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DEPARTMENT OF JUSTICE AND EQUALITY

# Prisoner Population and Trends –discussion paper

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Department of Justice and Equality

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This paper was prepared for the Management Board of the Department of Justice and Equality to consider possible mechanisms that would give early warning of any significant increase in prisoner numbers.

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Department of Justice and Equality

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## 1.0 Introduction

This paper was prepared for the Management Board of the Department of Justice and Equality to consider possible mechanisms that would give early warning of any significant increase in prisoner numbers. Any observations or views on the topic would be most welcome and can be forwarded to the Email address [prisons\\_policy\\_inbox@justice.ie](mailto:prisons_policy_inbox@justice.ie)

## 2.0 Prisoner numbers - trends to date

### Period 1925-1969

2.1 Figure 1 in the Appendix sets out prisoner numbers for the period 1925-2015.

Effectively the prisoner population for the State was in the region of **400 to 700 persons** from 1925 until the end of the 1960's with a slightly higher peak (777) during World War Two. By any standard the State had a low prisoner population during these decades. There are a number of possible explanations including strong social controls, poverty, high incarceration rate in other institutions (asylums, industrial schools), mass emigration particularly of young males and an absence of any significant level of drug trafficking.

### Period 1970 - 1980

2.2 The prisoner population climbed significantly from 1970 onwards reaching over a **1,000 persons** by 1972. It then stayed close to that level for nearly 10 years until 1981.

### Period 1980 - 2005

**2.3** There was a period of steady increase nearly every year from 1981 (1,196) until it reached **3,165 persons** in the year 2001 - an increase of 2,000 prisoners over a 20 year period. This period saw social and economic change, the population increased by 20% and the full effect of subversive influences and the drug trade were felt. From the year 2001 until 2005 prisoner numbers remained stable at approximately **3,100 persons** .

### Period 2005 onwards

**2.4** Between 2005 and 2010/2011, the prison population in custody increased by 1,300 reaching **4,440 persons** in 2010 and if you include those on temporary release, the total increase was over 1,800. (Temporary release had been used to relieve pressure in the prison system. Including temporary release numbers gives a more accurate picture of the demand on prison capacity.) This was a very fast and significant increase over a 4-5 year period. It peaked in 2010/2011 and then started to decline.

**2.5** On 29 January 2016, the numbers in custody were 3717 (with 408 on temporary release giving a total of 4,263 in the system). The numbers in custody are now 700 less than 2010 (if you include those on temporary release, 850 less than 2011).

### Overall

**2.6** As regards recent history then, we had a gradual increase in prison numbers from 1980 to 2000, followed by a period of stable numbers and then a sudden and very significant increase in prisoner numbers in the three year period 2007 – 2010/11, followed by a gradual reduction in the following five year period. One possible interpretation is that the prisoner to population ration reached a mature/modern level in the year 2000 at 80 to 100 prisoners per 100,000 and we have stayed roughly within that band since 2,000 with fluctuations, see Figure 2 in Appendices.

### 3.0 Why an accurate forecast of prisoner numbers is desirable

**3.1** The Irish Prison Service (IPS) has no control over the number of committals to prison and it cannot refuse to accept prisoners.

NB.

(i) However decisions made within the Department and the Criminal Justice system can indirectly influence the number of committals.

(ii) The IPS has some control over managing the numbers in custody by the use of temporary release either structured (e.g. Community Return, Parole Board recommendations) or unstructured. The IPS has greater freedom and control in this respect than most prison administrations. However the excessive use of unstructured temporary release brings the criminal justice system into disrepute and there are limits on its use.

**3.2** Ideally a prison system needs a certain amount of spare capacity for operational reasons, including surges in committals, and cannot operate at 100% of capacity without leading to problems. On 23 December 2015 the IPS was operating at 90% of bed capacity but a number of prisons were at 100% or more.

**3.3** The capacity of the prison system depends on the number of cells (and the persons per cell) so the capacity of the prison system cannot be quickly altered to accommodate an increase in numbers without leading to overcrowding. It takes a minimum of 2-3 years to build or make additions to a prison including, getting sanction for the expenditure, planning, tendering, construction and commissioning. If a new site is required, the process can be even longer.

**3.4** If the prison system is to avoid constant crisis and have adequate capacity, an accurate forecast of future prison numbers is of significant value in deciding whether to increase capacity and by how much. However it is not only of importance to the

IPS, it should also be a factor in determining criminal justice policy generally. For example the level of emphasis on non-custodial sanctions or early release may obviate the need to build a new prison (or require a new prison). The number of prisoners in custody is clearly influenced by criminal justice policy and implementation.

### 4.0 Previous attempts

**4.1** The first attempt at a forecast of prison numbers was done internally in the "Prisoner Population Projection 2005-2015" prepared by the IPS December 2005. The IPS reviewed a number of statistical models but none were deemed suitable although some aspects of different models were incorporated into the approach chosen by the IPS. In essence the 2005 IPS model assumed that there would be no significant change in committal levels and the forecasts were then constructed on expected release dates for those serving more than one year. The presumption of no change in committal levels was based on the experience of 2001-2004. On this basis alone the prison population was expected to increase by 447 over 10 years due to longer sentences.

Unfortunately the presumption about no change in committal levels, turned out to be wrong (if understandable). Presented in December 2005 the carefully researched study gave no hint of the size of a 5 year sustained increase in prisoner number that commenced the following month.

**4.2** A second attempt at forecasting was undertaken in 2009 and involved contracting the task to outside experts. The "Report on Prisoner Population Projections 2009-2024" was submitted to the IPS on 26 November 2009 by J. Schweppe and J. Saunders, University of Limerick.

My understanding is that the authors, having considered many models, thought that the number of variables potentially affecting the prison population was so great that they opted for a relatively simple model based primarily on linear regression with

low, medium and higher models. They did point to the weaknesses of their approach and the need to regularly update. Although presented in 2009, the model failed to anticipate the decrease in the prison population from 2010 onwards.

**4.3** While not a forecast, the Department did in 2010 attempt an Analysis of Prisoner Population and Trends. This was shared with agencies and academics and no obvious flaw was identified in its approach. The analysis confirmed that it is the number of longer term prisoners that have the most effect on the total prison population. 80% of the prison population is serving a sentence of longer than one year.

In the period 2005 to 2009 there was an increase of **48%** in the number of persons being committed to prison with a sentence of more than one year, most marked in 2007 (see Figure 3 in appendices). The actual numbers were not huge going from 1,193 in 2006 to 1,503 in 2007 (+310) but they have a cumulative and disproportionate effect. (An analysis of later figures up to 2014 confirms this effect. The total number of committals of prisoners with sentences with one year or more evened off (with some fluctuations in 2008-2012 and have declined sharply in 2013 and 2014 to less than 1,300. See Figure 3 below.) The analysis did not indicate that the proportion of longer sentences had increased significantly but rather the number of serious cases being dealt with seemed to have increased. (The figures at Figure 2 show that during this period the rate of incarceration rose sharply going from 76.4 prisoners per 100,000 in 2005 to more than 97 per 100,000 in 2010.)

**4.4** Allowing for the fact that prison population projections are fraught with difficulty (see below), the worrying thing is not so much that our two attempts at long term projections proved inaccurate but that we cannot even anticipate trends reliably over the next 12 months.

## 5.0 Forecasting prisoner numbers

**5.1** The prisoner population on any day is a product of the number of committals minus the number of releases. However there are a huge number of variables involved in both, which makes forecasting prison numbers notoriously difficult.

These variables include:

- demographics
- economic activity
- social change
- crime rate
- criminal justice and penal policy as well as legislation
- Garda activity and capacity
- DPP decisions
- Court activity and sentencing
- policy decisions on release.

Our two attempts at forecasting to date both failed to predict a change in trends within 12 months of their production and certainly could not be relied upon for planning. The experience in other jurisdictions is not encouraging either. The IPS attended a EuroPris workshop in 2014 and it was clear from presentations by UK, Canada, Denmark and Belgium that no country has an entirely successful model. Countries such as Belgium were moving away from long term projecting.

**5.2 Longer term prisoners** - Our experience to date does indicate that the key factor in determining the underlying trends in the prison population is the number of persons being committed to prison with longer term sentences (1 year +). (Increases in this category can have an accumulator effect - an increase of the numbers being committed with a 10 year sentence from 50 to 60 persons per year will have a net increase in the prison population of 75 (with standard remission) before the numbers being released balance with the committals.) You cannot



completely ignore short-term (1 year or less) prisoners because they represent a large volume of committals and at any one time and form 10% of the prison population.

Remand prisoners, most of which are short term, constitute 15% of the prison population. However in both cases it would require a very significant shift in volume before they would have any significant effect on total prison numbers. Between 2005 and 2009 the number of short term committals more than doubled but their proportion of the total prison population actually decreased. Release policies affect numbers in custody. However they have limited effect on the total number when for example temporary release are included as in Figure 1 in Appendices.

**5.3** Prison statistics are generally reliable and give a concrete indication of the factual situation at a particular point in time. They are updated on a daily basis. How can we improve our forecasting of trends using current figures? *Should there be a focus in daily/monthly/annual prison **statistics** on the cohort of prisoners being committed with longer sentences with a comparison with previous years so that any changes or trends which have the potential to affect the prisoner population are immediately obvious ? (A similar focus on the numbers of prisoners serving such sentences, might if properly developed, also give a clearer idea of what the underlying prison population trend is ?)*

**5.4** However prison statistics are of limited value in forecasting trends as they only come into play after the prisoner has arrived. *Could we identify potential prisoner population trends using **court statistics**.* In this regard, we may be only really interested in Circuit Court (and Special Criminal Court) statistics. The Central Criminal Court deals with rape and murder and while sentences are significant, the numbers are relatively small. Sentences from the District Court are normally 12 months or less and so have little effect on the prison population. Similarly remands in Ireland are normally for relatively short periods and so unlikely to significantly

affect the prison population.

However it is difficult to predict the number of persons who will be convicted and their sentences and the statistics are unlikely to be available much in advance of Prison statistics. *What might be useful is an advance indication of the capacity of the Circuit Court to process criminal trials and any backlogs.* That would give some advance warning of whether there is likely to be an increase or decrease. However the position varies between different Circuits and it is not clear whether such information could be made available.

**5.5** The cohort of offenders that we are interested in have to be processed through the Office of the **Director of Public Prosecutions** before being sent forward for trial. Only cases which the Garda have completed their investigation and may be suitable for prosecution are submitted to the DPP. The DPP's office therefore should have the raw material on the numbers who are to be prosecuted and who are likely to receive a sentence of more than 12 months. Furthermore there is a natural time lag between a file being received, a decision being made to prosecute and the outcome of a trial. *This might give advance warning in the region of up to 12 months ahead of prison statistics as regards trends for the key group of longer term prisoners?*

**5.6** Offenders will not be prosecuted, convicted and committed to prison unless their crimes are detected and investigated by An Garda Síochana. However it does not follow that an increase in a particular crime detected by An Garda Síochana will in due course lead to an increase in committals of the type we are interested in. (A crime has to be investigated, a perpetrator identified, evidence gathered, a file submitted to the DPP, a decision to prosecute, a trial, a guilty verdict and finally a sentence.)

While crime statistics and information held by An Garda Síochana may be useful in

predicting trends, it is not clear that there is a direct link to the size of the prison population or that the data is sufficiently detailed to be directly relevant in predicting trends in committals particularly as regards committals of longer term prisoners.

**5.7 Demographics** has an indirect link with the prisoner population, particularly the number of young males who are most likely to engage in offending behaviour. The total population of the State has increased by 50% since 1975 but our prison population has increased by 370%. The increase in population was clearly a factor but by no means the most significant one.

## 6 Conclusion

**6.1** Our own experience and that in other jurisdictions is that estimating future prisoner number is difficult and generally unreliable. It would be a significant improvement if we could forecast trends for the next 6 - 18 months and I would recommend that efforts are concentrated on this target initially. The data for such forecasting may be found in a focus on committal trends for longer term prisoners and data from the DPP's office which would show underlying trends. This combined with an analysis of other issues that affect committal and release rates may give a more reliable indication of future prisoner populations albeit restricted to a rather short time period. Detected crimes and Garda data might be of value for longer term projections.

## Appendices

**Figure 1: Average or snapshot of numbers of prisoners 1925 - 2015<sup>1</sup>**

Year	Numbers in custody	Numbers on temporary release	Total in system	<i>Projected numbers in custody 2005 study</i>	<i>Projected total numbers in system 2009 study</i>
1925	674				
1935	617				
1945	733				
1955	396				
1965	560				
1975	1017				
1985	1863				
1990	2108				
1995	2121				
2000	2948				
2/12/ 2003	3,234	262	3496		

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(1) Figures 1925-2000 taken from Crime and Punishment In Ireland 1922-2003 edited by O'Donnell, O'Sullivan and Healy.

(2) Figures 2003- 2014 supplied by Irish Prison Service in particular email 20/11/2015 18.22 from jfmitchell.

(3) Forecasts are "Prisoner Population Projection 2005-2015" prepared by the IPS December 2005 and "Report on Prisoner Population Projections 2009-2024 submitted to the IPS on 26 November 2009 by J. Scheppe and J. Saunders, University of Limerick.

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3/12/20004	3,147	261	3408		
7/122005	3,157	123	3280	<i>3179</i>	
7/12/2006	3,287	137	3424	<i>3312</i>	
5/12/ 2007	3,334	183	3517	<i>3345</i>	
5/12/2008	3,695	438	4133	<i>3409</i>	
4/12/2009	4,040	718	4478	<i>3490</i>	<i>3942 - 4255</i>
30/11/2010	<b>4,440</b>	656	5096	<i>3580</i>	<i>4036 - 5030</i>
30/11/2011	4,313	811	<b>5124</b>	<i>3606</i>	<i>4130 - 5612</i>
30/11/2012	4,298	805	5103	<i>3615</i>	<i>4224 - 6194</i>
30/11/2013	4,099	745	4844	<i>3616</i>	<i>4318 - 6776</i>
28/11 2014	3,777	715	4632	<i>3615</i>	<i>4412 - 7358</i>
30/11/2015	3755	411	4336	<i>3626</i>	<i>4505 - 7940</i>
2016					<i>4599 - 8522</i>
2020					<i>4975 - 10850</i>
2024					<i>5350 - 13178</i>

### **Figure 2: Number of Prisoners per 100,000 of population**

In 2013 (latest year Council of Europe figures are available) the European average was 133.5 prisoners per 100,000 persons. England was 147.2 and Sweden with proportionately one of the lowest prison populations was 61.4. Ireland with 88.5 has a relatively low prison population by European standards.

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Year	Population of State (i) 1925-2003 estimate based on census nearest to date, so indicative only (ii) 2004-2015 figures from CSO sources	Number of prisoners per 100,000  Indicative only, figures with * are Council of Europe data and can be compared to other European states. Differences arise as prisoner numbers fluctuate during a year and population numbers are revised.
1925	2,972,000	22.7
1935	2,968,000	20.8
1945	2,955,000	24.8
1955	2,898,000	13.7
1965	2,884,000	19.4
1975	2,978,000	34.5
1985	3,541,000	52.6
1990	3,526,000	59.8
1995	3,626,000	54.1
2000	3,917,000	103* (74.4)
2003	3,963,000	90.1* (81.6)
2004	4,045,200	77.8
2005	4,134,800	76.4
2006	4,232,900	74.3* (79.5)
2007	4,375,800	80.4* (76.2)
2008	4,485,100	84.8* (82.4)
2009	4,533,400	88.1* (89.1)
2010	4,554,800	97.4* (97.5)
2011	4,574,900	93.1* (94.3)
2012	4,585,400	94.3* (93.7)
2013	4,593,100	88.5* (89.2)
2014	4,609,600	83.1* (81.9)
2015	4,635,400	81

**Figure 3: Prison Committals with sentences more than 12 months**

Year	1-2 years	2-3 years	3-5 years	5-10 years	10+	Life	Total
2005	465	259	225	143	35	17	1,114
2006	458	281	250	166	20	18	1,193
2007	509	333	360	231	47	23	1,503
2008	610	359	346	219	65	20	1,619
2009	440	408	469	240	70	22	1,649
2010	453	351	420	282	44	18	1,568
2011	636	380	472	227	39	22	<b>1,776</b>
2012	461	447	494	227	31	22	1,682
2013	348	335	398	173	31	22	1,307
2014	350	343	346	165	28	25	1,257



**Figure 4: Annual Report Snapshot**

Snapshot Date	Numbers in custody	% of Bed Capacity	Number on Temporary Release
28 November 2014	3,777	92%	715
30 November 2013	4,099	93%	745
30 November 2012	4,298	98%	805
30 November 2011	4,313	96%	811
30 November 2010	4,440	100%	656
4 December 2009	4,040	100%	718
5 December 2008	3,695	102%	438
5 December 2007	3,334	96%	183
7 December 2006	3,287	96%	137
7 December 2005	3,157	94%	123
3 December 2004	3,147	95%	261
2 December 2003	3,234	95%	262

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