
COAG REVIEW OF NATURAL DISASTER RELIEF AND MITIGATION ARRANGEMENTS

GOVERNMENT EXPENDITURE ANALYSIS

This paper is split into 4 sections:

1. Key findings for 1999/00 and 2000/01
2. Background information
3. Historical expenditure 1990/91 to 2001/02
4. Attachments

1. KEY FINDINGS—1999/00 AND 2000/01

Natural disaster related expenditure for the last two financial years (1999/00 and 2000/01) are the focus of this report. It is for these most recent years that data are most reliable. Historical expenditure since 1990/91 is provided in a later section. Though useful, these data are somewhat less reliable.

The estimates presented in this report are based on the best currently available information. Data gaps and other limitations of the analysis are discussed in section 2. Given the limitations of existing records, it is reasonable to view the estimates provided in this report as significant underestimates of actual government expenditure on natural disasters. Most agencies believe this to be the case.

Combined government expenditure

Table 1 provides a breakdown of Commonwealth and State/Territory natural disaster expenditure for 1999/00 and 2000/01.

In 2000/01 combined Commonwealth and State/Territory Government expenditure on natural disasters was approximately \$1 billion or \$52 per person. In 1999/00 the figure was around \$814 million or \$42 per person. Over the period 1967 to 1999 natural disasters (with a total cost per event over \$10 million) cost the Australian community an average of \$1.14 billion each year in 1999 prices.¹

¹ BTE 2001, *Economic costs of natural disasters in Australia*, Report 103, Canberra, p. xvi.

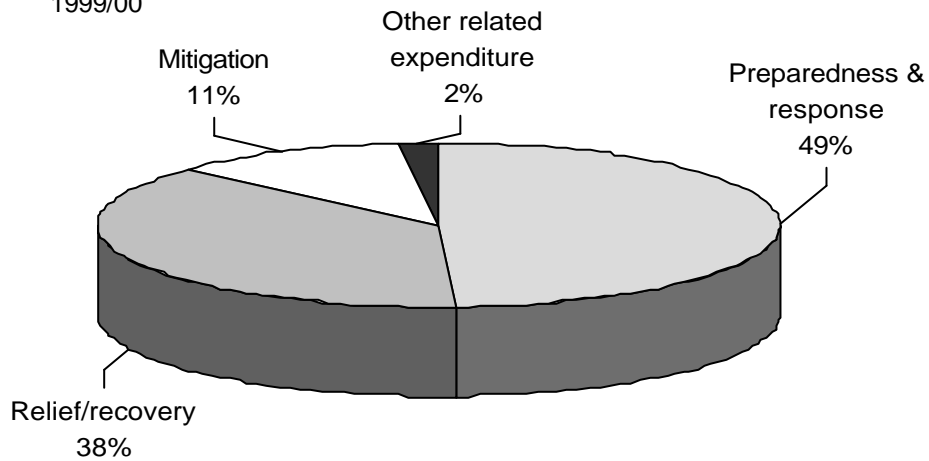
TABLE 1 COMMONWEALTH AND STATE/TERRITORY NATURAL DISASTER EXPENDITURE FOR 1999/00 AND 2000/01 (\$MILLION)

Expenditure Category	1999/00			2000/01		
	State & Territory	Cmwlth	Total Govt Expenditure	State & Territory	Cmwlth	Total Govt Expenditure
Preparedness & response	383	13	397	441	13	454
Relief/recovery	183	123	306	167	263	430
Mitigation	51	41	92	60	47	106
Other related expenditure	8	12	20	10	14	23
Total expenditure	625	189	814	677	337	1 014

Important Figures may not add to totals due to rounding. See notes (a) to (j) in attachment 1 and notes on individual State/Territory tables in attachment 2.

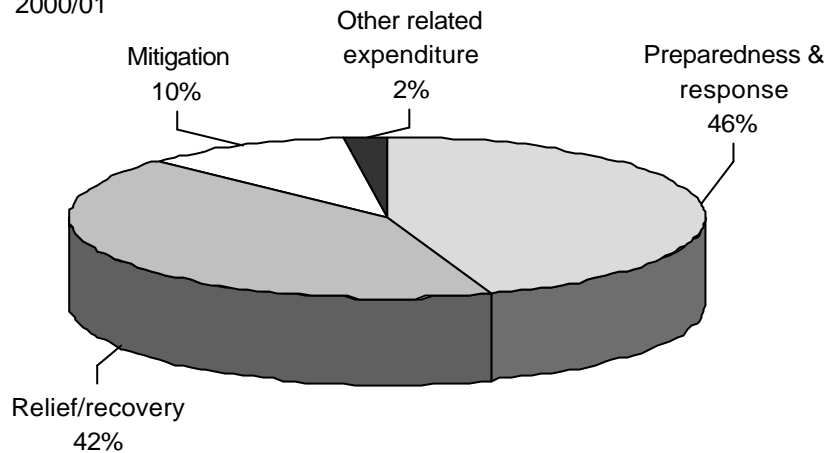
Figures 1 and 2 show the split between the four expenditure categories identified—preparedness and response, relief and recovery, mitigation and other related expenditure. Almost half of total government expenditure for the last two years has been on preparedness and response. Relief and recovery expenditure has been the next largest category with 38 per cent in 1999/00 and 42 per cent in 2000/01. Mitigation and other related expenditure were relatively smaller contributors.

FIGURE 1 TOTAL GOVERNMENT NATURAL DISASTER EXPENDITURE BY CATEGORY 1999/00



Important See notes (a) to (j) in attachment 1 and notes on individual State/Territory tables in attachment 2.

FIGURE 2 TOTAL GOVERNMENT NATURAL DISASTER EXPENDITURE BY CATEGORY 2000/01



Important See notes (a) to (j) in attachment 1 and notes on individual State/Territory tables in attachment 2.

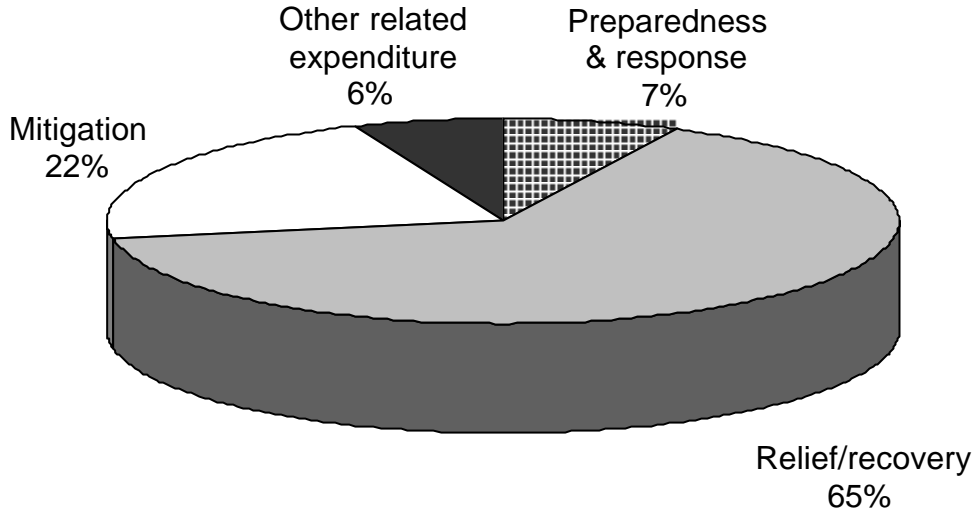
Commonwealth government expenditure

The detailed Commonwealth expenditure data, consolidated to include all agencies, are in attachment 1. Summary tables and charts are set out below.

Total Commonwealth natural disaster related expenditure in 1999/00 was approximately \$189 million or \$10 per person, which increased, to \$337 million or \$17 per person in 2000/01 with the introduction of a range of relief and recovery assistance packages (table 1).

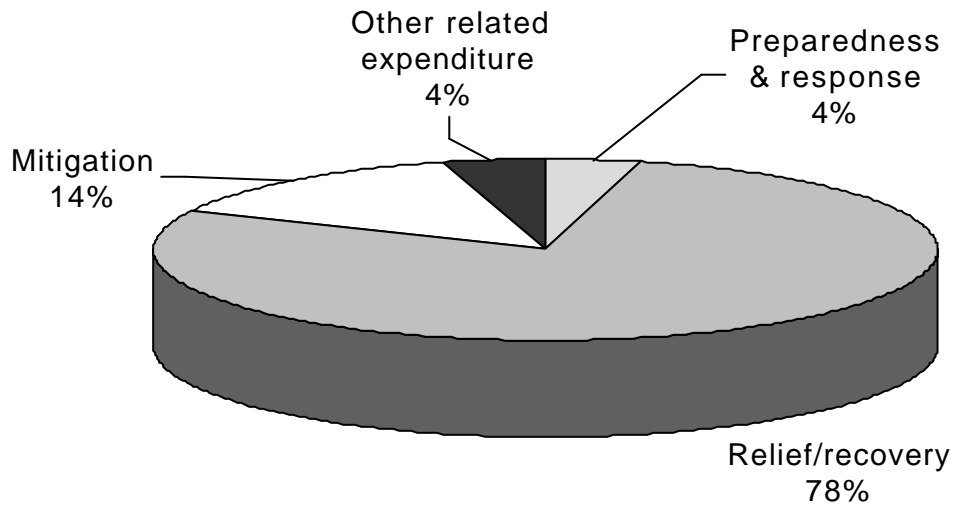
The relief and recovery category dominates Commonwealth expenditure in both years (65 per cent in 1999/00 and 78 per cent in 2000/01), reflecting the size of NDRA payments (see figures 3 and 4). Mitigation is the next largest category (22 per cent in 1999/00 and 14 per cent in 2000/01), followed by preparedness and response (7 per cent in 1999/00 and 4 per cent in 2000/01). A number of substantial relief and recovery programs (such as the *Flood Assistance Package*) were not in operation until the 2000/01 financial year.

FIGURE 3 TOTAL COMMONWEALTH EXPENDITURE BY CATEGORY 1999/00



Important See notes (a) to (j) in attachment 1.

FIGURE 4 TOTAL COMMONWEALTH EXPENDITURE BY CATEGORY 2000/01



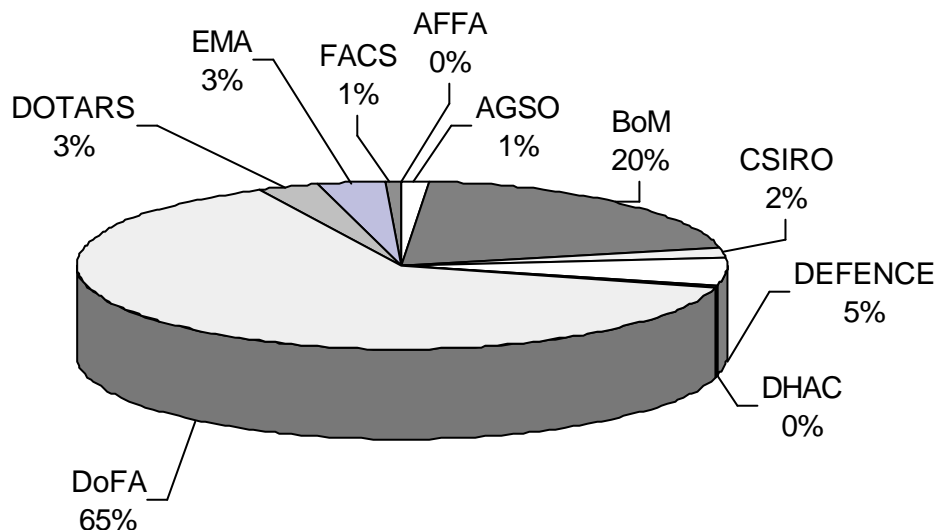
Important See notes (a) to (j) in attachment 1.

Figure 5 shows that the Department of Finance and Administration (DoFA), which administers the NDRA, dominated expenditure compared to other Commonwealth agencies in 1999/00 (with approximately 65 per cent of the total). However, in 2000/01 the introduction of the *Flood Assistance Package* meant that AFFA accounted for approximately 46 per cent of total Commonwealth expenditure, followed by DoFA with 32 per cent (figure 6).

Recent machinery of government changes mean that from 2001/02, the DoFA expenditure (NDRA and NDRMSP²) has been moved to the Department of Transport and Regional Services (DoTaRS).

The Bureau of Meteorology is the other major agency for natural disaster expenditure with around 20 per cent of the total in 1999/00 and 11 per cent in 2000/01.

FIGURE 5 COMMONWEALTH EXPENDITURE BY AGENCY 1999/2000

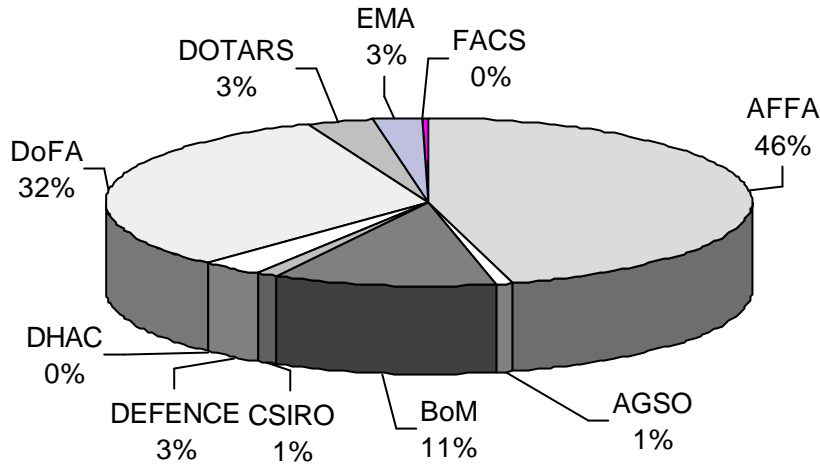


Note From 2002 the AGSO is known as Geoscience Australia.

Important See notes (a) to (j) in attachment 1.

² Natural Disaster Risk Management Studies Program (NDRMSP)

FIGURE 6 COMMONWEALTH EXPENDITURE BY AGENCY 2000/01



Note From 2002 the AGSO is known as Geoscience Australia.

Important See notes (a) to (j) in attachment 1.

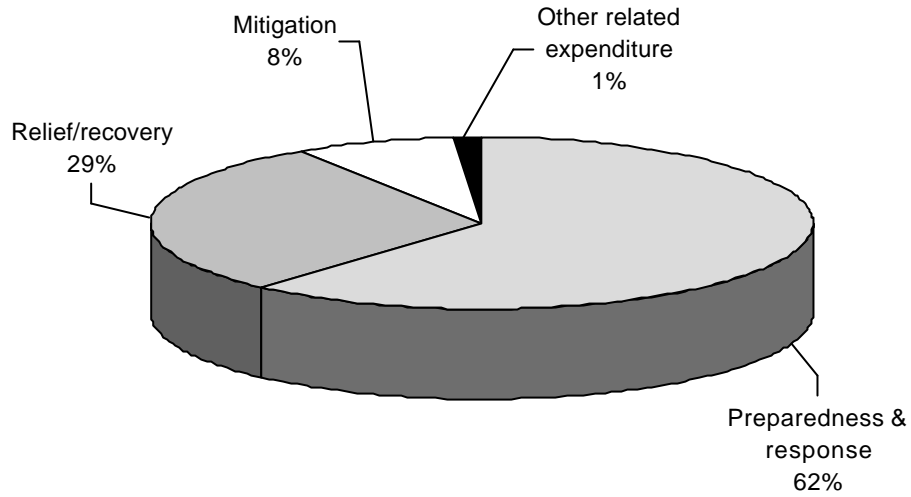
State and Territory government expenditure

The detailed data for total State/Territory expenditure and each State and Territory are in attachment 2. Summary tables and charts for 1999/00 and 2000/01 are set out below.

Total State and Territory natural disaster related expenditure in 1999/00 was approximately \$625 million or \$33 per person, which increased to \$677 million or \$35 per person in 2000/01 (see tables 1 and 3).

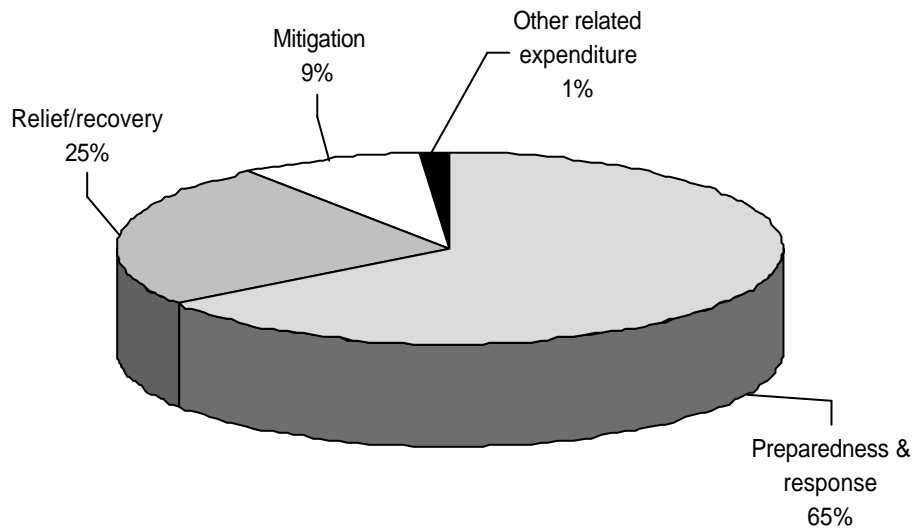
Figures 7 and 8 give total State and Territory expenditure by category for 1999/00 and 2000/01. The preparedness and response category dominates total State and Territory expenditure with more than 60 per cent of the total in both years. Relief and recovery was the next largest expenditure category with more than one-quarter of the total, followed by mitigation and other related expenditure.

FIGURE 7 TOTAL STATE AND TERRITORY EXPENDITURE BY CATEGORY 1999/00



Important: See notes on individual State/Territory tables in attachment 2.

FIGURE 8 TOTAL STATE AND TERRITORY EXPENDITURE BY CATEGORY 2000/01



Important: See notes on individual State/Territory tables in attachment 2.

Table 2 provides expenditure data by State and Territory by category in 2000/01. Figure 9 presents the same information graphically. Comparisons between jurisdictions are difficult for reasons discussed in section 2. However, there are some points of interest.

- The estimates are intuitively sensible in that New South Wales, Queensland and Victoria had the largest expenditures on natural disasters in 2000/01.
- The largest component of all jurisdictions' expenditure (with the exception of the Northern Territory) in 2000/01 was preparedness and response. The largest component of Northern Territory expenditure was relief and recovery. Relief and recovery expenditure was also substantial for New South Wales and Queensland.

The estimates for 1999/00 show a similar pattern.

Table 3 shows per capita expenditure by State and Territory for the last two years.

TABLE 2 NATURAL DISASTER EXPENDITURE BY STATE & TERRITORY 2000/01

State/ Territory	Preparedness & response	Relief/recovery	Mitigation	Other related expenditure	Total
(\$million)					
NSW	133	66	14	2	215
QLD	81	69	10	na	160
VIC	99	4	6	2	112
SA	37	2	9	3	51
TAS	45	0	2	na	47
NT	14	20	3	3	39
WA	17	6	4	0	27
ACT	14	0	11	na	25
Total	441	167	60	10	677

Note na = not available. Figures may not add to totals due to rounding.

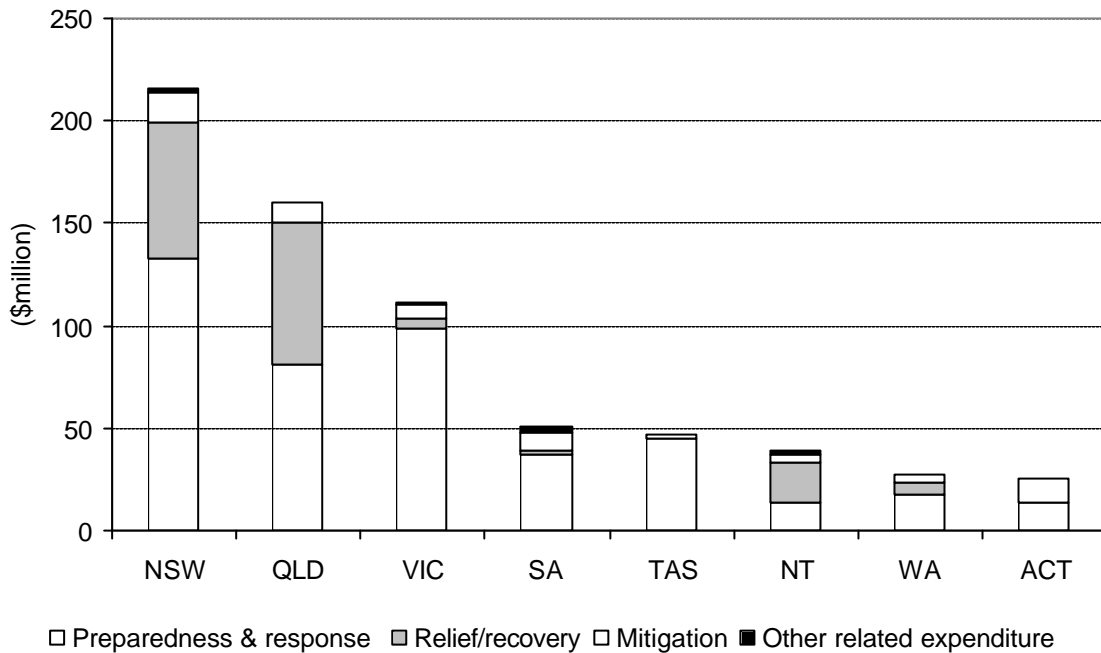
Important: See notes on individual State/Territory tables in attachment 2.

TABLE 3 PER CAPITA EXPENDITURE BY STATE AND TERRITORY 1999/00 AND 2000/01

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	Australia
(\$)									
1999/00	71	30	120	40	30	91	22	25	33
2000/01	80	33	199	44	34	100	23	14	35

Source BTRE analysis of Australian Bureau of Statistics 2001, Australian Demographic Statistics (3101.0), March Quarter 2001, Table 4 Estimated Resident Population, States and Territories, p. 15.

FIGURE 9 EXPENDITURE BY STATE AND TERRITORY BY CATEGORY 2000/01



Important: See notes on individual State/Territory tables in attachment 2.

Local government expenditure

Local government expenditure on natural disasters has not been captured in the BTRE analysis contained in this paper. Natural disaster-related expenditure by local government is likely to be significant for many jurisdictions. The Australian Local Government Association (ALGA) recently conducted a survey of local government expenditure on natural disasters (attachment 3). Using these survey results, ALGA provides estimates of total local government natural disaster-related expenditure by state/territory for the last 3 years. ALGA estimates that in 2000/01 local governments across Australia spent approximately \$222 million on natural disasters. On average over the last three years, ALGA found that mitigation (43%) was the largest component of local government expenditure followed by preparedness and response (34%) and relief and recovery (20%).

2. BACKGROUND INFORMATION

The Council of Australian Governments (COAG) agreed in June 2001 to undertake a review of Australia's approach to natural disaster relief, recovery and mitigation.

The Terms of Reference for the review included:

- Reviewing current disaster mitigation programmes and arrangements, with a view to assessing their appropriateness, effectiveness and scope.
- Reviewing current arrangements for providing disaster relief, with a view to assessing their appropriateness and effectiveness in meeting national objectives (and include identifying any gaps in disaster relief arrangements).

In order to assist with these objectives, the Bureau of Transport and Regional Economics (BTRE) was asked to assist in the collection and analysis of government expenditure data at the Commonwealth and State/Territory levels. There is currently no national picture of how much has been, and is currently being, spent on natural disasters by Commonwealth and State/Territory governments in terms of 'preparedness and response', 'relief and recovery', 'mitigation' and 'other' natural disaster related expenditure.

Purpose

The aim is to attempt to capture the best and most comprehensive expenditure information available at this time (Dec 2001-Jan 2002), accepting the limitations and difficulties inherent in such an undertaking.

The purpose of this paper is to provide a starting point for examining historical and current government expenditure on natural disasters. Given that this has not been attempted on a national scale before, it is an extensive task. As a result, some of the data presented in this report are approximate.

The types of policy questions COAG were seeking information on include:

- How much do Australian governments spend on natural disasters? What have been the trends in expenditure over time?
- What is the balance between expenditure on preparedness and response, relief/recovery and mitigation? Has this changed over time?
- What differences exist among States and Territories with respect to natural disaster expenditure?
- How does Commonwealth and State/Territory expenditure compare?

The analysis is potentially useful in identifying the gaps in, and limitations of, currently available information. These gaps and limitations can then be

investigated to improve the information base available when the same policy questions are asked in the future.

Method

The BTRE, in consultation with other Commonwealth and State/Territory agencies, developed spreadsheet questionnaires, which were forwarded to relevant agencies through the COAG High Level Group (HLG). Responses to the questionnaires were then collated and analysed. Most responses required some follow-up discussion with organisations to clarify a range of data issues.

Expenditure information from 1990/91 to 2001/02 was sought. After examining the information collected in a draft report, the COAG HLG agreed to focus on ensuring the last two financial years (1999/00 and 2000/01) were as accurate as possible. This more reliable information has been presented up front as the key findings. The less reliable historical expenditure information is also presented in the next section as it provides a useful picture of natural disaster expenditure over time.

Attachment 4 contains the blank questionnaires and explanatory notes that were sent to agencies. Attachment 5 contains a list of the agencies from which responses were received.

Natural disaster expenditure was broadly defined to include expenditure related to naturally occurring hazards. Naturally occurring hazards are any one, or a combination, of the following: bushfire; earthquake; flood; storm including hailstorm; cyclone; storm surge; landslide, tsunami; meteorite and tornado.

Information on expenditure on natural disasters was divided into four categories—(1) preparedness and response (2) relief and recovery (3) mitigation and (4) other disaster-related expenditure.

Care was taken to avoid double counting, by for example, asking for information on any NDRA reimbursements received. The extent of any double-counting remaining is not clear.

Limitations

The accuracy of the information is variable, with some organisations being reasonably confident that the estimates are within plus or minus 10 per cent, and others only able to provide 'guesstimates' of their expenditure.

Gaps:

The major gaps in the Commonwealth expenditure information are:

- Some expenditure was only available for 1999/2000 and 2000/01 (eg. DACC).
- Ex-gratia payment information is unavailable before 1996/97.
- The estimates of Bureau of Meteorology expenditure for 2000/01 are based roughly on previous years' data.

A detailed analysis of the gaps for State and Territory information is contained in attachment 6.

- Data for earlier years was not available from many agencies. For example, it was not possible to obtain Northern Territory data before 1996–97. The further back in time data were sought, the poorer was the quality.
- NT and WA were unable to supply an expenditure estimate for that proportion of their metropolitan fire services that responds to natural disaster related events.
- Queensland Rural Fire Service expenditure on bushfire mitigation was unable to be estimated and the National Parks and Wildlife Service and Forestry bushfire mitigation expenditure is still being compiled.
- Most agencies believe the expenditure data captured will significantly underestimate actual expenditure on natural disasters because existing records are limited.

Interpretation issues:

- The longer the data time series the better. With the infrequent and unpredictable nature of natural disasters, the timeframe (a maximum of 12 years) is too short to enable meaningful comment on trends. Data for the early 1990s are typically less reliable and many agencies were unable to provide such data, making trend analysis impossible.
- Comparisons across States and Territories are difficult because:
 - there are different emergency management arrangements in each jurisdiction;
 - some elements of expenditure have not been captured for some jurisdictions;
 - of the different way jurisdictions measure expenditure (for example, cash or accrual).

As far as practically possible the information has been collected to provide a consistent basis for comparison. For most of the major expenditure categories there are no large gaps (that is, for all jurisdictions, major fire and SES, NDRA, flood and bushfire mitigation are captured).

All of the expenditure for the last two years should include employee expenses, administration costs, depreciation and amortisation, interest expenses and other overheads. Despite the efforts to achieve consistency, comparisons should still only be made when the notes attached to the State and Territory spreadsheets have been carefully considered.

Given the approximate nature of some of the data, it should be used and interpreted with caution. Some of the figures provided by agencies are best guesstimates only. The notes at the base of each table or chart should be carefully considered.

3. HISTORICAL EXPENDITURE—1990/91 TO 2001/02

Combined government expenditure

Table 4 shows total combined government expenditure by category for 1990/91 to 2001/02. It also includes the percentage of total expenditure associated with each category in each year. Figure 10 shows the same information graphically. Over the last 12 years, combined government expenditure on natural disasters has been consumed by two categories—preparedness and response and relief/recovery.

TABLE 4 TOTAL GOVERNMENT EXPENDITURE BY CATEGORY 1990/91–2001/02

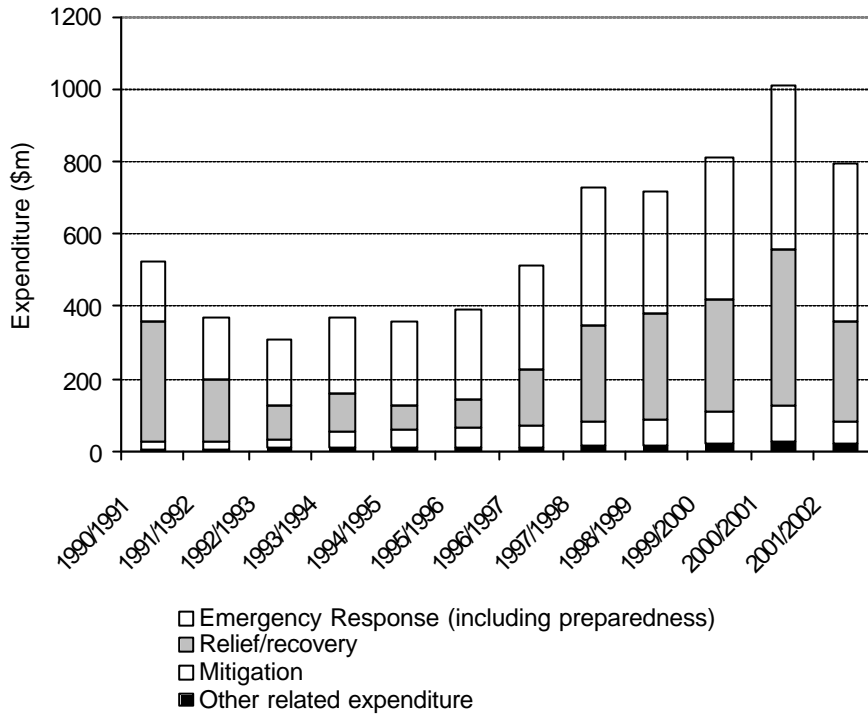
	<i>Preparedness & response</i>		<i>Relief/recovery</i>		<i>Mitigation</i>		<i>Other related expenditure</i>		<i>Aggregate expenditure</i>
	(\$m)	%	(\$m)	%	(\$m)	%	(\$m)	%	
2001/02	433	55	274	35	63	8	21	3	791
2000/01	454	46	430	42	106	10	23	2	1 014
1999/00	397	49	306	38	92	11	20	2	814
1998/99	340	47	294	41	73	10	13	2	720
1997/98	379	52	268	37	68	9	14	2	730
1996/97	296	57	152	29	61	12	10	2	519
1995/96	246	63	80	20	57	15	9	2	392
1994/95	230	64	68	19	55	15	9	2	362
1993/94	207	56	107	29	47	13	9	2	369
1992/93	182	59	88	29	29	9	8	3	306
1991/92	172	46	172	47	20	5	6	2	371
1990/91	167	32	334	63	20	4	6	1	527

Note 2001/02 is a forward estimate. na = not available. Figures may not add to totals due to rounding.

Important See notes (a) to (j) in attachment 1 and notes on individual State and Territory tables in Attachment 2.

Figure 11 shows the relative proportions of Commonwealth and State/Territory expenditure over the last 12 years. State and Territory governments have been the major source of natural disaster expenditure over that period.

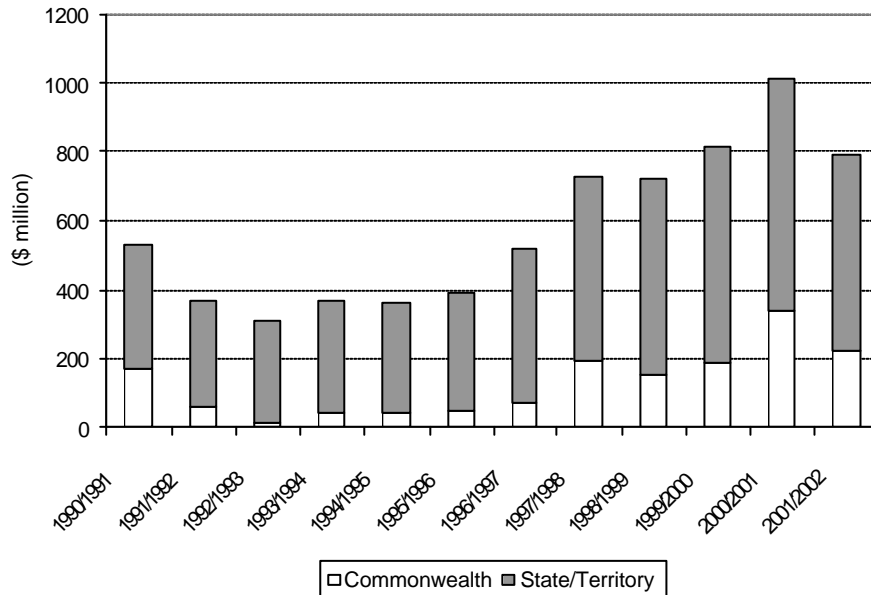
FIGURE 10 TOTAL GOVERNMENT EXPENDITURE BY CATEGORY 1990/91–2001/02



Note 2001/02 is a forward estimate.

Important See notes (a) to (j) in attachment 1 and notes on individual State and Territory tables in Attachment 2.

FIGURE 11 TOTAL GOVERNMENT EXPENDITURE BY GOVERNMENT 1990/91–2001/02



Note 2001/02 is a forward estimate.

Important See notes (a) to (j) in attachment 1 and notes on individual State and Territory tables in Attachment 2.

Commonwealth Expenditure

The detailed Commonwealth expenditure data for the whole 1990/91 to 2001/02 period, consolidated to include all agencies, are in attachment 1. Summary tables and charts are set out below.

TABLE 5 TOTAL COMMONWEALTH EXPENDITURE BY CATEGORY 1990/91–2001/02

	<i>Preparedness & response</i>		<i>Relief/recovery</i>		<i>Mitigation</i>		<i>Other related expenditure</i>		<i>Aggregate expenditure</i>
	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	
2001/02	0.1	0	194.0	89	15.2	7	13.8	6	223
2000/01	12.9	4	263.3	78	46.6	14	13.9	4	337
1999/00	13.4	7	122.8	67	40.9	22	11.7	6	189
1998/99	9.8	6	108.4	70	29.4	19	7.0	5	155
1997/98	8.5	4	146.9	77	28.9	15	6.9	4	191
1996/97	8.2	11	30.2	41	28.6	39	7.3	10	74
1995/96	8.4	17	4.6	9	29.1	59	7.1	14	49
1994/95	7.7	18	2.2	5	25.5	61	6.6	16	42
1993/94	7.9	18	5.2	12	24.1	55	6.4	15	44
1992/93	0.1	0	10.3	64	na		5.8	36	16
1991/92	0.1	0	59.0	91	na		5.7	9	65
1990/91	0.1	0	163.5	97	na		5.7	3	169

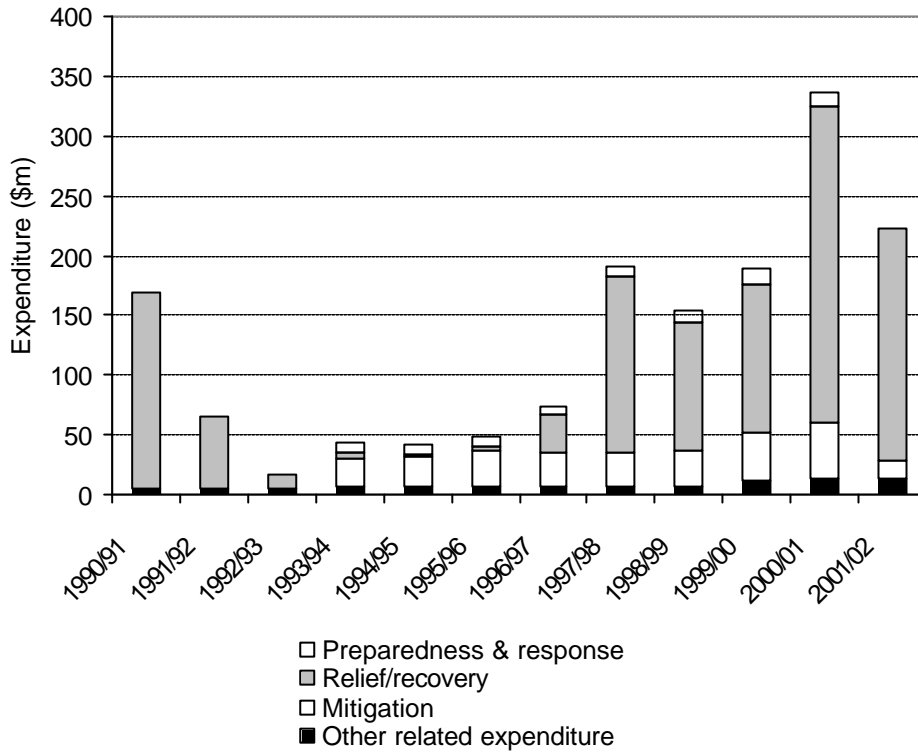
Note 2001/02 is a forward estimate. na = not available. Figures may not add to totals due to rounding.

Important See notes (a) to (j) in attachment 1.

Table 5 shows total Commonwealth expenditure by category for 1990/91 to 2001/02. It also includes the percentage of total expenditure associated with each category in each year. Figure 12 shows the same information graphically. Figure 13 illustrates the average proportion for each expenditure category for the whole period 1990/91 to 2001/02.

For the last 5 years the vast majority of Commonwealth expenditure on natural disasters has been in the relief/recovery category (reflecting the size of NDRA assistance). Next in size has typically been mitigation, followed by preparedness and response and then other expenditure. The proportion of relief/recovery expenditure is considerably lower in the mid-1990s, probably due to the smaller number of natural disasters occurring in those years.

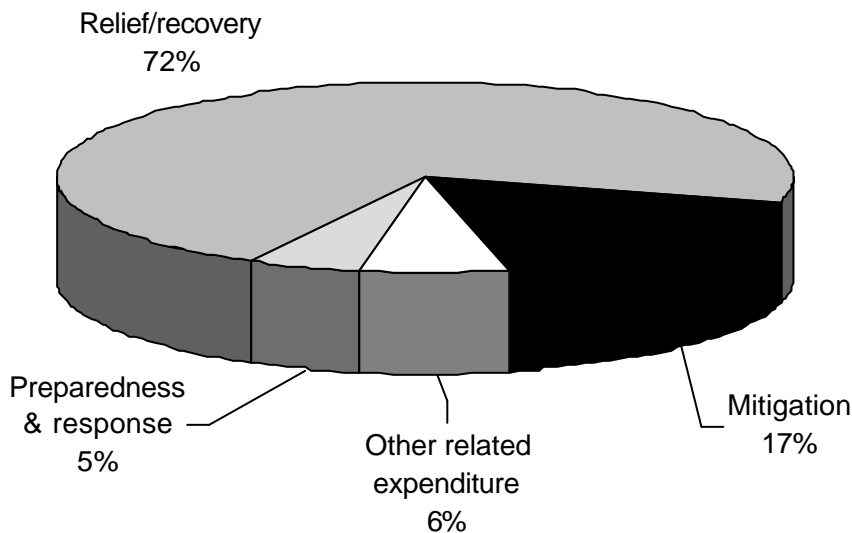
FIGURE 12 TOTAL COMMONWEALTH EXPENDITURE BY CATEGORY 1990/91–2001/02



Note 2001/02 is a forward estimate.

Important See notes (a) to (j) in attachment 1.

FIGURE 13 TOTAL COMMONWEALTH EXPENDITURE BY CATEGORY 1990/91–2001/02



Note 2001/02 is a forward estimate.

Important See notes (a) to (j) in attachment 1.

Table 6 provides Commonwealth expenditure broken down by agency for 1990/91–2001/02.

TABLE 6 COMMONWEALTH EXPENDITURE BY AGENCY 1990/91–2001/02

	AFFA	AGSO	BoM	CSIRO	DEFENCE	DHAC	DoFA	DOTARS	EMA	FACS	TOTAL
	(\$million)										
01/02	76.94	3.79	na	5.02		0.20	115.00	13.06	8.65	0.52	223
00/01	154.06	3.52	37.00	4.09	9.77	0.20	107.19	11.53	8.60	0.79	337
99/00	0	2.65	38.01	4.12	9.99	0.18	120.23	5.76	6.33	1.47	189
98/99	0	2.45	37.57	na		0.18	101.34	5.00	7.78	0.17	154
97/98	0	2.93	36.00	na		0.18	141.75	3.34	6.94	0.03	191
96/97	0	3.21	35.14	na		0.18	28.55	na	7.22	0.01	74
95/96	0	1.91	37.15	na		na	2.79	na	7.28	0.00	49
94/95	0	2.06	32.39	na		na	0.59	na	6.87	na	42
93/94	0	na	33.26	na		na	3.68	na	6.65	na	44
92/93	0	na	na	na		na	9.75	na	6.43	na	16
91/92	na	na	na	na		na	58.41	na	6.38	na	65
90/91	na	na	na	na		na	162.89	na	6.36	na	169

Notes na = not available. From 2002, the AGSO is known as Geoscience Australia and the DoFA expenditure (NDRA and NDRMSP) will be moved to DoTaRS. Figures may not add to totals due to rounding. 2001/2002 is a forward estimate.

Important See notes (a) to (j) in attachment 1.

State/Territory Expenditure

The detailed data for total State/Territory expenditure and each State and Territory for the whole 1990/91 to 2001/02 period are in attachment 2. Summary tables and charts are set out below.

Table 7 shows total State and Territory expenditure by category for 1990/91 to 2001/02. It also includes the percentage of total expenditure associated with each category in each year. Figure 14 shows the same information graphically. The preparedness and response category has consistently been the largest area of expenditure over the period and there is some evidence of this expenditure increasing over time. However, this could be the result of gaps in earlier data showing a false trend. Relief and recovery has typically been the next most significant category of expenditure followed by mitigation and other related expenditure.

Given the gaps in the data (especially for earlier years) it is not possible to comment on trends in total expenditure over time. The large proportions spent on response and relief/recovery also means that the infrequent nature of disasters makes trend analysis meaningless.

TABLE 7 TOTAL STATE AND TERRITORY GOVERNMENT EXPENDITURE BY CATEGORY 1990/91–2001/02

	<i>Preparedness & Response</i>		<i>Relief/recovery</i>		<i>Mitigation</i>		<i>Other related expenditure</i>		<i>Aggregate expenditure</i>
	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	<i>(\$m)</i>	<i>%</i>	
2001/02	433	76	80	14	48	8	6.7	1.2	568
2000/01	441	65	167	25	60	9	9.5	1.4	677
1999/00	383	62	183	29	51	8	8.0	1.3	625
1998/99	331	58	185	33	43	8	6.5	1.1	566
1997/98	371	69	121	22	40	7	7.3	1.4	539
1996/97	288	65	122	27	33	7	2.7	0.6	444
1995/96	237	70	75	22	28	8	2.0	0.6	341
1994/95	223	70	66	21	29	9	2.0	0.6	318
1993/94	199	62	101	31	23	7	2.4	0.8	323
1992/93	182	63	77	27	29	10	2.5	0.9	288
1991/92	172	56	113	37	20	7	0.6	0.2	305
1990/91	167	47	170	48	20	6	0.6	0.2	357

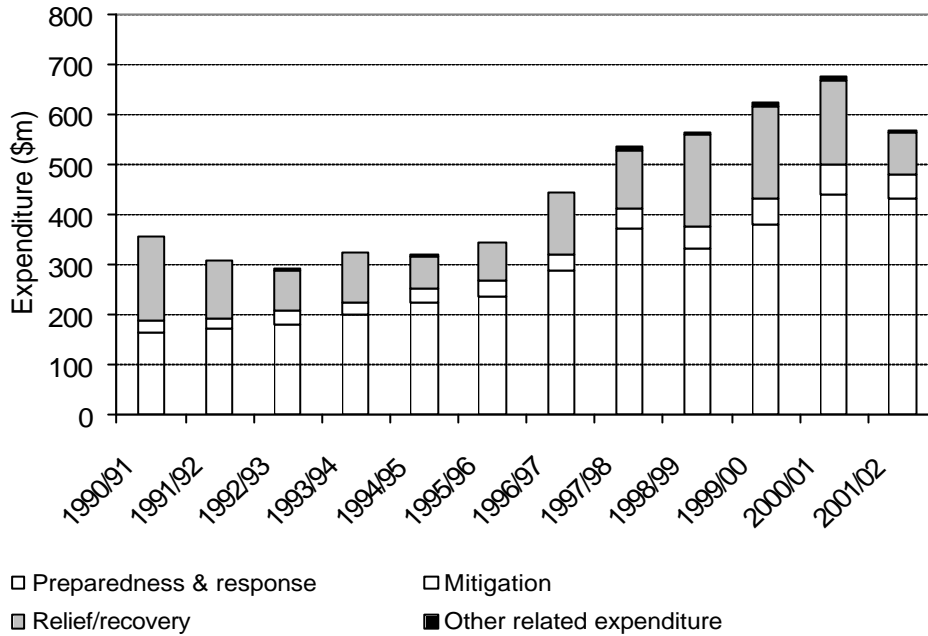
Note 2001/02 is a forward estimate. Figures may not add to totals due to rounding. na = not available.

Important: See notes on individual State/Territory tables in attachment 2.

Table 8 provides natural disaster expenditure by State and Territory for the period 1990/91–2001/02.

- As would be expected, Queensland, New South Wales and Victoria typically expend the largest amounts on natural disasters.
- However, specific comparisons between jurisdictions are made difficult by a number of factors. In particular, for some jurisdictions, elements of expenditure have not been captured. Also, despite efforts to improve consistency, the complex arrangements in each jurisdiction mean that there are some differences in the way expenditure is measured. Despite these difficulties the estimates provided are intuitively sensible. For example, the more populated and vulnerable East Coast jurisdictions spend more than less populated areas such as Western Australia.

FIGURE 14 TOTAL STATE AND TERRITORY EXPENDITURE BY CATEGORY 1990/91–2001/02



Note 2001/02 is a forward estimate.

Important: See notes on individual State/Territory tables in attachment 2.

TABLE 8 EXPENDITURE BY STATE AND TERRITORY 1990/91–2001/02

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	Total
	(\$million)								
2001/02	21	169	23	160	40	45	106	4	568
2000/01	25	215	39	160	51	47	112	27	677
1999/00	22	195	23	144	45	43	105	48	625
1998/99	20	198	23	126	31	40	111	17	566
1997/98	19	167	34	125	32	41	109	12	539
1996/97	16	145	12	108	27	42	82	14	444
1995/96	19	124	na	81	19	42	49	9	343
1994/95	20	121	na	75	23	40	35	6	320
1993/94	18	103	na	67	35	33	64	6	326
1992/93	23	95	na	73	29	35	32	4	290
1991/92	15	112	na	100	13	33	30	3	306
1990/91	14	139	na	115	11	36	35	7	357

Note 2001/02 is a forward estimate. na = not available. Figures may not add to totals due to rounding.

Important: See notes on individual State/Territory tables in attachment 2.

ATTACHMENT 3 ALGA LOCAL GOVERNMENT EXPENDITURE SURVEY

LOCAL GOVERNMENT EXPENDITURE ON NATURAL DISASTER RELIEF AND MITIGATION ARRANGEMENTS

Background

The survey resulted in some 108 Councils in New South Wales, Victoria, Queensland and Western Australia completing the questionnaire. In addition data for 78 councils in Victoria was collected by the Municipal Association of Victoria, and data for all South Australian Councils was provided by the South Australian Local Government Association. The tables below also shows estimates for the whole State, using a weighting of the responses, based on population and area of the sample councils relative to the State as a whole (equal weight to each of population and area).

The sample in Western Australia was the most complete with 43 councils responding representing 24% of the population and 27% of the area of the state. The Western Australian sample covered a sound cross section of the State. While the Queensland (29% population and 15% area) and New South Wales (19% population and 9% area) were not as comprehensive as in Western Australia, the cross section of each State is regarded as representative. The Northern Territory sample was small and would not be a good representation of NT local government outlays. No information was obtained for Tasmania.

Overall Outlays

Table 1 provides a summary of the overall results of the survey of councils across Australia, along with estimates of the total outlays by local government on all aspects of natural disaster relief and mitigation arrangements.

Based on the data for the five States/Territory responding, **Local Government in Australia is estimated to have a net outlay on natural disaster relief and mitigation around \$230 million per annum**, using an average for the three years shown.

TABLE 1: TOTAL NATURAL DISASTER RELIEF/MITIGATION EXPENDITURE, \$'000s

<i>State</i>	<i>Total exp 00/01</i>	<i>Total reimb 00/01</i>	<i>Net 00/01</i>	<i>Total exp 99/00</i>	<i>Total reimb 99/00</i>	<i>Net 99/00</i>	<i>Total exp 98/99</i>	<i>Total reimb 98/99</i>	<i>Net 98/99</i>
New South Wales (24)	\$27,312	\$13,363	\$13,950	\$20,604	\$10,801	\$9,802	\$26,419	\$12,713	\$13,706
Northern Territory (6)	\$152	\$156	-\$4	\$429	\$115	\$314	\$256	\$20	\$236
Queensland (34)	\$26,342	\$21,664	\$4,678	\$40,530	\$32,667	\$7,862	\$33,429	\$13,509	\$19,920
South Australia (70)	\$35,400	\$2,674	\$32,726	\$32,861	\$5,288	\$27,573	\$34,495	\$2,252	\$32,243
Victoria (78)	\$52,097	\$18,062	\$34,035	\$35,924	\$10,703	\$25,221	\$65,123	\$37,197	\$27,926
Western Australia (43)	\$17,145	\$8,867	\$8,278	\$12,693	\$5,457	\$7,236	\$7,322	\$2,920	\$4,402
TOTAL SURVEY (255)	\$158,448	\$64,786	\$93,663	\$143,040	\$65,031	\$78,009	\$167,043	\$68,611	\$98,432
Estimates									
New South Wales	\$197,720	\$96,735	\$100,986	\$149,155	\$78,194	\$70,962	\$191,255	\$92,035	\$99,220
Northern Territory	\$3,325	\$3,406	-\$81	\$9,371	\$2,513	\$6,858	\$5,581	\$437	\$5,144
Queensland	\$122,216	\$100,513	\$21,703	\$188,044	\$151,565	\$36,479	\$155,098	\$62,677	\$92,420
South Australia	\$35,400	\$2,674	\$32,726	\$32,861	\$5,288	\$27,573	\$34,495	\$2,252	\$32,243
Victoria	\$52,097	\$18,062	\$34,035	\$35,924	\$10,703	\$25,221	\$65,123	\$37,197	\$27,926
Western Australia	\$66,869	\$34,584	\$32,285	\$49,504	\$21,282	\$28,222	\$28,557	\$11,388	\$17,169
TOTAL ESTIMATE	\$477,628	\$255,973	\$221,654	\$464,859	\$269,544	\$195,315	\$480,109	\$205,986	\$274,122

Preparedness and Response

Table 2 provides details of expenditure on preparedness and response arrangements.

The average net annual expenditure for the States shown is estimated at some **\$80 million for preparedness and response**, and represents around 34% of relevant local government outlays on natural disaster relief and mitigation.

TABLE 2: PREPAREDNESS AND RESPONSE EXPENDITURE, \$'000s

<i>State</i>	<i>Prep. exp 00/01</i>	<i>Prep. reimb 00/01</i>	<i>Net. 00/01</i>	<i>Prep Exp 99/00</i>	<i>Prep reimb 99/00</i>	<i>Net 99/00</i>	<i>Prep exp 98/99</i>	<i>Prep. reimb 98/99</i>	<i>Net 98/99</i>
New South Wales	\$13,156	\$5,898	\$7,258	\$12,071	\$6,329	\$5,742	\$11,886	\$6,081	\$5,805
Northern Territory	\$14	\$0	\$14	\$30	\$0	\$30	\$6	\$0	\$6
Queensland South Australia	\$1,911	\$259	\$1,653	\$1,482	\$323	\$1,159	\$1,213	\$151	\$1,062
Victoria	\$8,217	\$574	\$7,643	\$8,982	\$886	\$8,096	\$10,028	\$934	\$9,094
Western Australia	\$11,099	\$1,193	\$9,906	\$9,363	\$906	\$8,457	\$9,027	\$1,731	\$7,296
TOTAL SURVEY	\$39,460	\$9,545	\$29,915	\$36,215	\$10,142	\$26,073	\$35,663	\$9,825	\$25,838
Estimates									
New South Wales	\$95,238	\$42,696	\$52,542	\$87,387	\$45,817	\$41,570	\$86,045	\$44,019	\$42,026
Northern Territory	\$306	\$0	\$306	\$644	\$0	\$644	\$120	\$0	\$120
Queensland South Australia	\$8,867	\$1,200	\$7,667	\$6,876	\$1,500	\$5,375	\$5,630	\$703	\$4,927
Victoria	\$8,217	\$574	\$7,643	\$8,982	\$886	\$8,096	\$10,028	\$934	\$9,094
Western Australia	\$11,099	\$1,193	\$9,906	\$9,363	\$906	\$8,457	\$9,027	\$1,731	\$7,296
TOTAL ESTIMATE	\$143,473	\$51,987	\$91,487	\$129,973	\$55,730	\$74,243	\$124,512	\$51,006	\$73,506

Relief and Recovery

Table 3 provides details of outlays by Local Government on relief and recovery. The table shows an average net expenditure for the States shown estimated at some **\$47 million for relief and recovery**. This represents around 20% of relevant local government outlays on natural disaster relief and mitigation.

TABLE 3: RELIEF/RECOVERY EXPENDITURE, \$'000s

State	Relief exp 00/01	Relief reimb 00/01	Net Relief 00/01	Relief exp 99/00	Relief reimb 99/00	Net Relief 99/00	Relief exp 98/99	Relief reimb 98/99	Net Relief 98/99
New South Wales	\$6,131	\$5,446	\$685	\$1,087	\$1,177	-\$90	\$4,759	\$4,186	\$573
Northern Territory	\$158	\$168	-\$10	\$400	\$115	\$285	\$250	\$20	\$230
Queensland	\$19,412	\$18,429	\$983	\$16,330	\$16,559	-\$229	\$20,710	\$12,714	\$7,996
South Australia	\$9,722	\$585	\$9,137	\$7,108	\$256	\$6,852	\$7,409	\$280	\$7,129
Victoria	\$27,429	\$11,493	\$15,936	\$13,867	\$9,140	\$4,727	\$48,691	\$34,866	\$13,825
Western Australia	\$9,129	\$6,368	\$2,761	\$6,677	\$3,871	\$2,807	\$2,807	\$1,940	\$867
TOTAL SURVEY	\$71,981	\$42,490	\$29,491	\$45,469	\$31,118	\$14,351	\$84,626	\$54,006	\$30,620
Estimates									
New South Wales	\$44,384	\$39,427	\$4,956	\$7,868	\$8,522	-\$654	\$34,454	\$30,303	\$4,151
Northern Territory	\$3,456	\$3,668	-\$212	\$8,727	\$2,513	\$6,214	\$5,461	\$437	\$5,024
Queensland	\$90,064	\$85,505	\$4,559	\$75,767	\$76,830	-\$1,064	\$96,087	\$58,990	\$37,097
South Australia	\$9,722	\$585	\$9,137	\$7,108	\$256	\$6,852	\$7,409	\$280	\$7,129
Victoria	\$27,429	\$11,493	\$15,936	\$13,867	\$9,140	\$4,727	\$48,691	\$34,866	\$13,825
Western Australia	\$35,604	\$24,837	\$10,767	\$26,044	\$15,097	\$10,947	\$10,947	\$7,566	\$3,381
TOTAL ESTIMATE	\$210,658	\$165,516	\$45,143	\$139,380	\$112,358	\$27,022	\$203,049	\$132,443	\$70,606

Mitigation

Table 4 provides details of outlays by Local Government on mitigation.

The table shows an average net expenditure for the States shown estimated at some **\$99 million for mitigation**. This represents around 43% of relevant local government outlays on natural disaster relief and mitigation.

Because the data for the NT councils showed nil expenditure on mitigation, estimates for NT Local Government outlays on mitigation have not been made. In the national context additional information for the NT would not dramatically change the overall estimates.

TABLE 4: MITIGATION EXPENDITURE, \$'000s

<i>State</i>	<i>Mitigate exp 00/01</i>	<i>Mitigate reimb 00/01</i>	<i>Net Mitigate 00/01</i>	<i>Mitigate exp 99/00</i>	<i>Mitigate reimb 99/00</i>	<i>Net Mitigate 99/00</i>	<i>Mitigate exp 98/99</i>	<i>Mitigate reimb 98/99</i>	<i>Net Mitigate 98/99</i>
New South Wales	\$8,184	\$2,690	\$5,494	\$6,878	\$2,856	\$4,021	\$9,855	\$2,689	\$7,166
Northern Territory	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Queensland	\$4,953	\$2,463	\$2,490	\$22,605	\$15,788	\$6,817	\$11,423	\$643	\$10,780
South Australia	\$15,993	\$1,515	\$14,478	\$15,134	\$4,089	\$11,045	\$15,375	\$934	\$14,441
Victoria	\$12,745	\$5,070	\$7,675	\$12,285	\$657	\$11,628	\$7,095	\$600	\$6,495
Western Australia	\$2,175	\$296	\$1,879	\$1,948	\$86	\$1,862	\$941	\$137	\$804
TOTAL SURVEY	\$44,050	\$12,034	\$32,016	\$58,850	\$23,476	\$35,374	\$44,689	\$5,003	\$39,686
Estimates									
New South Wales	\$59,249	\$19,476	\$39,773	\$49,789	\$20,677	\$29,112	\$71,342	\$19,464	\$51,878
Northern Territory	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Queensland	\$22,978	\$11,426	\$11,552	\$104,879	\$73,249	\$31,631	\$52,999	\$2,985	\$50,014
South Australia	\$15,993	\$1,515	\$14,478	\$15,134	\$4,089	\$11,045	\$15,375	\$934	\$14,441
Victoria	\$12,745	\$5,070	\$7,675	\$12,285	\$657	\$11,628	\$7,095	\$600	\$6,495
Western Australia	\$8,483	\$1,153	\$7,330	\$7,599	\$335	\$7,264	\$3,670	\$534	\$3,135
TOTAL ESTIMATE	\$119,448	\$38,640	\$80,808	\$189,686	\$99,008	\$90,679	\$150,481	\$24,517	\$125,964

Other Related Expenditure

Table 5 provides details of expenditure on other related items.

The average net annual expenditure for the States shown is estimated at some **\$6.5 million for other related expenditure**, and represents around 3% of relevant local government outlays on natural disaster relief and mitigation.

TABLE 5: OTHER RELATED EXPENDITURE, \$'000s

<i>State</i>	<i>Other exp 00/01</i>	<i>Other reimb 00/01</i>	<i>Net Other 00/01</i>	<i>Other exp 99/00</i>	<i>Other reimb 99/00</i>	<i>Net Other 99/00</i>	<i>Other exp 98/99</i>	<i>Other reimb 98/99</i>	<i>Net Other 98/99</i>
New South Wales	\$974	\$445	\$529	\$992	\$543	\$449	\$746	\$293	\$453
Northern Territory	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Queensland	\$76	\$13	\$63	\$33	\$0	\$33	\$29	\$0	\$29
South Australia	\$1,468	\$0	\$1,468	\$1,637	\$57	\$1,580	\$1,683	\$104	\$1,579
Victoria	\$824	\$306	\$518	\$409	\$0	\$409	\$310	\$0	\$310
Western Australia	\$227	\$0	\$227	\$280	\$0	\$280	\$182	\$0	\$182
TOTAL SURVEY	\$3,570	\$764	\$2,806	\$3,351	\$600	\$2,751	\$2,951	\$397	\$2,554
Estimates									
New South Wales	\$7,051	\$3,221	\$3,830	\$7,183	\$3,931	\$3,252	\$5,403	\$2,121	\$3,282
Northern Territory	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Queensland	\$355	\$62	\$293	\$152	\$0	\$152	\$136	\$0	\$136
South Australia	\$1,468	\$0	\$1,468	\$1,637	\$57	\$1,580	\$1,683	\$104	\$1,579
Victoria	\$824	\$306	\$518	\$409	\$0	\$409	\$310	\$0	\$310
Western Australia	\$887	\$0	\$887	\$1,094	\$0	\$1,094	\$712	\$0	\$712
TOTAL ESTIMATE	\$10,584	\$3,589	\$6,995	\$10,474	\$3,988	\$6,486	\$8,244	\$2,225	\$6,019

ATTACHMENT 4

GOVERNMENT EXPENDITURE SPREADSHEET EXPLANATORY NOTES

The attached *Excel* spreadsheet is divided into four categories of natural disaster expenditure—(1) preparedness & response, (2) relief and recovery, (3) mitigation and (4) other disaster-related expenditure. We are attempting to capture the best and most comprehensive expenditure information available at this time, but accept the limitations and difficulties inherent in such an undertaking. Therefore, if it is not possible to allocate expenditure within the four categories (eg. to bushfire, SES etc), a ‘sub-total’ for each category will suffice.

Natural disaster expenditure is defined broadly to include expenditure related to floods, storms (including hailstorms), cyclones, landslides, tsunamis, storm surges, bushfires, earthquakes and heatwaves. It does not include drought, plant/animal/pest diseases, technological disasters etc.

Preparedness and response

In terms of ‘preparedness and response’ expenditure, we are interested in a response agency’s total natural disaster commitment. This includes both direct response costs and those associated with preparedness (eg. training).

- For fire agencies please provide an estimate of that component of expenditure which is natural disaster (bushfires, floods etc) related for metropolitan, rural, forest and parks. Please put in the actual estimate and a note at the bottom of the spreadsheet as to how this was calculated (eg. 30% of total agency cost).
- For SES, please provide an estimate of that component of total expenditure that is natural disaster (bushfires, floods etc) related. Please put in the actual estimate and a note at the bottom of the spreadsheet as to how this was calculated (eg. 80% of total agency cost).
- If there is any response expenditure not otherwise captured please provide it in the ‘other’ category and specify its nature. For example the costs of response committees, communication, planning, training, costs incurred by other agencies such as Departments of Community Services, Health etc in counter disaster operations. Do not include the cost of assistance, which is covered in section 2.

- Please also include any reimbursements received through NDRA for counter-disaster operations.

Relief/Recovery

Please include all State/Territory relief and recovery expenditure associated with natural disasters. That is:

- NDRA—total State/Territory government NDRA expenditure.
- Other State/Territory funded assistance. Please specify. May include other State/Territory agency expenditures on non-NDRA relief and recovery, other loans/grants, interest subsidies, assistance packages, payments to NGOs, counselling, housing assistance etc.
- NDRA reimbursements. When entering expenditure in the worksheet it is important to remember to account for any reimbursements received through NDRA or other means.

Mitigation

Please include all mitigation expenditure by hazard type if applicable (eg. Regional Flood Mitigation Program).

Mitigation is defined as measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment. It includes both structural (levees, channel works etc) and non-structural measures (voluntary purchase, education/awareness campaigns etc).

Other expenditure not already specified might include costs associated with mitigation committees, flood mapping, risk analysis, catchment management plans, disaster plans, public education & training etc. Expenditure under the Natural Disaster Risk Management Studies Program should be included.

Other related expenditure

This category provides allowance for expenditure and costs not easily attributable to one of the above categories. It may include costs associated with policy and research functions, allowance for administration and other indirect costs.

For all categories

Where possible please include:

- Employee expenses (wages, salary, superannuation)

- Administration costs
- Depreciation & amortisation costs
- Interest expenses
- Other on-costs / overheads
- Whether expenditure is accrual or cash. (Please specify if this changed during the period)

Please ensure that what is and is not included in the categories and how they were calculated is clear by using notes at the bottom of the spreadsheet.

It is important to include only expenditure related to State/Territory governments. For example, if you are a State agency do not include Commonwealth or local government NDRA or RFMP contributions.

If there is not enough room to enter expenditure items please insert extra rows in the spreadsheet. Please attach any additional explanatory notes that may be necessary or insert 'comments' in the actual spreadsheet.

ATTACHMENT 5

ORGANISATIONS—RESPONSES RECEIVED

Commonwealth	<p>Agriculture, Forests & Fisheries Australia (AFFA)</p> <p>Australian Geological Survey Organisation (AGSO)</p> <p>Bureau of Meteorology (BoM)</p> <p>Department of Family & Community Services (FACS)</p> <p>Department of Finance & Administration (DoFA)</p> <p>Department of Health & Aged Care (DH&AC)</p> <p>Department of Transport & Regional Services (DoTaRS)</p> <p>Emergency Management Australia (EMA)</p>
Australian Capital Territory	Emergency Services Bureau (ESB)
New South Wales	Treasury, Dept Land & Water Conservation (DWLC), State Emergency Service (SES), NPWS Fire Service
Northern Territory	Treasury, Dept Lands, Planning & Environment (DLPE), Bushfire Council, Dept Police, Fire & Emergency Services
Queensland	Dept Emergency Services (DES), Treasury, Dept Natural Resources & Mines (NRM), Q-Build, Dept Local Government & Planning (DLGP)
South Australia	Treasury, Emergency Services Administration Unit (ESAU), Country Fire Service (CFS), Metropolitan Fire Service (MFS), SES, Police, SA Water, Transport SA, Dept Environment & Heritage, Forestry SA, Dept Justice
Tasmania	State Emergency Service
Victoria	Treasury, Dept Justice (CFA, MFESB and VICSES), Dept Natural Resources & Environment (NRE), Dept Human Services (DHS), Rural Finance Corporation (RFC)
Western Australia	Fire & Emergency Services Authority (FESA), Water & Rivers Commission (WRC)
