*	*	0.1	0.1	*	*	0.3	0.5	3.8
Tropical storms and typhoons/Cyclones	3.4	4.1	3.7	1.7	0.3	0.2	0.1	0.1	*	0.1	0.7	2.0	14.8
Southwest Indian Ocean													
Tropical storms	2.0	2.2	1.7	0.6	0.2	*	*	*	*	0.3	0.3	0.8	7.4
Cyclones	1.3	1.1	0.8	0.4	*	*	*	*	*	*	*	0.5	3.8
Tropical storms and cyclones	3.2	3.3	2.5	1.1	0.2	*	*	*	*	0.3	0.4	1.4	11.2
North Indian Ocean													
Tropical storms	0.1	*	*	0.1	0.3	0.5	0.5	0.4	0.4	0.6	0.5	0.3	3.5
Cyclones1	*	*	*	0.1	0.5	0.2	0.1	*	0.1	0.4	0.6	0.2	2.2
Tropical storms and cyclones	0.1	*	0.1	0.3	0.7	0.7	0.6	0.4	0.5	1.0	1.1	0.5	5.7

* Less than .05

1 Winds ~ 89km/h (Beaufort 10)

Monthly values cannot be combined because single storms overlapping two months were counted once in each month and once annually.

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Table C. 5 - Modified Mercalli scale

No.	Descriptive Term	Description	Acceleration (cm/s ²)
I	Imperceptible	Not felt. Marginal and long-period effects of large earthquakes.	<1
II	Very Slight	Felt by persons at rest, on upper floor, or favourably placed.	1-2
III	Slight	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognised as an earthquake.	2-5
IV	Moderate	Hanging objects swing. Vibration like passing of heavy trucks or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink, crockery clashes. In upper range of IV, wooden walls and frames creak.	5-10
V	Rather Strong	Felt outdoors; direction estimated. Sleepers waken. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.	10-20
VI	Strong	Felt by all. Many frightened and run outdoors. People walk unsteadily. Dishes, glassware broken. Knick-knacks, books, off shelves. Pictures off walls. Furniture overturned or moved. Weak plaster, masonry D cracked. Small bells ring. Trees shaken.	20-50
VII	Very Strong	Difficult to stand. Noticed by motor car drivers. Hanging objects quiver. Furniture broken. Damage, to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices. Some cracks in masonry C. Waves on ponds: water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.	50-100
VIII	Destructive	Steering of motor cars affected. Damage to masonry C: partial collapse. Some damage to masonry B, none to masonry A. Fall of stucco, some masonry walls. Twisting, fall of chimneys factory stacks, monuments, towers, elevated tanks. Frame houses move on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground, on steep slopes.	100-200
IX	Devastating	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. Frame structures, if not bolted, shifted off foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand, mud ejected, earthquake fountains, sand craters.	200-500
X	Annihilating	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dykes, and embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.	500-1000

continued below

XI	Disaster	Disaster Rails bent greatly. Underground pipelines completely out of service.	1000-2000
XII	Major Disaster	Major Disaster Damage nearly total. Large rock masses displaced. Line of sight and level distorted. Objects thrown into the air.	>2000

Categories of Masonry

Masonry A: Good workmanship, mortar and design; reinforced, especially laterally, and bound together using steel, concrete, etc.; designed to resist lateral forces.

Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonry D: Weak materials, such as adobe; poor mortar; low standards or workmanship; weak horizontally.

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Table C.6 - Landslide damage intensity scale

Grade	Description of damage	
0	None	Building is intact.
1	Negligible	Hairline cracks in walls or structural members: no distortion of structure or detachment of external architectural details.
2	Light	Building continues to be habitable; repair not urgent. Settlement of foundations, distortion of structure and inclination of walls are not sufficient to compromise overall stability.
3	Moderate	Walls out of perpendicular by 1-2 degrees, or substantial cracking has occurred to structural members, or foundations have settled during differential subsidence of at least 15 cm: building requires evacuation and rapid attention to ensure its continued life.
4	Serious	Walls out of perpendicular by several degrees; open cracks in walls; fracture of structural members; fragmentation of masonry; differential settlement of at least 25 cm compromises foundations; floors may be inclined by 1-2 degrees, or ruined by soil heave; internal partition walls will need to be replaced; door and window frames too distorted to use; occupants must be evacuated and major repairs carried out.
5	Very Serious	Walls out of plumb by 5-6 degrees; structure grossly distorted and differential Serious settlement will have seriously cracked floors and walls or caused major rotation or slewing of the building (wooden buildings may have detached completely from their foundations). Partition walls and brick infill will have at least partly collapsed: roof may have partially collapsed; outhouses, porches and patios may have been damaged more seriously than the principal structure itself. Occupants will need to be re-housed on a long-term basis, and rehabilitation of the building will probably not be feasible.
6	Partial Collapse	Requires immediate evacuation of the occupants and cordoning off the site to collapse prevent accidents will falling masonry.
7	Total Collapse	Requires clearance of the site.

Table C. 7 - Tsunami intensity scale

Intensity	Run-up height (m)	Descriptive Term	Description
I	0.5	Very Light	Waves so weak as to be perceptible only on tide gauge records.
II	1	Light	Waves noticed by those living along the shore and familiar with the sea. On very flat shores generally noticed.
III	2	Rather Strong	Generally noticed. Flooding of gently sloping coasts. Light sailing vessels carried away on shore. Slight damage to light structures situated near coast. In estuaries reversal of river flow for some distance upstream.
IV	4	Strong	Flooding of the shore to some depth. Light scouring on manmade ground. Embankments and dykes damaged. Light structures near the coast damaged. Solid structures on the coast slightly damaged. Big sailing vessels and small ships drifted inland or carried out to sea. Coasts littered with floating debris.
V	8	Very Strong	General flooding of the shore to some depth. Quaywalls and solid structures near the sea damaged. Light structures destroyed. Severe scouring of cultivated land and littering of the coast with floating items and sea animals. With the exception of big ships all other types of vessels carried inland or out to sea. Big bores in estuary rivers. Harbour works damaged. People drowned, waves accompanied by strong roar.
VI	16	Disastrous	Partial or complete destruction of man-made structures for some distance from the shore. Flooding of coasts to great depths. Big ships severely damaged. Trees uprooted or broken by the waves. Many casualties.

Table C.8 - Dangerous goods classification system

"The nine classes of dangerous goods, their divisions where applicable and a brief description of their characteristics are given below. These classes are shown on dangerous goods documents, class labels and placards.

Class 1 Explosives

- 1.1 Substances or articles which have a mass explosion hazard.
- 1.2 Substances or articles which have a projection hazard but not a mass explosion hazard.
- 1.3 Substances or articles which have a fire hazard and either a minor blast hazard or a minor projection hazard, or both, but not a mass explosion hazard.
- 1.4 Substances or articles which present no significant hazard; explosion effects are largely confined to the package and no projection or fragments of appreciable size or range are to be expected.
- 1.5 Very insensitive substances which have a mass explosion hazard like those substances in 1.1.
- 1.6 Extremely insensitive articles which do not have a mass explosion hazard.

Class 2 Gases

- 2.1 Flammable gases.
- 2.2 Non-flammable, non-toxic gases.
- 2.2 Subrisk 5.1 Oxidizing gases.
- 2.3 Toxic (poisonous) gases.

Class 3 Flammable Liquids

- For air transport, and for road and rail transport in **AUSTRALIA**, there are no **subdivisions of Class 3**.
- The degree of hazard is indicated by the Packing Group.
- For sea transport, and road and rail transport in **NEW ZEALAND**, Class 3 is subdivided as follows:
 - 3.1 Liquids with closed-cup flashpoints of less than -1 8°C.
 - 3.2 Liquids with closed-cup flashpoints not less than -18°C but less than 23°C.
 - 3.3 Liquids with closed-cup flashpoints not less than 23°C but less than 61 °C.

Class 4 Flammable solids, substances liable to spontaneous combustion and substances which in contact with water emit flammable gases

- 4.1 Flammable solids; self-reactive and related substances; and desensitized explosives.
- 4.2 Substances liable to spontaneous combustion, which either immediately catch fire or self-heat on contact with air.
- 4.3 'Dangerous when wet' substances which, in contact with water or water vapour, emit dangerous quantities of flammable gases.

Class 5 Oxidizing substances and organic peroxides

- 5.1 Substances which, although not necessarily combustible, may readily liberate oxygen, or be the cause of oxidation processes and which, as a result, may start a fire in other materials or stimulate the combustion of other materials, and therefore increase the violence of a fire.
- 5.2 Organic compounds which are also strong oxidizing agents and may be liable to explosive decomposition. Most burn rapidly, are sensitive to heat, shock, impact or friction and react dangerously with other substances.

Class 6 Toxic (poisonous) substances and infectious substances

- 6.1 Substances which are liable to cause death or serious injury to health if swallowed, inhaled or by skin contact (PG I and II); or Substances of lesser hazard (PG II) which are harmful to health if swallowed, inhaled or by skin contact.
- 6.2 Substances containing organisms that are known or reasonably believed to cause disease in humans or animals.

Class 7 Radioactive substances

Substances or combinations of materials which spontaneously emit radiation with activity exceeding 70 kBq/kg.

Class 8 Corrosive substances

Substances which, by chemical action, will cause severe damage in contact with living tissue, or will damage or even destroy other materials, especially metals.

Class 9 Miscellaneous dangerous goods Substances or articles which present a danger not covered by other classes. Class 9 includes a number of substances and articles which present a relatively low hazard and environmentally hazardous substances that do not meet the criteria for another Class.

SUBSIDIARY RISKS (SUB-RISKS)

Many dangerous goods present more than one hazard. These are classified according to their major hazard, and their additional hazards are called Subsidiary Risks. Subsidiary risk is printed on transport documentation, storage placarding and site manifests and marked on packages, freight containers, vehicles and storage placards by class labels without a number.

PACKING GROUP = DEGREE OF DANGER

Dangerous goods of classes 3, 4, 5, 6.1, 8 and 9 have been divided into 3 packing groups indicating the degree of danger presented by the substance. This information is usually shown on documentation and may be on substance labels.

Packing Group I (PG I)	Great danger
Packing Group II (PG II)	Medium danger
Packing Group III (PG III)	Minor danger

PG I - substances that pose an immediate threat to life, health or property whenever there is a leak, spill or fire, even in very small quantities.

PG II - substances that pose a significant threat in a fire or larger spill or leak. Flammable substances of PG II will ignite readily at ambient temperatures.

PG III - substances that are similar in hazard to many found in domestic situations. Flammable substances of PG III will usually be difficult to ignite at ambient temperatures. Generally PG III substances pose a significant threat to health or property in open areas only when involved in a large fire or in a major spill or leak.

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