## Data quality information — Emergency management sector overview (sector overview D)

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| Data quality information |
| Data quality information (DQI) provides information against the seven ABS data quality framework dimensions, for performance indicators and/or measures in the Emergency management sector overview.  Technical DQI has been supplied or agreed by relevant data providers. Additional Steering Committee commentary does not necessarily reflect the views of data providers. |
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#### CONTENTS

Community preparedness for emergency events 2

Deaths from emergency events 4

Total asset from emergency events 7

### Community preparedness for emergency events

Data quality information for this indicator has been drafted by the Emergency Management Working Group in consultation with the Emergency Management Working Group (EMWG), with additional Steering Committee comments.

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| Indicator definition and description | |
| Element | Emergency management sector performance indicator framework – Sector wide indicators |
| Indicator | Total asset loss from emergency events |
| Measure (computation) | ‘Proportion of Australians that have developed emergency plans for natural disasters’ is defined as the proportion of Australians that developed emergency plans (evacuations/meeting places) for natural disasters. |
| Data source | Western, M., Mazerolle, L., & Boreham, P. (2012), National Security and Preparedness Survey 2011-2012. Brisbane: Institute for Social Science Research and the Australian Research Council Centre of Excellence in Policing and Security, The University of Queensland, 2012. |
| Data Quality Framework dimensions | |
| Institutional environment | The study is funded by:  the Australian Research Council Centre of Excellence in Policing and Security (CEPS) — CEPS is a complex research enterprise consisting of multiple collaborating researchers, and university and partner organisations. CEPS is administered by Griffith University in Brisbane and operates across four University Nodes  the University of Queensland — the study is led by researchers from the Institute for Social Science Research (ISSR) at the University of Queensland. ISSR is a division of The University of Queensland. The institute provides research and postgraduate research training for the social sciences.  the Queensland Government.  In kind support to the study is provided by the University of Queensland, the Queensland Government, and the Australian Institute of Criminology. |
| Relevance | Data are available nationally and by state and territory for the 2011-12 financial year.  The questionnaire covers a range of issues, including the following topics:  confidence and attitudes towards national security and policing measures  confidence and attitudes towards policing and national security agencies  relationships and interactions with national security and policing agencies  perceptions of personal security and national security  self-reported impact on individual behaviours  emergency preparedness  community resilience. |
| Timeliness | The project gathered cross-sectional indicators of economic, social and cultural wellbeing to assess community perceptions of community preparedness, resilience, vulnerability and their attitudes to key policing and security policies, laws and programs. Future surveys will also collect panel and longitudinal information.  The National Security and Preparedness Survey (NSPS) began survey recruitment in November 2011 and concluded in May 2012. |

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| Accuracy | A final random sample of survey respondents (N= 4258) was recruited from all six states and two territories.  The survey was designed to produce descriptive statistics and these may not be representative of the population. Confidence intervals have been prepared for this Report on the assumption that a random sample of the population was selected.  The NSPS was implemented via Computer Assisted Telephone Interview (CATI) recruitment, followed by mail out/online surveys in November 2011.  Summary statistics (minimum, maximum, mean, median, and standard deviation) are available for most variables collected in the survey.  A series of floods in northern New South Wales and southern Queensland in January and February 2012 may have influenced respondent perceptions about, and/or actions around, disaster preparedness. |
| Coherence | The results of the survey, in concert with a similar survey simultaneously being conducted in the US and possibly other countries that are part of the START consortium, will be useful to the range of government agencies involved in anti-and counter-terrorism initiatives. |
| Accessibility | The ISSR research team will conduct analysis of the data from the National Survey. There are currently no papers published, but a number in preparation.  For selected results from the survey please contact the ISSR research team or CEPS. |
| Interpretability | A Technical Report on the survey methodology, survey question wording, and collection instruments are available from the ISSR or CEPS on request. |
| Data Gaps/Issues Analysis | |
| Key data gaps/issues | The Steering Committee notes the following issue:  The NSPS has been conducted as a one-off collection at the University of Queensland. Further work to repeat the survey in the future (or the development of time series data) would be welcomed. |

### Deaths from emergency events

Data quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Emergency management sector performance indicator framework – Sector wide indicators | | | |
| Indicator | Deaths from emergency events | | | |
| Measure/s (computation) | Deaths from emergency events’ is defined as the number of deaths per calendar year in three categories:  *Road traffic deaths* — deaths primarily caused by accidents involving transport vehicles (mainly cars)  *Fire deaths* — deaths primarily caused by exposure to smoke, fire or flames  *Deaths from exposure to forces of nature* — deaths primarily caused by exposure to forces of nature, such as natural disasters, or extreme climatic or weather conditions.  Numerator/s  The following International Classification of Diseases (ICD) codes are aggregated to define the data set:  *Road traffic deaths* — include ICD codes Road traffic accidents  (V01–V79), Intentional self‑harm by crashing of motor vehicle (X82), Assault by crashing of motor vehicle (Y03), and Crashing of motor vehicle, undetermined intent (Y32).  *Fire deaths* — include ICD codes Exposure to smoke, fire and flames (X00–X09), Intentional self‑harm by smoke, fire and flames (X76), Assault by smoke, fire and flames (X97), and Exposure to smoke, fire and flames, undetermined intent (Y26).  *Deaths from exposure to forces of nature* — includes ICD codes Exposure to excessive natural heat (X30), Exposure to excessive natural cold (X31), Exposure to sunlight (X32), Victim of lightning (X33), Victim of earthquake (X34), Victim of volcanic eruption (X35), Victim of avalanche, landslide and other earth movements (X36), Victim of cataclysmic storm (X37), Victim of flood (X38), and Exposure to other and unspecified forces of nature (X39).  Denominator  Population by State and Territory and Australian total  The measure is expressed by State and Territory and Australian total, by ICD code detail and total, as an annual, and a three year rolling weighted average rate per million people. | | | |
| Data source/s | Numerator  ABS *Causes of Death, Australia*, Cat. no. 3303.0 (Underlying causes of death, State and Territory tables, published and unpublished data).  Denominator  ABS *Estimated Residential Population*, Cat. no. 3101.0 (for more detail about the population data used in the Report see RoGS Statistical context (chapter 2)). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The Causes of Death collection is published by the Australian Bureau of Statistics (ABS), with data sourced from deaths registrations administered by the various State and Territory Registrars of Births, Deaths and Marriages. It is a legal requirement of each State and Territory that all deaths are registered.  The ABS operates within a framework of the Census and Statistics Act 1905 and the Australian Bureau of Statistics Act 1975. These Acts ensure the confidentiality of respondents and ABS’ independence and impartiality from political influence. For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment. | | | |
| Relevance | The ABS Causes of Death collection includes all deaths that occurred and were registered in Australia, including deaths of persons whose usual residence is overseas. Deaths of Australian residents that occurred outside Australia may be registered by individual Registrars, but are not included in ABS deaths or causes of death statistics.  Data in the Causes of Death collection include demographic items, as well as Causes of Death information coded according to the International Classification of Diseases (ICD). The ICD is the international standard classification for epidemiological purposes and is designed to promote international comparability in the collection, processing, classification, and presentation of cause of death statistics. The classification is used to classify diseases and causes of disease or injury as recorded on many types of medical records as well as death records. The ICD has been revised periodically to incorporate changes in the medical field. The 10th revision of ICD (ICD‑10) has been used since 1997. | | | |
| Timeliness | Causes of Death data are published on an annual basis.  Death records are provided electronically to the ABS by individual Registrars on a monthly basis for compilation into aggregate statistics on a quarterly and annual basis. One dimension of timeliness in death registrations data is the interval between the occurrence and registration of a death. As a result, a small number of deaths occurring in one year are not registered until the following year or later.  Preliminary Estimated Residential Population (ERP) data are compiled and published quarterly and are generally made available five to six months after the end of each reference quarter. Commencing with data for September quarter 2006, revised estimates are released annually and made available 21 months after the end of the reference period for the previous financial year, once more accurate births, deaths and net overseas migration data becomes available. In the case of births and deaths, the revised data are compiled on a date of occurrence basis. In the case of net overseas migration, final data are based on actual traveller behaviour. Final estimates are made available every 5 years after a census and revisions are made to the previous inter‑censal period. ERP data are not changed once finalised. Releasing preliminary, revised and final ERP involves a balance between timeliness and accuracy. | | | |
| Accuracy | All ERP data sources are subject to non‑sampling error. Non‑sampling error can arise from inaccuracies in collecting, recording and processing the data. In the case of Census and Post Enumeration Survey (PES) data, every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures.  For the Causes of Death collection, which constitutes a complete census of the population, non-sample errors are most likely to influence accuracy. Non-sample error arises from inaccuracies in collecting, recording and processing the data. The most significant of these errors are: misreported data items; deficiencies in coverage; incomplete records; and processing errors. Every effort is made to minimise non‑sample error by working closely with data providers, running quality checks throughout the data processing cycle, training of processing staff, and efficient data processing procedures.  The ABS has implemented a new revisions process that applies to all coroner certified deaths registered after 1 January 2006. This is a change from previous years where all ABS processing of causes of death data for a particular reference period was finalised approximately 13 months after the end of the reference period. The revisions process enables the use of additional information relating to coroner certified deaths as it becomes available over time, resulting in increased specificity of the assigned ICD-10 codes. See Explanatory Notes 29-33 and Technical Notes, Causes of Death Revisions, 2006 in *Causes of Death, Australia*, 2010 (cat. no. 3303.0) and Causes of Death Revisions, 2010 and 2011 in *Causes of Death, Australia, 2012* (cat. no. 3303.0), for further information on the revision process.  Some rates are unreliable due to small numbers of deaths over the reference period. All rates in this indicator must be used with caution. | | | |
| Coherence | The ABS provide source data for the numerator and denominator for this indicator.  The number of road traffic deaths provided in *Causes of Death* (ABS Cat. no. 3303.0) is different to the number of ‘Road fatalities’ presented in Police services (chapter 6). The ABS source their data from death registrations recorded by the State and Territory Registrars of Births, Deaths and Marriages (where each death must be certified by either a doctor using the Medical Certificate of Cause of Death, or by a coroner). ‘Road fatalities’ in chapter 6 provides more recent data sourced by the Australian Road Deaths Databases reported by the police each month to the State and Territory road safety authorities. | | | |
| Accessibility | Causes of Death data are available in a variety of formats on the ABS website, www.abs.gov.au, under Causes of Death, Australia (Cat. no 3303.0).  ERP data are available in a variety of formats on the ABS website, www.abs.gov.au, under the 3101.0 and 3201.0 product families.  Further information on deaths and mortality may be available on request. The ABS observes strict confidentiality protocols as required by the Census and Statistics Act (1905). This may restrict access to data at a very detailed level. | | | |
| Interpretability | Data for this indicator are presented as crude rates, per million estimated resident population, and as three year rolling averages due to volatility of the small numbers involved.  Information on how to interpret and use the cause of death data is available from the Explanatory Notes in Causes of Death, Australia (Cat. no 3303.0).  Small value data are randomly adjusted to avoid the release of confidential data.  Causes of death statistics for states and territories have been compiled in respect of the state or territory of usual residence of the deceased, regardless of where in Australia the death occurred and was registered.  The ERP is Australia’s population reported by state and territory and by place of usual residence. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following key data gaps/issues:  Timeliness — data available for the Report on Government Services are delayed by one reference year. This is due to a tradeoff between accuracy and timeliness.  Volatility — due to the small numbers of emergency event deaths annually, there is a high level of volatility in reported indicator rates. It is important therefore to assess longer term trends where data are available. | | | |

### Total asset loss from emergency events

Data quality information for this indicator has been drafted by the Secretariat in consultation with the Australian Government, with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Emergency management sector performance indicator framework – Sector wide indicators | | | |
| Indicator | Total asset loss from emergency events | | | |
| Measure/s (computation) | Insured losses from disaster events  ‘Insured losses from disaster events’ data are defined as the insured asset losses incurred by the community following disaster event.  Estimates of asset losses are derived from the submissions of general insurance companies following large events incurring cost to the community and insurers.  To be included as a disaster event, natural, technological and human‑caused events must meet at least one of the following criteria:   * three or more deaths * 20 injuries or illnesses * significant damage to property, infrastructure, agriculture or the environment; or disruption to essential services, commerce or industry; or trauma or dislocation of the community at an estimated total cost of $10 million or more at the time the event occurred.   For the *Report on Government Services* the following event types are in scope:   |  |  | | --- | --- | | * Bushfire * Cyclone * Earthquake * Environmental * Flood   Hail | Landslide  Severe Storm  Tornado  Tsunami  Urban fire. |   Deflator  Time series financial data are adjusted to real dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator. | | | |
| Data source/s | Numerator  Australian Government 2013, *Australian Emergency Management: Knowledge Hub*, maintained by the Australian Emergency Management Institute, http://www.emknowledge.gov.au (accessed 23 April 2013  Denominator  ABS 2013, Australian National Accounts: National Income, Expenditure and Product, June 2013, Cat. no. 5206.0 | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | Data Collector: Insurance Council of Australia (ICA)  Collection authority: Data are derived from the submissions of ICA member general insurance companies following large events incurring cost to the community and insurers.  The Insurance Council of Australia is the representative body of the general insurance industry in Australia. Its members represent more than 90 per cent of total premium income written by private sector general insurers.  Data Compiler: The Australian Emergency Management Institute (AEMI)  The AEMI hosts the Australian Emergency Management Knowledge Hub. The Knowledge Hub provides research, resources and news relevant to emergency management and includes statistics and information, photos, video and media about past disaster events.  The AEMI is a centre of excellence for knowledge and skills development in the national emergency management sector. As a part of the Attorney‑General’s Department, AEMI provides a range of education, training, professional development, information, research and community awareness services to the nation and our region. | | | |
| Relevance | Data topic: Estimates of asset losses are derived from the submissions of general insurance companies following large events incurring cost to the community and insurers.  Level of geography: The incurred cost of claims is available for each declared emergency event can be coded to state/territory locations.  Key Data Items: The incurred cost of claims is available for each declared emergency event by disaster/event type, Catastrophe Number (if declared), date, location, state, original cost and normalised cost.  Additional information: Value of asset loss is a measure of the economic cost of emergency events. The prevention/mitigation, preparedness, and response activities of government contribute to reduce the value of total asset loss from emergency events. A low or decreasing value of total asset loss from emergency events is desirable. | | | |
| Timeliness | Data collected: Data are available for individual emergency events, allowing for the creation of financial year and/or calendar year data.  Data available: Reports are available approximately four months after the reference period.  Additional information: The final loss figure for an event can take many years to resolve. | | | |
| Accuracy | The asset loss data do not represent the entire cost of the event, it is only an approximation of the insured loss based upon reported data.  The final loss figure for an event can take many years to resolve.  Events are only recorded where there is a potential for the insured loss to exceed $10 million. Many large single losses occur on a day to day basis in Australia that are not part of a larger catastrophe event.  Other costs not taken into account include:   * the losses of insurance companies that are not a member of the Insurance Council. * costs incurred by emergency services; local, State, Territory and Commonwealth governments; non‑government organisations; and by local governments during clean‑up * remedial and environmental damage costs (including pollution of foreshores and riverbanks and beach erosion) * costs associated with community dislocation * costs associated with job losses * costs associated with rehabilitation/recovery * medical and funeral costs associated with injuries and deaths. | | | |
| Coherence | Insurance companies must adhere to common accounting practices for insurance companies, and provide data according to an agreed classification system. | | | |
| Accessibility | The Attorney‑General’s Department aims to make information on the Knowledge Hub website accessible to all users. Data are available in a variety of formats on the website, www.emknowledge.gov.au. | | | |
| Interpretability | Insurance Statistics Australia publishes an Operations Guidebook, which documents the key collection processes, standards and classifications. The guidebook is available at:  http://www.insurancestats.com.au/objectives.html | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following key data gaps/issues:  Volatility — due to the sporadic nature of emergency events, there is a high level of volatility in reported asset loss data. It is important therefore to assess longer term trends where data are available. | | | |