

2009–2017 criminal justice forecast report

Introduction

This paper sets out the forecast of the prison population for 2009–2017 and the forecast of non-custodial sentences and orders for 2009–2013. The non-custodial sentences and orders included are those overseen by the Community Probation and Psychological Services (CPPS). Both Prison Services and CPPS are part of the Department of Corrections. The forecast also includes the number of pre-sentence reports provided to courts by probation officers for 2009–2013. The forecast represents a key instrument for strategic planning within the justice sector, and was completed in September 2009. The forecasts cover different time periods because differences in the data underpinning each forecast mean we have different levels of confidence in the results.

The forecasts project the numbers of people expected to be held in custody either on remand, awaiting trial or sentencing or serving prison sentences, and the numbers of non-custodial sentences started.¹ They draw on recent trends as well as the best available estimates of how those trends may change in future, on the basis of current legislation and policy as at September 2009. They are monitored regularly, with a report prepared every other month that notes the difference between the forecast and actual numbers.

The forecast shows that the prison population is expected to grow more slowly over the next eight years than it has over the past eight years, and more slowly than forecast in 2008. By June 2016 the total prison population is now expected to be 646 lower than forecast last year, due for the most part to lower growth in the length of time prisoners are remanded in custody awaiting trial or sentence, resulting from reduced court processing times.

The 2009 criminal justice forecast has been developed using the best data and assumptions available at the time. As a forecast it is only indicative of future prison population numbers to the extent that its assumptions hold. Any change in current policy settings, the legal framework and operational delivery could have a significant impact on current and future forecasts. The key drivers are regularly monitored to see how close they lie to the assumed values.

Forecast methodology

As in previous years, this forecast projects the selected quantities for eight years into the future. The prison forecast identifies changes in the remand and sentenced populations separately. The 2009 forecast is based on the same broad approach as that outlined in the technical report for the 2006 forecast. The forecast draws on trends established in recent years in a range of factors that affect the numbers of people in prison, and incorporates assumptions about how those trends are likely to change over time.

¹ The non-custodial sentences forecast are: community work, supervision, intensive supervision, community detention and home detention. We also forecast numbers starting on parole and numbers who are released on conditions. A 'start' is an instance of an offender commencing a non-custodial sentence; many offenders receive more than one such sentence at a given time, so the number of starts is greater than the number of offenders.

In the 2009 prison forecast, the most influential factors driving the forecast are:

- remands in custody – numbers being remanded in custody and the average length of time spent on remand
- proportion of imposed sentence served in custody (excluding remand).

Other factors are considered as well, and monitored over time. The assumptions for the 2009–2017 criminal justice forecast are the result of a collaborative process between the Ministry of Justice, Department of Corrections, and New Zealand Police, with additional advice received from the Law Commission and Parole Board. Table 1 summarises the assumption for each driver.

Table 1: Assumptions for 2009–2017 prison population forecast baseline

Driver	Assumption	Comparison to 2008 forecast
1: Numbers entering the system (number of charging events)	The number of charging events will grow 4.5% in 2009/10 and 2010/11, and 3% per annum from 2011/12 onwards.	Same
2.1: Number of people remanded in custody	The number of people remanded in custody will grow at 3.5% per annum throughout the forecast period.	Same
2.2: Average time spent on custodial remand	The average time spent on custodial remand will grow by 2% in 2009/10, 2010/11, 2011/2012, 2012/2013, 2013/2014 and 1% per annum from 2014/15 onwards.	Lower than assumed
3: Proportion of people convicted	The proportion of people convicted will remain at 71% for 2009/10, but will increase by 1 percentage point per year thereafter, until it reaches 75% in 2013/14, when it will stabilise at the new level.	Same
4: Proportion of those convicted given custodial and non-custodial sentences	Current distribution of sentences remains broadly constant (summary of sequence of individual assumptions regarding different types of sentence)	Same assumption for custodial sentences - non-custodial sentences were not forecast in 2008
5: Length of sentence imposed	The length of sentence imposed will remain constant.	Same
6: Proportion of sentence served (excluding remand)	The proportion of sentence served will continue to rise, converging around 66%.	Same

Drivers 1, 3, and 4 also affect the forecast of non-custodial sentences. The mix of different non-custodial sentences is assumed to remain as it is at present. It is also assumed that the number of starts per offender will remain as it is at present.

The drivers for the criminal justice forecast change over time as a result of changes in policy settings and/or operational delivery. Policy or operational changes are not factored into forecast drivers until policy decisions are made and implemented, including any necessary legislative changes.

Main prison forecast results

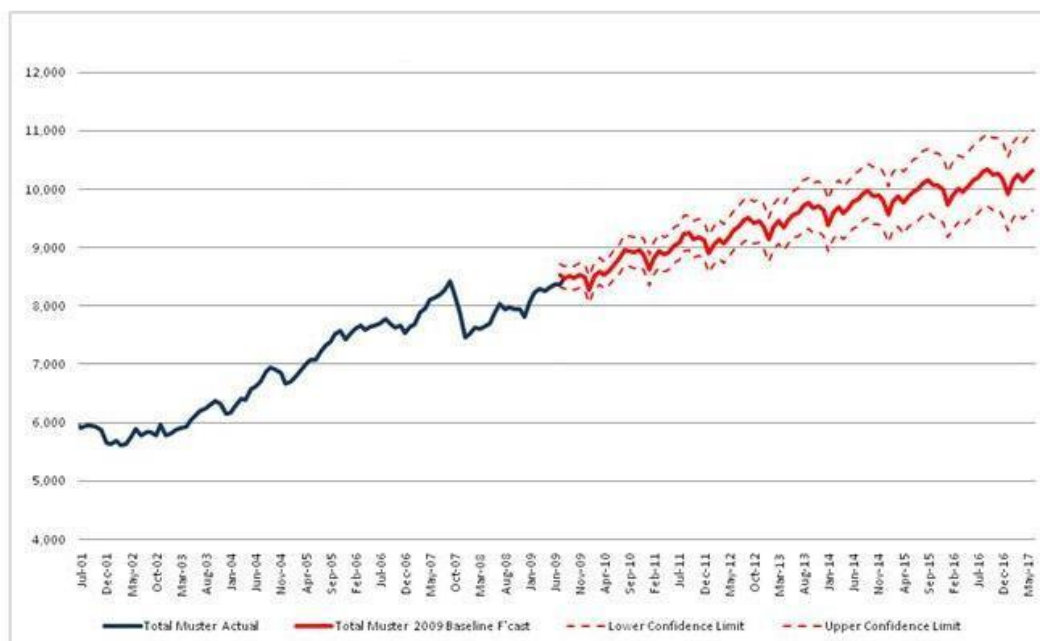
The prison population is forecast to reach 10,314 by 30 June 2017. This is an increase of 1941 beds from June 2009. The increase in the actual prison population over the preceding eight years was 2393 beds.

The forecast June 2017 prison population is made up of 7508 sentenced prisoners (a 16% increase from June 2009) and 2806 remand prisoners (a 47% increase from June 2009). The forecast growth in the sentenced population is less than in the previous eight years (during which the sentenced population increased by 26%), while the forecast remand population is growing more slowly (during the previous eight years it increased by 122%).

The incarceration rate is projected to increase from 194 per 100,000 in June 2009 to around 223 by 2017. This compares with an increase from 154 per 100,000 to 194 from 2001 to 2009.²

Figure 1 shows the increase in the prison population over the forecast period.

Figure 1: Total prison population forecast



² In calculating the population for 2017, Series 5 of Statistics New Zealand population projections was used – average fertility, mortality and immigration levels – and linear interpolation between 2016 and 2021.

Any forecast contains a margin of error, and the possible error increases the further into the future the forecast looks. The dotted lines on the above graph represent limits (called 'confidence limits') which capture this margin of error, with the solid red line indicating the most likely values (the baseline forecast) for the prison population.

Figure 2 compares the 2009–2017 forecast to the 2008–2016 forecast. It shows how the 2009 forecast (red line) parallels the 2008 forecast (green line) for some time but then diverges from it, as it grows at a lower rate.

Figure 2: Comparison of 2008 and 2009 forecasts



Table 2 sets out the estimated prison population and the confidence limits for each quarter over the eight years to June 2017. The number given is a point estimate of the prison population at the end of the given month.

Table 2: Quarterly values for the 2009 prison forecast

At end of quarter	Lower limit	2009 forecast	Upper limit
June 2009 (actual)		8,373	
September 2009	8,321	8,521	8,721
December 2009	8,265	8,489	8,713
March 2010	8,363	8,593	8,822
June 2010	8,462	8,706	8,951
September 2010	8,681	8,940	9,199
December 2010	8,598	8,869	9,141
March 2011	8,655	8,946	9,237
June 2011	8,741	9,039	9,336
September 2011	8,947	9,251	9,555
December 2011	8,808	9,125	9,442
March 2012	8,813	9,145	9,478
June 2012	8,960	9,293	9,626
September 2012	9,146	9,508	9,870
December 2012	8,999	9,370	9,741
March 2013	9,057	9,446	9,834
June 2013	9,168	9,572	9,975
September 2013	9,325	9,761	10,197
December 2013	9,198	9,631	10,063
March 2014	9,238	9,697	10,157
June 2014	9,325	9,791	10,257
September 2014	9,506	9,973	10,439
December 2014	9,327	9,811	10,296
March 2015	9,360	9,873	10,386
June 2015	9,417	9,961	10,505
September 2015	9,608	10,147	10,686
December 2015	9,420	9,985	10,550
March 2016	9,430	10,003	10,577
June 2016	9,553	10,149	10,745
September 2016	9,721	10,338	10,956
December 2016	9,544	10,182	10,821
March 2017	9,592	10,246	10,900
June 2017	9,633	10,314	10,996

Community Probation and Psychological Services forecast results

Figures 3 and 4 show the projected growth in new starts for sentences overseen by CPPS through 2013. The forecast does not project how many people will be overseen by CPPS at any one time, and in this way differs from the prison population forecast. Some types of sentences can be served over a length of time chosen by the offender him- or herself (for example, someone may be sentenced to serve a certain number of hours on community work, but have considerable discretion when to serve those hours), so when those sentences will be completed is not known in advance. Much of the time required to supervise these sentences is at the start, making new starts the most important factor for administrative reasons. The historical data for several of these sentences cover

relatively short time-scales and, as a result, the confidence limits are very broad. It is prudent, therefore, to look no more than four years ahead.

Figure 3: New CPPS starts and pre-sentence reports forecast

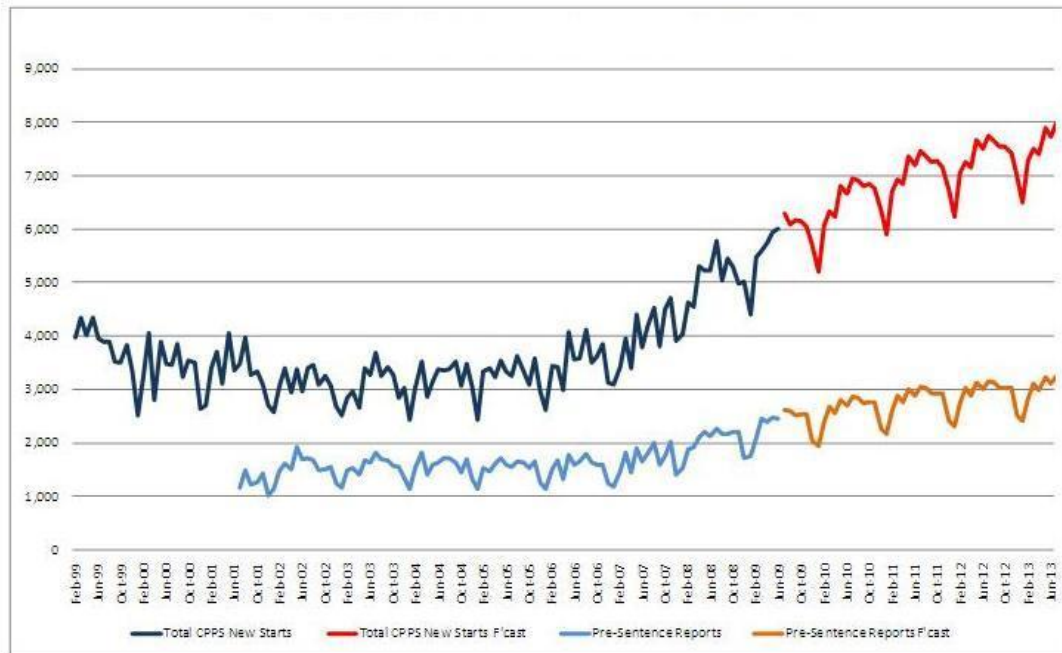


Figure 4: Home detention, community detention and intensive supervision forecast

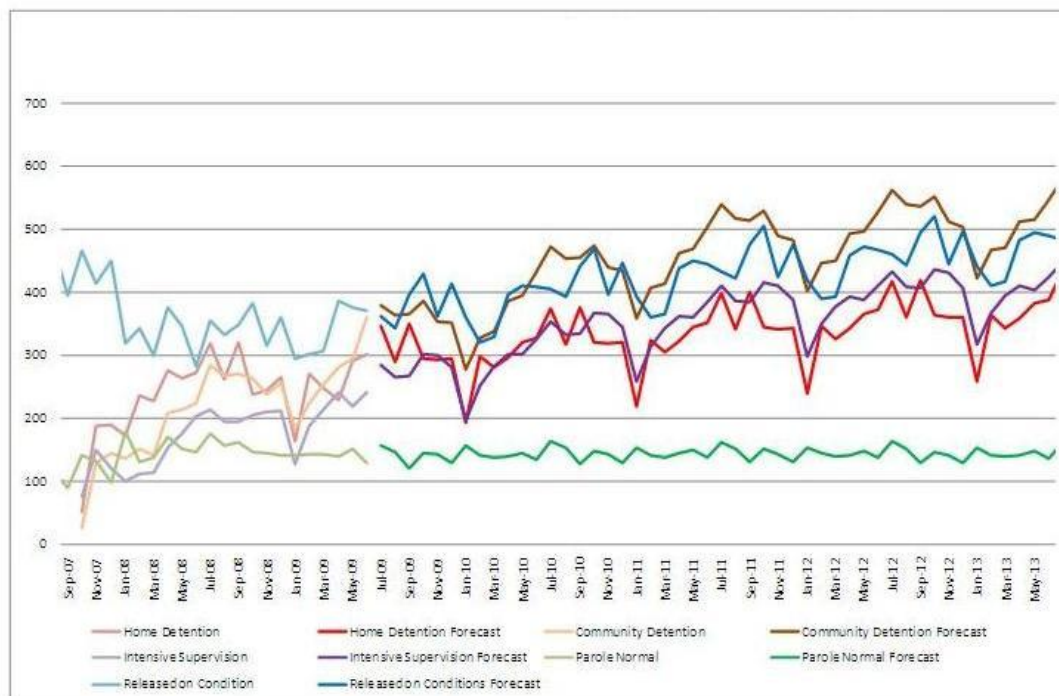


Table 3 gives the number of new starts for sentences overseen by the CPPS for the same quarters as Table 2. Projections for parole and release on conditions,

while based on existing trends in these quantities, have also been reconciled with the output of released prisoners likely to be subject to these orders from the prison forecast.

Table 3: Monthly number of new starts for sentences and orders overseen by the CPPS

Month	Community work	Supervision	Intensive supervision	Community detention	Home detention	Parole	Released on conditions
June 2009 (actual)	3744	857	242	361	302	129	370
September 2009	3807	853	267	366	349	120	397
December 2009	3451	807	281	352	294	129	413
March 2010	4030	936	282	337	280	138	330
June 2010	4106	938	326	432	328	134	409
September 2010	4160	908	334	455	376	128	441
December 2010	3825	848	345	435	320	129	446
March 2011	4393	964	344	414	305	138	366
June 2011	4418	955	385	504	352	138	444
September 2011	4415	943	384	514	400	131	475
December 2011	4014	888	387	482	343	131	476
March 2012	4560	1007	377	450	326	140	394
June 2012	4582	998	410	527	372	137	468
September 2012	4571	985	406	536	419	129	494
December 2012	4166	927	407	503	361	128	497
March 2013	4689	1044	394	470	344	139	417
June 2013	4711	1033	424	546	388	136	490

Projections for two years ahead are made for extended supervision and life parolees. The number of these offenders is very small, and it is not feasible to provide a longer term projection. The number of new start of life parolees per annum is forecast to be 24, and the number of people starting extended supervision per annum is forecast to be 32.

Figure 5 and Table 4 show the projected numbers of short and full pre-sentence reports over the forecast period.

Figure 5: Pre-sentence reports forecast

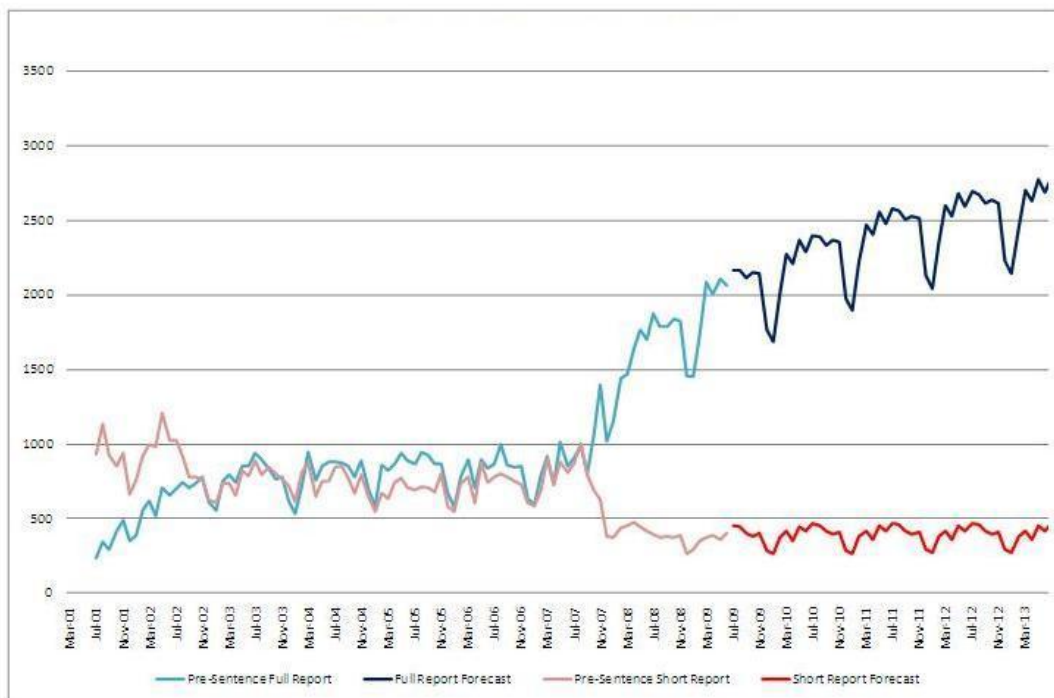


Table 4: Monthly number of short and full pre-sentence reports

Month	Short reports	Full reports
June 2009 (actual)	399	2061
September 2009	404	2109
December 2009	283	1764
March 2010	414	2270
June 2010	413	2288
September 2010	415	2332
December 2010	289	1972
March 2011	418	2469
June 2011	416	2475
September 2011	417	2501
December 2011	290	2124
March 2012	419	2601
June 2012	416	2590
September 2012	417	2611
December 2012	291	2227
March 2013	419	2700
June 2013	416	2684