# AN UPDATE OF LONG-TERM TRENDS IN PROPERTY AND VIOLENT CRIME IN NEW SOUTH WALES: 1990-2009

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*This paper describes trends in the annual recorded incidence of 10 major categories of property and violent crime for the period 1990 to 2009 in New South Wales. The data presented here are an update of the property and violent crime trends reported in Bulletin Number 90. Kendall's trend test was run on the 20 annual rates[1] for each of the ten major offence categories, indicating some overall improvement since last year. Firstly, the same two significant long-term upward trends as last year were recorded; assault and sexual assault. However, there has been a jump from three to five long-term significant downward trends with the move from stable to down for the two burglary offence categories. The long-term downward trends now include; murder, robbery with a firearm, break and enter dwelling and break and enter non-dwelling and motor vehicle theft. The remaining three categories, other sexual offences[2], robbery without a weapon, robbery with a weapon not a firearm, continue to maintain their long term stable result.*
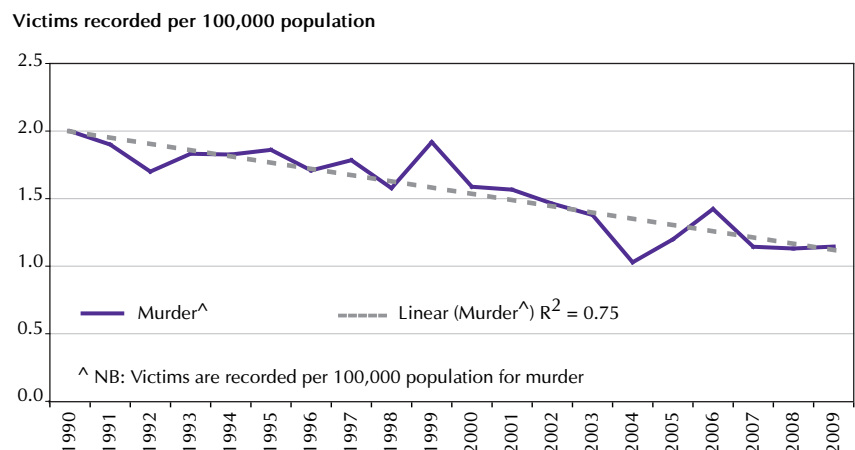
## DATA SOURCES

With the exception of murder, the data presented here refer to the number of police recorded criminal incidents per 100,000 population. For murder, rates are calculated on the numbers of murder victims per 100,000 population. Data from the NSW Police Force Computerised Operational Policing System (COPS) have been used to calculate offence rates for the period 1995-2009. Criminal incident data for 1994 and for the years prior to the introduction of COPS have been taken from the Bureau's recorded crime statistics report series, *NSW Recorded Crime Statistics*.

There is one definitional change from last year's report. Prior to August 2008, if police suspected a criminal incident reported to them did not occur they could record it as 'doubtful'. In the past BOCSAR's recorded crime statistics have included 'accepted' and 'doubtful' incidents. In August 2008 NSW Police removed the 'doubtful' category from COPS, instead directing police officers to

categorise these incidents as 'accepted' unless evidence existed to indicate the crime did not occur. In which case the incident would be categorised as 'rejected'. Thus recorded crime statistics from August 2008 to the present have not contained 'doubtful' incidents. In order to present a continuous series BOCSAR have decided to retrospectively limit recorded crime statistics to only
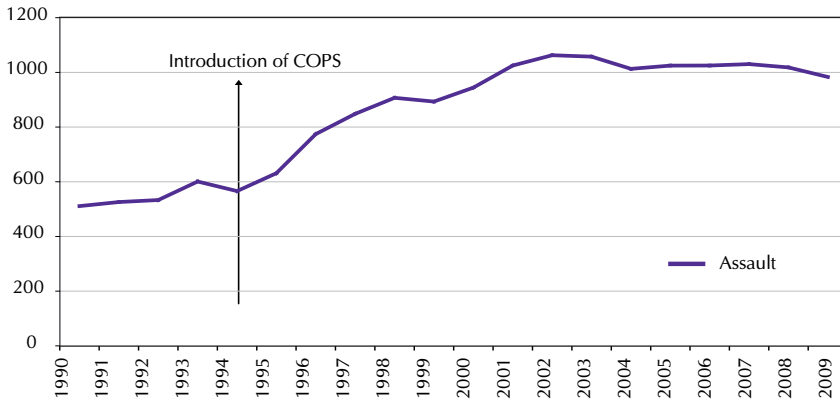
'accepted' incidents. To do this we have removed the 'doubtful' incidents from crime data from January 1995 to August 2008. There will therefore be a slight revision to incident counts and hence rates from 1995 to 2008 as reported in earlier versions of this brief. As we are unable to view which incidents were doubtful in the period 1990 to 1994, the series were not adjusted in these years.



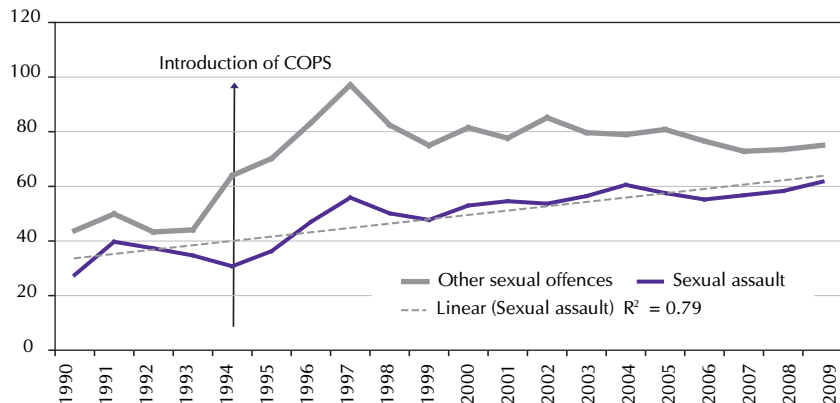**Figure 1: Murder rate for NSW per 100,000 population 1990-2009**

Victims recorded per 100,000 population

Murder^    Linear (Murder^) $R^2$ = 0.75

^ NB: Victims are recorded per 100,000 population for murder

## Figure 2: Assault rate for NSW per 100,000 population 1990-2009

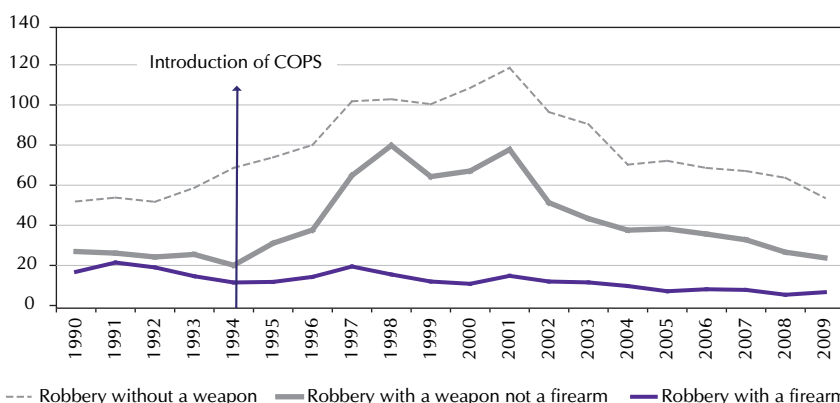**Incidents recorded per 100,000 population**



## Figure 3: Sexual offence rate for NSW per 100,000 population 1990-2009

**Incidents recorded per 100,000 population**



## Figure 4: Robbery rate for NSW per 100,000 population 1990-2009

**Incidents recorded per 100,000 population**



# PERSONAL CRIME

Figure 1 shows the number of *murder* victims in NSW per 100,000 population from 1990 to 2009. Figures 2, 3 and 4 show the number of recorded *assault*, *sexual offences* and *robbery* incidents per 100,000 population from 1990 to 2009, respectively. The major points to note from these figures are:

♦ A significant downward trend is apparent in the NSW murder rate (down 43% since 1990). Apart from the 2004 recorded rate of 1.0 murder victims per 100,000 population (which was below the long-term linear trend), the recent annual murder rates, (1.1 in 2008 and 2009), have continued back on trend showing strong linearity with the $r^2$ measure of goodness of fit remaining around 0.75.

♦ A significant upward trend in the NSW *assault* rate (up 92% since 1990). However the past eight years have remained statistically stable and the rate graph is showing that a turning point may have been passed. In the early 1990's the recorded *assault* rate was about 500 incidents per 100,000 population climbing to over 1,000 incidents per 100,000 population by 2001. Provided that data revisions remain within the usual bounds it would appear that the 2009 annual rate is below 1,000 for the first time since the year 2000.

♦ Over the period 1990-2009 NSW recorded increases in the crime rate of both *sexual assault* (up 124%) and *other sexual offences*[2] (up 71%). In both cases, however, the sharpest rises occurred in the mid to late 1990s and the statistical trend test for *other sexual offences,* as was reported last year, continues to remain stable. *Sexual assault*, however is the only offence reporting 2009 as the highest rate in the years since 1990 and remains the only offence registering an upward trend over the period 2000 to 2009.

♦ Recorded rates of *robbery without a weapon* and *robbery with a weapon not a firearm* reflect levels seen around

1990 and continue to show declines (see Figure 4), even though the long term trends are still registering as statistically stable. A significant and consistent downward trend continues in the NSW rate of *robbery with a firearm* (down by 61% in the period 1990 to 2009). The 2009 rate is well below half of the early 1990s rate, when fitted to a linear trend (see Figure 4a).

## PROPERTY CRIME

Figure 5 shows trends in the recorded rates of three major theft categories: *break and enter dwelling, break and enter non-dwelling* and *motor vehicle theft*. The major points to note from this figure are:

♦ Recorded rates of *motor vehicle theft* continue to decline significantly (down by 66% since 1990). After a fall in this theft category in the early part of last decade the incident rate for *motor vehicle theft* began to increase from 1993 onwards. From about 1997, the rate of *motor vehicle theft* stabilised at around 800 incidents per 100,000 persons and then dropped sharply from 2001 onwards, having registered a 61 per cent fall for the period 2001 to 2009. The rates of *motor vehicle theft* and *break and enter non-dwelling* continue to track one another closely as has been the case since the late 1990s.

♦ Crime rates for burglary offences fell slightly in the early part of last decade but from about 1993 onwards began to increase. The increase was particularly marked in the case of *break and enter non-dwelling*, which rose by 39 per cent between 1993 and 2001. From 2001 onwards, however, burglary offences began to fall sharply, with *break and enter dwelling* falling by 51 per cent and *break and enter non-dwelling* falling by 65 per cent. Recorded rates of burglary and *motor vehicle theft* are now well below the recorded 1990 levels and around half the rate for the year 2000.



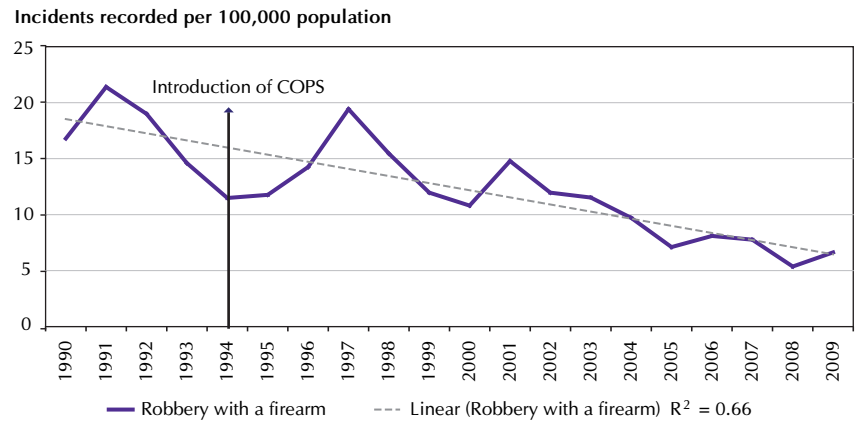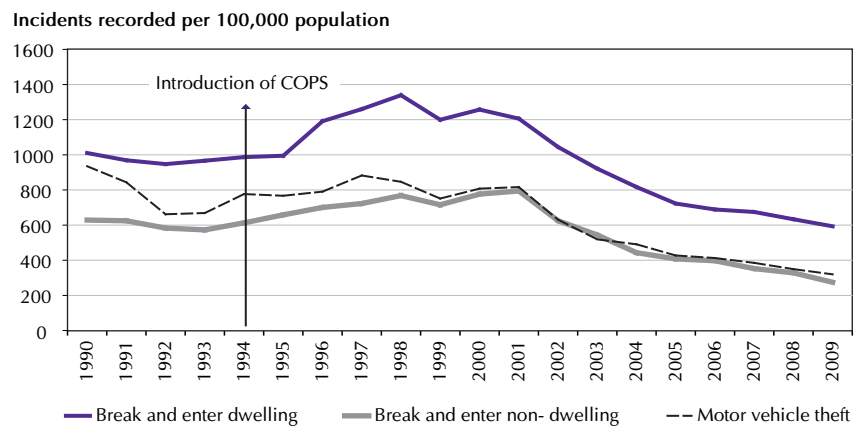Figure 4a: Robbery with a firearm rate for NSW per 100,000 population 1990-2009

Incidents recorded per 100,000 population



Figure 5: Burglary and motor vehicle theft rate for NSW per 100,000 population 1990-2008

Incidents recorded per 100,000 population

## NOTES

1. For the rate calculations, population data were obtained from the Australian Bureau of Statistics publication: Regional Population Growth, Australia, 2007-08, Cat. No. 3218.0 (for 2007 and 2008 population estimates). As no population estimates were available for 2009 when this report was published, rates for 2009 were calculated using 2008 population estimates.

2. The offence category 'other sexual offences' includes recorded incidents of indecent assault, acts of indecency, grooming / procuring and other sexual offences (e.g. wilful and obscene exposure, peep or pry).

## REFERENCES

Moffatt & Poynton 2006, 'Long term trends in property and violent crime in NSW: 1990-2004', Crime and Justice Bulletin, no. 90, NSW Bureau of Crime Statistics and Research, Sydney.

# APPENDIX

## Table A1: Number of criminal incidents recorded by the NSW Police Force by year and offence type

| Year | Murder^ | Assault | Sexual assault | Other sexual offences | Robbery without a weapon | Robbery with a firearm | Robbery with a weapon not a firearm | Break and enter dwelling | Break and enter non-dwelling | Motor vehicle theft |
|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | 119 | 29,776 | 1,606 | 2,552 | 3,022 | 981 | 1,568 | 58,862 | 36,639 | 54,488 |
| 1991 | 115 | 31,014 | 2,343 | 2,942 | 3,173 | 1,265 | 1,542 | 57,155 | 36,838 | 49,758 |
| 1992 | 101 | 31,773 | 2,220 | 2,583 | 3,080 | 1,132 | 1,444 | 56,437 | 34,754 | 39,423 |
| 1993 | 110 | 36,076 | 2,083 | 2,646 | 3,525 | 877 | 1,528 | 58,036 | 34,379 | 40,169 |
| 1994 * | 83 | 25,732 | 1,397 | 2,908 | 3,120 | 522 | 912 | 44,850 | 27,858 | 35,304 |
| 1995 | 114 | 38,675 | 2,224 | 4,302 | 4,528 | 721 | 1,903 | 60,947 | 40,337 | 46,999 |
| 1996 | 106 | 48,043 | 2,916 | 5,165 | 4,966 | 884 | 2,336 | 73,921 | 43,470 | 49,054 |
| 1997 | 112 | 53,246 | 3,508 | 6,100 | 6,391 | 1,219 | 4,069 | 79,101 | 45,367 | 55,383 |
| 1998 | 100 | 57,494 | 3,177 | 5,225 | 6,521 | 980 | 5,058 | 84,891 | 48,672 | 53,647 |
| 1999 | 123 | 57,272 | 3,060 | 4,809 | 6,438 | 767 | 4,122 | 76,910 | 45,874 | 48,168 |
| 2000 | 103 | 61,260 | 3,436 | 5,284 | 7,037 | 701 | 4,349 | 81,547 | 50,343 | 52,378 |
| 2001 | 103 | 67,404 | 3,588 | 5,105 | 7,789 | 972 | 5,114 | 79,292 | 52,229 | 53,685 |
| 2002 | 97 | 70,450 | 3,558 | 5,645 | 6,393 | 793 | 3,398 | 69,236 | 41,409 | 41,808 |
| 2003 | 92 | 70,578 | 3,766 | 5,315 | 6,030 | 769 | 2,890 | 61,457 | 36,280 | 34,604 |
| 2004 | 69 | 67,950 | 4,060 | 5,295 | 4,713 | 652 | 2,522 | 54,770 | 29,725 | 32,904 |
| 2005 | 81 | 69,243 | 3,886 | 5,460 | 4,872 | 480 | 2,582 | 48,834 | 27,546 | 28,872 |
| 2006 | 97 | 69,872 | 3,762 | 5,219 | 4,674 | 552 | 2,427 | 46,955 | 27,059 | 28,124 |
| 2007 | 79 | 71,129 | 3,918 | 5,030 | 4,628 | 536 | 2,262 | 46,567 | 24,316 | 26,592 |
| 2008 | 79 | 71,108 | 4,072 | 5,131 | 4,446 | 375 | 1,856 | 44,239 | 22,923 | 24,405 |
| 2009 | 80 | 68,675 | 4,311 | 5,240 | 3,750 | 463 | 1,660 | 41,410 | 19,179 | 22,322 |

^   For murder, the number shown is the number of recorded victims rather than criminal incidents

*   Due to the introduction of the COPS system in 1994 only nine months of recorded crime data was available for this year. The number of incidents recorded in 1994 was therefore multiplied by one and one-third in order to calculate the annual rate. However, it should be noted that this calculation does not take into account the seasonality of certain crimes (e.g. more assaults in the summer months). Thus for some offences this extrapolation would underestimate the actual number of criminal incidents that occurred.

## Table A2: Number of criminal incidents recorded by the NSW Police Force per 100,000 population by year and offence type

| Year | Murder^ | Assault | Sexual assault | Other sexual offences | Robbery without a weapon | Robbery with a firearm | Robbery with a weapon not a firearm | Break and enter dwelling | Break and enter non-dwelling | Motor vehicle theft |
|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | 2.0 | 511.0 | 27.6 | 43.8 | 51.9 | 16.8 | 26.9 | 1010.2 | 628.8 | 935.1 |
| 1991 | 1.9 | 525.8 | 39.7 | 49.9 | 53.8 | 21.4 | 26.1 | 968.9 | 624.5 | 843.5 |
| 1992 | 1.7 | 533.2 | 37.3 | 43.3 | 51.7 | 19.0 | 24.2 | 947.1 | 583.2 | 661.6 |
| 1993 | 1.8 | 600.8 | 34.7 | 44.1 | 58.7 | 14.6 | 25.4 | 966.5 | 572.5 | 668.9 |
| 1994 | 1.8 | 566.1 | 30.7 | 64.0 | 68.6 | 11.5 | 20.1 | 986.8 | 612.9 | 776.7 |
| 1995 | 1.9 | 631.2 | 36.3 | 70.2 | 73.9 | 11.8 | 31.1 | 994.7 | 658.4 | 767.1 |
| 1996 | 1.7 | 774.3 | 47.0 | 83.2 | 80.0 | 14.2 | 37.6 | 1191.4 | 700.6 | 790.6 |
| 1997 | 1.8 | 848.3 | 55.9 | 97.2 | 101.8 | 19.4 | 64.8 | 1260.2 | 722.8 | 882.3 |
| 1998 | 1.6 | 907.0 | 50.1 | 82.4 | 102.9 | 15.5 | 79.8 | 1339.2 | 767.8 | 846.3 |
| 1999 | 1.9 | 893.3 | 47.7 | 75.0 | 100.4 | 12.0 | 64.3 | 1199.6 | 715.5 | 751.3 |
| 2000 | 1.6 | 944.5 | 53.0 | 81.5 | 108.5 | 10.8 | 67.0 | 1257.2 | 776.2 | 807.5 |
| 2001 | 1.6 | 1025.1 | 54.6 | 77.6 | 118.5 | 14.8 | 77.8 | 1205.9 | 794.3 | 816.5 |
| 2002 | 1.5 | 1062.8 | 53.7 | 85.2 | 96.4 | 12.0 | 51.3 | 1044.4 | 624.7 | 630.7 |
| 2003 | 1.4 | 1057.7 | 56.4 | 79.7 | 90.4 | 11.5 | 43.3 | 921.0 | 543.7 | 518.6 |
| 2004 | 1.0 | 1013.1 | 60.5 | 78.9 | 70.3 | 9.7 | 37.6 | 816.6 | 443.2 | 490.6 |
| 2005 | 1.2 | 1024.8 | 57.5 | 80.8 | 72.1 | 7.1 | 38.2 | 722.8 | 407.7 | 427.3 |
| 2006 | 1.4 | 1025.1 | 55.2 | 76.6 | 68.6 | 8.1 | 35.6 | 688.9 | 397.0 | 412.6 |
| 2007 | 1.1 | 1030.1 | 56.7 | 72.8 | 67.0 | 7.8 | 32.8 | 674.4 | 352.2 | 385.1 |
| 2008 | 1.1 | 1018.1 | 58.3 | 73.5 | 63.7 | 5.4 | 26.6 | 633.4 | 328.2 | 349.4 |
| 2009 | 1.1 | 983.3 | 61.7 | 75.0 | 53.7 | 6.6 | 23.8 | 592.9 | 274.6 | 319.6 |

^ Victims are recorded per 100,000 population for murder