

# National Alcohol Sales Data Project (NASDP)

## Stage Four Report, 2014



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national drug research institute



## Preventing harmful drug use in Australia

The National Drug Research Institute at Curtin University is supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund

WHO Collaborating Centre for the Prevention of Alcohol and Drug Abuse

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CRICOS Provider Code 00301J

ISBN 978-0-9873641-8-0

20150008

**NATIONAL ALCOHOL SALES DATA PROJECT**  
**STAGE 4, FINAL REPORT**

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August 2014

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**NATIONAL ALCOHOL SALES DATA PROJECT**  
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STAGE 4, FINAL REPORT

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Suggested citation:

Loxley, W., Gilmore, W., Catalano, P. and Chikritzhs, T. (2014). National Alcohol Sales Data Project (NASDP) Stage Four Report. National Drug Research Institute, Curtin University, Perth, Western Australia.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## CONTENTS

<b>TABLE OF TABLES</b> .....	<b>4</b>
<b>TABLE OF FIGURES</b> .....	<b>5</b>
<b>ACKNOWLEDGMENTS</b> .....	<b>6</b>
<b>ACRONYMS</b> .....	<b>7</b>
<b>GLOSSARY</b> .....	<b>8</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>9</b>
<b>INTRODUCTION</b> .....	<b>14</b>
Background to the NASDP.....	14
The significance of alcohol consumption data .....	15
The NASDP objectives and aims .....	17
Implementation and establishment of the NASDP .....	18
Results in the NASDP Stage 3.....	18
<b>METHODS</b> .....	<b>21</b>
Data transfer issues.....	21
Overview of methods .....	21
<i>Per capita</i> consumption calculation method .....	22
Population estimates.....	22
ASGC regional units .....	25
Overview of PCC calculation by jurisdiction .....	26
Preparation of alcohol sales data.....	26
Alcohol conversion factors .....	29
Mapping the NASDP data .....	35
<b>RESULTS</b> .....	<b>36</b>
The Australia Capital territory .....	36
The Northern Territory .....	36
Queensland .....	40
Western Australia.....	53
Trends in <i>per capita</i> consumption .....	68
<b>DISCUSSION</b> .....	<b>70</b>
Summary of regional data.....	70
Trends in <i>per capita</i> consumption .....	72
Future developments in the NASDP .....	73
<b>REFERENCES</b> .....	<b>75</b>
<b>APPENDIX I</b> estimates of Queensland and Western Australian <i>per capita</i> consumption by ERP .....	<b>77</b>
<b>APPENDIX II</b> Estimates of Northern Territory <i>per capita</i> consumption excluding consumption by tourists.....	<b>88</b>

# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

### TABLE OF TABLES

Table 1	Alcohol conversion factors by jurisdiction .....	34
Table 2	Volumes (litres) of alcohol sold, by beverage, and pure alcohol in the Australian Capital Territory 2012/13.....	36
Table 3	Estimated per capita alcohol consumption, Northern Territory, 2005/06 to 2010/11.....	36
Table 4	Volumes (litres) of alcohol sold by beverage and pure alcohol in Urban Centres and Northern Territory Balance, 2005/06 – 2010/11.....	38
Table 5	Estimated per capita consumption (litres of absolute alcohol), Queensland 2007/08 to 2010/11 .....	40
Table 6	Volumes (litres) of alcohol sold by beverage, pure alcohol, and pcc/ ESP in SSDs, Queensland 2007/08 to 2009/101 .....	47
Table 7	Estimated per capita pure alcohol consumption (litres of absolute alcohol), Western Australia, 2005/06 to 2010/11 .....	53
Table 8	Volumes (litres) of alcohol sold by beverage, pure alcohol and consumption in SSDs, Western Australia, 2005/06 to 2010/11 .....	58
Table 9	Estimated per capita consumption (litres of absolute alcohol), Queensland 2009/10, by two different ERP, and ESP estimates.....	77
Table 10	Volumes of alcohol, pure alcohol and estimated <i>per capita</i> consumption (litres of absolute alcohol) by ERP in SSDs, Queensland 2007/08 to 2009/10 .....	79
Table 11	Volumes of alcohol, pure alcohol and estimated per capita consumption (litres of absolute alcohol) by ERP in SSDs, Western Australia, 2005/06 to 2010/11 .....	83
Table 12	Estimated <i>per capita</i> pure alcohol consumption, Northern Territory 2005/06 – 2010/11.....	88

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**TABLE OF FIGURES**

Figure 1	National per capita consumption of pure alcohol per person aged 15 years and over (Australian Bureau of Statistics 2014) .....	17
Figure 2	Volumes of pure alcohol sold in Urban Centres and Northern Territory Balance, 2010/11 .....	37
Figure 3	Volumes of pure alcohol sold, Statistical Subdivisions, Queensland, 2009/10 ..	41
Figure 4	Volumes of pure alcohol sold, Statistical Subdivisions, areas of high tourism, Queensland, 2009/10.....	42
Figure 5	Volumes of pure alcohol sold, Statistical Subdivisions, Brisbane and environs, Queensland, 2009/10.....	43
Figure 6	Estimated per capita consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Queensland, 2009/10.....	44
Figure 7	Estimated per capita consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, areas of high tourism, Queensland, 2009/10 .....	45
Figure 8	Estimated per capita consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Brisbane and environs, Queensland, 2009/10 .....	46
Figure 9	Volumes of pure alcohol sold, Statistical Subdivisions, Western Australia, 2010/11 .....	54
Figure 10	Volumes of pure alcohol sold, Statistical Subdivisions, Perth and West Coast, Western Australia, 2010/11 .....	55
Figure 11	Estimated per capita consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Western Australia, 2010/11 .....	56
Figure 12	Estimated per capita consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Perth and West Coast, Western Australia, 2010/11 .....	57
Figure 15	Per capita consumption in NASDP jurisdictions and nationally from 2005/06 to 2010/11.....	68
Figure 16	Northern Territory all alcohol volumes and pcc, 2005/06 to 2010/11.....	69
Figure 17	Western Australia all alcohol volumes and pcc/ESP, 2005/06 to 2010/11 .....	69

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **ACKNOWLEDGMENTS**

This project was funded by the Australian Government Department of Health as recommended by the Ministerial Council on Drug Strategy. The National Drug Research Institute at Curtin University is supported by funding from the Australian Government, under the Substance Misuse Prevention and Service Improvement Grants Fund.

We thank:

- All members of the NASDP Advisory Committee for their helpful advice and support, with special thanks to representatives from the Australian Capital Territory, Northern Territory, Queensland and Western Australia for providing access to their alcohol sales data and assistance with interpretation.
- The Geography Section of the Australian Bureau of Statistics.
- Paul Jones, National Drug Research Institute, for IT support.
- Elise Gordon and Eveline Lensvelt, National Drug Research Institute, for work on data sets.



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**ACRONYMS**

Advisory Committee	AC
Population aged 15 and older	15+
Australian Bureau of Statistics	ABS
Australian Standard Geographical Classification	ASGC
Australian Statistical Geography Standard	ASGS
Census Collection District	CCD
Distilled Spirits Industry Council of Australia	DSICA
Drug and Alcohol Office	DAO
Estimated Enumerated Population	EEP
Estimated Resident Population	ERP
Estimated Service Population	ESP
Intergovernmental Committee on Drugs	IGCD
Liquor Licensing	LL
Ministerial Council on Drug Strategy	MCDS
National Alcohol Indicators Project	NAIP
National Alcohol Sales Data Project	NASDP
National Drug Research Institute	NDRI
Office of Liquor and Gaming Regulation	OLGR
<i>Per capita</i> consumption	pcc
<i>Per capita</i> consumption derived from ERP	pcc/ERP
<i>Per capita</i> consumption derived from ESP	pcc/ESP
Pure alcohol content by volume	PACV
Ready to drink or pre-mixed spirit	RTD
Statistical Local Area	SLA
Statistical Subdivision	SSD
World Health Organization	WHO

# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

### GLOSSARY

Australian Standard Geographical Classification	ABS coding structure for Australian geographical information into pre-established categories, including Statistical Divisions, Statistical Subdivisions and Statistical Local Areas.
Australian Statistical Geography Standard	ABS coding structure for Australian geographical information into six hierarchical levels comprising in ascending order: Mesh Blocks, SA1s, SA2s, SA3s, SA4s and S/T's
Alcohol sales data	Information obtained from wholesalers regarding volumes of alcohol purchased from them by individual licensed retailers, or licensed retailer records of volumes of alcohol sold to the general public.
Estimated Enumerated Population	Count of all persons living in all occupied dwellings on the night of the Census (every 5 years), irrespective of whether they are usually resident in the area or are visitors.
Estimated Resident Population	ABS measure of Australian population. Based on Census data adjusted for population change since the most recent Census year, net overseas migration and estimated interstate movements. Overseas visitors are excluded.
Estimated Service Population	Developed for use in the NASDP. Based on ERP, but accounts for absent residents, Australian visitors and international tourists.
Inter-censal years	Years between census collections.
Mead	Brewed honey-based beverage with an average alcohol content of 12.5%.
<i>Per capita</i> consumption	Litres of absolute (pure) alcohol consumed, divided by population aged 15 years and over.
Ready to drink	Pre-mixed spirit-based drinks with an alcohol content less than 10%.
Alcohol supply	Purchase of wholesale alcohol by other licensed alcohol wholesalers or producers.
Tourists	Persons travelling to a place other than that of his/her usual environment for less than twelve months (ABS, 2000).

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **EXECUTIVE SUMMARY**

The harmful use of alcohol causes an estimated 2.5 million deaths every year and is the third leading risk factor for poor health globally, but it is one of the most preventable risk factors for major non-communicable diseases. Such is the global concern about harmful alcohol use that in May 2010 the Sixty-third World Health Assembly endorsed The Global Strategy to Reduce the Harmful Use of Alcohol which commits Member States to sustained action against harmful alcohol use at all levels. Such action requires data for evaluation and monitoring of alcohol-related policies and interventions.

The WHO recommends the collection of sales data as the gold standard in measuring alcohol consumption within communities, but there is a world-wide paucity of information collected on alcohol sales/purchases made by liquor retailers. In Australia, substantial efforts have recently been made to improve our knowledge base regarding the levels of alcohol available for consumption at local levels.

The Australian Bureau of Statistics (ABS) publishes annual national estimates of alcohol *per capita* consumption based on import clearance, excise and domestic alcohol sales data. The latest estimates for Australians aged 15 years and over demonstrate that alcohol consumption has been reducing in Australia since 2008 to 9.88 litres of pure alcohol in 2013. Until 1996, the ABS estimates were complemented by state and territory alcohol sales data collected by liquor licensing authorities. In 1996, however, the High Court of Australia ruled that liquor licensing fees and levies were, in fact, excise duties and as such illegal under the terms of the Australian Constitution. The ruling did not preclude the collection of wholesale alcohol purchase data by liquor licensing authorities but, for most jurisdictions, the incentive for continued collection was lost. Only the Northern Territory, Queensland and Western Australia continued to collect this information, but the Australian Capital Territory (ACT) commenced an alcohol sales data collection from July 1 2012.

The Australian Government, via the Intergovernmental Committee on Drug Strategy (IGCD), has funded the Drug and Alcohol Office of Western Australia (DAO) and the National Drug Research Institute (NDRI) at Curtin University in Perth, to develop the National Alcohol Sales Data Project (NASDP). In 2013/14, the NASDP is in its fourth funding year (Stage 4), having completed three analyses and reviews of alcohol sales data in three Australian jurisdictions (Loxley, Chikritzhs et al. 2010; Loxley, Chikritzhs et al. 2011; Loxley, Catalano

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

et al. 2012). The current report presents the work of the NASDP Stage 4. We are pleased to report that the data from the ACT first year of collection has been included in this report, and we congratulate the ACT on this achievement.

The overall objective of the NASDP is to construct an ongoing, regularly updated, national database of standardised alcohol sales data, which includes all Australian states/territories. The NASDP works closely with an Advisory Committee consisting of senior representatives of Liquor Licensing, Health and Police in every Australian jurisdiction, and the Australian Government Department of Health.

*Per capita* alcohol consumption is calculated by dividing volumes of pure alcohol by the number of people in a given population (usually persons aged 15 and over). The objective in measuring *per capita* consumption is to estimate the average amount of alcohol consumed by individuals in a particular population at a particular time as accurately as possible. For that reason the denominator should exclude children and others who are not consuming purchased alcohol at that time, but should include adult residents and visitors who are buying and consuming alcohol in that place at that time.

The NASDP uses a developed population estimate called an Estimated Service Population (ESP) to calculate *per capita* consumption. This measure, based on the ABS Estimated Residential Population (ERP), accounts for absent residents, Australian visitors and international tourists, and is used with all jurisdictions other than the Northern Territory who supply population data and tourist numbers.

Alcohol conversion factors are required to convert volumes of different alcohol-based beverages to volumes of absolute or 'pure' alcohol content. In the NASDP we use national alcohol conversion factors in order to derive standardised rates which can be used to compare *per capita* consumption across different regions and jurisdictions.

In the NASDP Stage 3 it was found that patterns in beverage choice in the three jurisdictions fell into two distinct types. In the Northern Territory and Queensland, beer on the one hand, and wine and spirits on the other, moved in opposite directions reaching a peak or a nadir in 2008/09 from which there has been slight movement. The pattern in Western Australia showed increases in all three major beverage types over the previous 2 – 3 years.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

In Stage 4, alcohol sales data for the financial year 2012/13 were made available to the NASDP by ACT Health which provided aggregated volumes by each beverage type for the whole of the ACT to the NASDP.

Alcohol sales data for 2010/11 were made available to the NASDP by the Northern Territory Department of Business. The Department supplied Reporting Areas for retailers, which allowed sales information to be aggregated into the six Urban Centres and Northern Territory Balance which is the Department's usual mode of presenting geographical information on alcohol sales. The ERP aged 15+ for the years 2005/06 to 2010/11 was supplied, as well as Department of Tourism estimates of the number of interstate and overseas visitors aged 15+ to the Northern Territory in the same years.

Alcohol sales data for the year 2010/11 were made available to the NASDP by the Queensland Office of Liquor and Gaming Regulation. The purchaser postcode was the primary geographical information.

De-identified alcohol sales data for 2010/11 were made available to the NASDP through the Western Australia Drug and Alcohol Office. Postcode was the primary geographical information.

In the ACT estimates are made of the jurisdiction as a whole while the Northern Territory sales data are aggregated into six Urban Centres and Northern Territory Balance. In Queensland and Western Australia alcohol volumes sold and *per capita* consumption are reported for the state as a whole and for Statistical Subdivisions (SSDs).

*Per capita* consumption and volumes of pure alcohol sold were mapped for the Northern Territory, Queensland and Western Australia and data for all jurisdictions are also presented in figures and tables.

The ACT provided data from the first year of collection (2012/13) submitted by 90% of wholesalers required to submit sales data. We found estimated *per capita* consumption unlikely to be a reasonable account of actual consumption levels and have not presented it in this report. The NASDP team congratulates the ACT for establishing an alcohol sales data collection, and thanks them for making the inaugural data available to the NASDP. We hope that the comprehensiveness of the collection will improve in the next few years as the new recording process becomes established.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

The estimated alcohol *per capita* consumption in the Northern Territory in 2010/11 was 13.30 litres of pure alcohol per adult (aged 15+), using population figures which included tourists. This is the lowest level seen in the time period reported for the Northern Territory by the NASDP. Less pure alcohol was sold in 2010/11 than in any preceding year in the NASDP analysis. Between 2009/10 and 2010/11 sales of most beverage types across the Northern Territory were relatively stable, with the exception of cider where there was a 7% increase in cider sales overall.

Examination of Queensland alcohol sales data suggested that returns did not completely reflect alcohol consumption in Queensland for the financial year 2010/11. Preliminary calculations found *per capita* consumption to be unreasonably low, suggesting that returns were incomplete from a small number of wholesalers. Apparent estimates of volumes of pure alcohol sold and *per capita* consumption based on ESP (pcc/ESP) in Queensland as a whole were developed for 2010/11 using data from 2010/11 and selected data from 2009/10 to estimate shortfalls from those wholesalers identified by the NASDP as having incomplete returns. Estimates at SSD level have not been calculated using these assumptions.

The overall estimated alcohol pcc/ESP for Queensland for 2010/11 was 10.91 litres of pure alcohol per individual aged 15+. Queensland pcc/ESP was relatively stable, ranging from 11.34 in 2007/08 to 10.91 in 2010/11.

The overall estimated alcohol pcc/ESP for Western Australia for 2010/11 was 13.24 litres of pure alcohol per individual aged 15+. Western Australia had the highest pcc/ESP in 2010/11 in the six years of the NASDP, having increased steadily during the last three years of the period. Between 2009/10 and 2010/11, Western Australia pure alcohol sales increased by 8.1%. Beer sales increased by 7.9% although wine sales decreased by 1.1%. The biggest rise was found in spirits, sales of which increased by 19.9%.

A comparison of population with alcohol sales and consumption in the Northern Territory and Western Australia demonstrates that trends in sales are not directly related to trends in population. In the Northern Territory, population steadily increased over the first five years for which the NASDP data are available, and alcohol volumes sold fluctuated across the same period, but *per capita* consumption has been decreasing across the entire period. Population has also been rising in Western Australia and sales, although fluctuating a little, have generally increased, but consumption has also been increasing across the period

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

demonstrating that rising sales are more likely to be a function of increasing consumption than of increasing population.

There have been significant changes to the ABS geographical reporting scheme which will affect the NASDP if the project continues beyond Stage 4. From 1 July 2011, the ABS moved to a new geographical system: the Australian Statistical Geography Standard (ASGS) and alcohol sales data collected after 1 July 2011 will be analysed in the NASDP under the new system. The closest approximation to Statistical Sub Division (SSD), which is the primary regional unit currently used in the NASDP, is SA3 and that will be the primary regional unit of analysis in future NASDP Stages.

Finally, we thank the jurisdictions who have supplied alcohol sales data to the NASDP for the and hope that they will continue to do so. The NASDP team look forward to welcoming jurisdictions which have new sales data collection and we trust that this report and the reports that preceded it will continue to demonstrate the policy and practice value of alcohol sales data analysis.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **INTRODUCTION**

### **BACKGROUND TO THE NASDP**

Alcohol-related morbidity and mortality are global phenomena. The harmful use of alcohol causes an estimated 2.5 million deaths every year and alcohol use is the third leading risk factor for poor health globally. Moreover, the harmful use of alcohol is one of the four most preventable risk factors for major non-communicable diseases (World Health Organization 2010).

Harmful use of alcohol was responsible for 3.8% of all deaths in the world in 2004, and 4.5% of the global burden of disease. A significant proportion of the disease burden arises from unintentional and intentional injuries, including those due to road traffic crashes, violence and suicides. Fatal injuries attributable to alcohol consumption tend to occur in relatively young people (World Health Organization 2010).

The significance of alcohol-related harm is such that in May 2010 the Sixty-third World Health Assembly endorsed The Global Strategy to Reduce the Harmful Use of Alcohol. This document and associated activities represents the commitment by the Member States of the WHO World Health Organization WHO to sustained action against harmful alcohol use at all levels (World Health Organization 2010).

Data from monitoring and surveillance are critical to successful alcohol policy. The development of sustainable information systems allows for effective evaluation of national efforts to reduce the harmful use of alcohol, and for monitoring trends at regional and subregional levels. Systematic continual collection, collation and analysis of data and the timely dissemination of information and feedback to policy-makers and other stakeholders should be an integral part of implementation of any policy and intervention to reduce the harmful use of alcohol (World Health Organization 2010).

There is a world-wide paucity of information collected on alcohol sales/purchases made by liquor retailers. The WHO recommends the collection of sales data as the gold standard in measuring alcohol consumption within communities (sales data are far superior to self-report surveys which typically only account for about 60% of known consumption from sales data) (Stockwell, Donath et al. 2004). Fortunately, in Australia, substantial efforts have recently been made to improve our knowledge base regarding the levels of alcohol available for consumption at local levels.



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

In Australia, in 2007, the Ministerial Council on Drug Strategy (MCDS) highlighted the absence of systematic and standardised Australia-wide alcohol sales data collections<sup>1</sup>. In response, the Australian Government Department of Health funded the Drug and Alcohol Office of Western Australia (DAO) and the National Drug Research Institute (NDRI) at Curtin University in Perth, to develop the National Alcohol Sales Data Project (NASDP). In 2013/14, the NASDP is in its fourth funding year, having completed three analyses and reviews of alcohol sales data in three Australian jurisdictions (Loxley, Chikritzhs et al. 2010; Loxley, Chikritzhs et al. 2011; Loxley, Catalano et al. 2012). The current report presents the work of the NASDP Stage 4.

### **THE SIGNIFICANCE OF ALCOHOL CONSUMPTION DATA**

Every year more than 3,000 people die prematurely from risky or high risk alcohol use and more than 100,000 people are hospitalised in Australia (Pascal, Chikritzhs et al. 2009). Currently, in Australia, as elsewhere, the regulation of alcohol misuse is the subject of both community and political debate. There are many stakeholders in this debate including legislators, liquor licensing decision makers, health, police, and, not least, communities and individuals who bear the social and economic burden of alcohol misuse. Future debate could be far better informed by publically available and widely disseminated policy-relevant research based on Australian data.

Alcohol consumption is heavily influenced by interventions put in place by jurisdictional and Commonwealth governments. All jurisdictional governments have enacted legislation which controls the sale of alcohol and places general restrictions on who may purchase alcoholic beverages, who may sell them, the places from and hours at which they may be sold, as well as specific conditions that can be imposed upon individual licences.

In December 2012 the Western Australia (WA) Minister for Racing and Gaming, appointed an independent review Committee to review the WA Liquor Control Act. This committee recently reported and in that report described the valuable uses of alcohol sales data collections in the control of alcohol-related harm (Independent Review Committee 2013).

Submissions were received from a number of agencies who supported the collection of alcohol sales data. The WA Police, for example, submitted that:

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<sup>1</sup> Australian Bureau of Statistics national apparent alcohol consumption estimates are derived from customs and excise data and cannot be disaggregated by state/territory.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

... the collection of wholesale sales data can provide an excellent measure of ‘apparent per-capita consumption’ of alcohol which helps identify regions of high per-capita consumption and high levels of alcohol-related harm around the state and allows WA Police to target interventions to areas identified with greatest need. Alcohol sales data also helps provide the rationale for interventions such as liquor restrictions in these areas and can also help to evaluate the effectiveness of liquor restrictions. In summary, the continued collection of wholesale alcohol sales data is an important tool in measuring alcohol-related harm and evaluating intervention strategies. (Independent Review Committee 2013 p. 219).

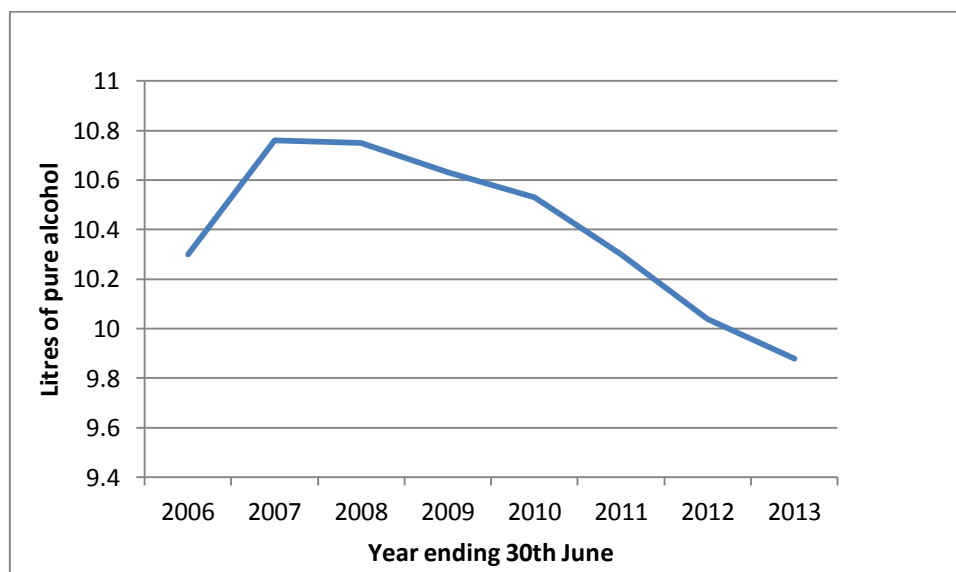
In conclusion the Committee stated that:

... there is a clear need to continue with the collection of wholesale sales data from a health and police perspective. In this regard, the Committee recommends the Minister monitor the outcomes of the National Alcohol Sales Data Project with a view to improving the data collected and capturing transactions which occur in other jurisdictions (Independent Review Committee 2013 p. 220).

The Australian Bureau of Statistics (ABS) publishes annual national estimates of alcohol *per capita* consumption based on import clearance, excise and domestic alcohol sales data. The latest estimates for Australians over the age of 15 years (15+) can be seen in Figure 1 which demonstrates that alcohol consumption has been reducing in Australia since 2008.

It should be noted that in their 2011 - 12 report the ABS revised estimates from 2004 - 05 of the total quantity of pure alcohol available for consumption in order to include cider. Other revisions included minor changes related to revisions of source data and population estimates (Australian Bureau of Statistics 2013). There were similar minor revisions in the 2012 - 13 report. The latest revised figures have been used in the current report.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT



**Figure 1 National per capita consumption of pure alcohol per person aged 15 years and over (Australian Bureau of Statistics 2014)**

Until 1996, the ABS estimates were complemented by state and territory alcohol sales data collected by liquor licensing authorities (Hall, Chikritzhs et al. 2008). In 1996, however, the High Court of Australia ruled that liquor licensing fees and levies were, in fact, excise duties and as such illegal under the terms of the Australian Constitution, because only the Commonwealth Government was empowered to impose excise duties. The ruling did not preclude the collection of wholesale alcohol purchase data by liquor licensing authorities but, for most jurisdictions, the incentive for continued collection was lost. Only the Northern Territory (NT), Queensland and WA continued to collect this information which means that invaluable data for informing alcohol policy and liquor licensing action and evaluating licensing restrictions are no longer available (Chikritzhs 2009). Recently, however, the Australian Capital Territory (ACT) commenced an alcohol sales data collection from July 1 2012. We are pleased to report that the data from their first year of collection has been included in this report, and we congratulate the ACT government on this achievement.

#### **THE NASDP OBJECTIVES AND AIMS**

The overall objective of the NASDP is to construct an ongoing, regularly updated, national database of standardised alcohol sales data which includes all Australian states/territories. This is progressed by jurisdictions supplying the project with electronic copies of their alcohol sales records conforming to a minimum set of specifications. These data sets are then systematically prepared and analysed by the NASDP staff.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

Other project aims include:

- monitoring alcohol consumption trends by regularly estimating *per capita* alcohol consumption for all participating states/territories;
- providing an annual report on consumption by region containing summaries of alcohol sales data and alcohol *per capita* consumption estimates for all participating states/territories and the Commonwealth; and
- providing standardised alcohol sales data sets for use by jurisdictions.

It is anticipated that the annual report will demonstrate the value of alcohol sales data for policy and services evaluation and encourage jurisdictions not currently collecting these data to closely consider the merits of doing so. An important aspect of the project is its capacity to work directly with relevant personnel in specific jurisdictions to assist in the development of sales data collections.

### **IMPLEMENTATION AND ESTABLISHMENT OF THE NASDP**

The NASDP works closely with an Advisory Committee (AC) consisting of senior representatives of Liquor Licensing (LL), Health and Police in every Australian jurisdiction and the Australian Government Department of Health. The purpose of the AC is to:

- provide guidance and advice on proposed processes and the use of sales data;
- communicate representatives' interests and requirements regarding sales data;
- provide comment and suggestions on draft annual reports; and
- support the aims and ongoing functions of the project.

Meetings are held via group teleconference twice a year and provide an opportunity for AC representatives to discuss any data collection issues that may arise and to provide feedback on draft reports. The first teleconference for the NASDP Stage 4 was held on February 13, 2014.

### **RESULTS IN THE NASDP STAGE 3**

The following is a summary of findings in the NASDP Stage 3. De-identified alcohol sales data were supplied to the NASDP by the NT, Queensland and WA for 2009/10.

The Northern Territory required that the NASDP only report *per capita* consumption for the Territory as a whole, using population data which included the numbers of tourists<sup>2</sup> during the relevant period. Alcohol volumes sold were to be reported for Urban Centres and the

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<sup>2</sup> Numbers provided by the Northern Territory.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

Remainder of the NT<sup>3</sup>. In Queensland and WA, alcohol volumes sold and *per capita* consumption were reported for the state as a whole and for Statistical Subdivisions (SSDs).

**Estimated alcohol consumption in the NASDP Stage 3**

The estimated alcohol *per capita* consumption in the NT in 2009/10 was 13.60 litres of pure alcohol per individual aged 15+, using population figures which included tourists. More pure alcohol was sold in 2009/10 than in the preceding years other than 2007/08, but this appeared to be associated with population growth rather than increased consumption. Between 2008/09 and 2009/10 sales of most beverage types across the NT were relatively stable. Sales of standard spirits decreased by approximately 1%, and sales of pre-mixed spirits (RTDs) increased by approximately 4% between 2008/09 and 2009/10.

Queensland pcc/ESP<sup>4</sup> was relatively stable at 11.34 litres in 2008/09, 10.98 in 2007/08 and 11.03 in 2009/10. High alcohol consumption was found in the metropolitan area, the Gold Coast and several coastal cities. Low alcohol consumption was found in some parts of Brisbane and the Sunshine Coast, Somerset, and Townsville. These findings are similar to those in 2008/09 where it was posited that the inner Brisbane area had particularly high alcohol consumption because of a combination of relatively low resident population, its status as an entertainment area and alcohol sales to city workers, and that coastal cities with high alcohol consumption had relatively high levels of tourism.

Across Queensland, sales of pure alcohol were increased in 2009/10 compared to the previous year, and the largest amounts of alcohol were generally sold on the eastern seaboard, although these did not necessarily translate into high *per capita* consumption. Sales of standard spirits decreased by approximately 7%, and sales of pre-mixed spirits (RTDs) increased by approximately 5% between 2008/09 and 2009/10.

Western Australia had its highest pcc/ESP of 12.37 in 2009/10 across the five year period other than in 2007/08 where pcc/ESP was 12.72. In 2009/10, higher pcc/ESP was found in Central Metropolitan, as well as several regions with highly mobile workforces and/or high tourism. The same factors that appear to have influenced high alcohol consumption in Inner Brisbane are likely to have influenced alcohol consumption in WA's Central Metropolitan region.

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<sup>3</sup> Regional areas defined by the Northern Territory.

<sup>4</sup> Per capita consumption derived from Estimated Service Population

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

Between 2008/09 and 2009/10, WA pure alcohol sales increased by 8.5%. Beer and wine sales increased by 8% and spirits sales increased by 5.5%. It should be noted that WA data do not separate regular and pre-mixed spirits, and do not distinguish sales of cider and other alcoholic beverages as separate categories.

**Trends in alcohol consumption in the NASDP Stage 3**

Beverage consumption patterns were similar in the Northern Territory and Queensland during the three years for which data were available for both jurisdictions. In both, total beer sales peaked in 2008/09 and then fell slightly to 2009/10. Sales of wine and spirits, on the other hand, reached their lowest points in both jurisdictions in 2008/09 and increased slightly in 2009/10.

The pattern in Western Australia was different. Total beer sales increased markedly in 2007/08 and then decreased in the following year, although increasing again in 2009/10. Wine and spirits sales were at their lowest point in 2007/08 and increased in each of the following 2 years.

These patterns appear to reflect the changing circumstances of the jurisdictions. WA had been in boom conditions for at least the previous three years with an increasing and highly mobile occupational population. WA's rising alcohol consumption and patterns in beverage choice might have been related to these economic conditions.

Alcohol consumption and beverage choice in the NT and Queensland on the other hand may have reflected a community concern with alcohol consumption and considerable efforts over the previous few years to address it. Overall alcohol consumption was decreasing and beverage choice was moving from beverages with higher alcohol content such as wine and spirits towards those such as beer which have lower alcohol content.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **METHODS**

### **DATA TRANSFER ISSUES**

A number of general conditions underlie data transfer arrangements in the NASDP.

- Individual state and territory governments are responsible for and retain ownership over the collection of electronic alcohol sales data within their own jurisdiction.
- The NASDP staff consult individually with responsible departments on minimum data set specifications, data transfer arrangements, confidentiality requirements and data quality checks.
- The NDRI liaises with participating jurisdictions to ensure confidentiality requirements are satisfied. All the NASDP staff are required to sign a data confidentiality agreement.
- All jurisdictions contributing alcohol sales data are consulted in relation to appropriate functional levels of reporting. Alcohol sales are not reported by liquor licence, and minimum sample rules (i.e. by geographic area) have been established to ensure the privacy of individual retailers is protected.

### **OVERVIEW OF METHODS**

All analytical work is supervised by senior researchers at the NDRI and electronic data are housed on secure servers at the NDRI.

Upon data transfer from jurisdictional collection agencies (e.g. liquor licensing authorities), alcohol sales data are cleaned, standardised and analysed.

Regional alcohol *per capita* consumption estimates are made using various population estimates.

Standardised data sets containing jurisdictional alcohol sales data are made available to nominated jurisdictional representatives.

Alcohol sales data cannot be transferred to third parties without the written consent of the relevant jurisdiction(s).

In 2014, the NT, Queensland and WA made de-identified alcohol sales data relating to the financial year 2010/11 available to the NASDP Stage 4. The current report presents all data available to the NASDP, including that previously presented, for comparison. Some previously presented data have been revised as detailed below.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

In 2014 the ACT made de-identified alcohol sales data relating to the financial year 2012/13 available to the NASDP Stage 4.

***PER CAPITA* CONSUMPTION CALCULATION METHOD**

*Per capita* consumption is calculated by relating pure alcohol content by volume (PACV) consumed, to the population aged 15+ as described in the following equation (Farah, Unwin et al. 2007):

$$\text{Per capita consumption} = \frac{\text{litres of absolute alcohol}}{\text{population 15+}}$$

**POPULATION ESTIMATES**

**Background**

The objective in measuring *per capita* alcohol consumption is to estimate the average amount of alcohol consumed by individuals in a particular population at a particular time as accurately as possible. For that reason the denominator should exclude children and others who are not consuming purchased alcohol at that time, but should include adult residents and visitors who are buying and consuming alcohol in that place at that time.

Measures of residential population such as ERP, can be poor guides to population in areas that are important in alcohol policy such as areas of high tourism or large entertainment districts. In some high tourism areas, for example, excluding tourists from the population denominator can be demonstrated to have inflated estimated *per capita* consumption.

The term ‘service population’ is used to denote a population that has been adjusted to include all relevant people for a particular purpose. An Estimated Service Population (ESP) was developed for the NASDP Stage 2 and compared to Estimated Resident Population (ERP) and Estimated Enumerated Population (EEP) which was included as a control condition.

At a state level, the differences found between consumption based on ERP or ESP were minimal, but larger differences were found in some regional areas. These differences suggested that ESP was a useful estimate for calculating alcohol consumption at a regional level, and was likely to be more accurate for this than estimates based on ERP.

A brief paper and summary of these issues was given to the IGCD Standing Committee on Alcohol. The Committee supported the use of ESP as the primary denominator in the NASDP reports, provided that *per capita* consumption estimates based on ERP were retained in an appendix to allow broader comparison. In Stage 3 most tables and maps were based on



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

pcc/ESP (*per capita* consumption derived from ESPs), and pcc/ERPs (*per capita* consumption derived from ERPs) were appended. The same approach has been used in Stage 4 as reported.

**Derivation of population estimates**

- The task in the NASDP Stage 4 was to calculate ESP for 2010/11 for WA and Queensland using Statistical Subdivision (SSD) boundaries established by the ABS. ESP for previous years data had been calculated in NASDP Stage 3 (method outlined below).<sup>5</sup> ESP is effectively a calculation of the service population within each SSD as at 30 June of each particular year.
- ESP was calculated for both the total population and the drinking age population (assumed conservatively to be 15 years and older).
- ESP for each SSD and period is calculated by adding to the ABS resident population (ERP) an estimate of “net visitors” (NV).
- NV is based on ERP and EEP data for 2006 and 2011 and is calculated by subtracting ERP from the census based EEP.
- This calculation of ESP is thus the resident population adjusted for the number of persons away from their residence or those visiting the SSD from other SSDs in Australia or from overseas for each year of interest.
- Because EEP is only available for census years, it was necessary to estimate it for inter-censal years. This was done as follows:
  - 2005/06 use census data directly
  - 2006/07 use average of net visitors from 2006 and 2011
  - 2007/08 as above
  - 2008/09 as above
  - 2009/10 as above
  - 2010/11 use census data directly

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<sup>5</sup> As detailed below, the Northern Territory requires that the NASDP calculates *per capita* consumption based on ERP to which is added tourism figures supplied by the jurisdiction.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

- At the time ESP for 2005/06 through 2009/10 was calculated, the ABS had yet to release age based ERP for the 2011 census so it was necessary to estimate ERP for ages 15+. This was done using a ratio approach which applied the same ratio of the 15+ ERP for 2010 of the ERP in 2010 to the ERP for the total population for 2011.
- Age based ERP for the 2011 census was available by the time we came to calculate 2010/11 ESP in Stage 4. Please note that ESP for earlier years has not been updated to reflect these newly available data.
- Because of the changes to SSD boundaries over time and the difficulties in comparing these regions over time, particularly for Queensland, it was decided to calculate ESP based on the 2005/06 SSD boundaries for all years of interest. To accomplish this, a specific data extraction was obtained from the ABS for 2007 through 2011 ERP and census EEP data recalculated on 2005/06 SSD boundaries.
- Once ERP data were obtained for each year and SSD and the estimated net visitors were calculated for the same, it was simply a matter of adding the net visitor estimate for each year and SSD to the ERP for the ERP data for the same.
- So, ESP for census years 2005/06 and 2010/11, essentially, was calculated as follows:
  - $ESP = ERP + \text{Net Visitors}$
  - Where  $\text{Net Visitors} = EEP - ERP$
  - (i.e. for 2006 and 2011,  $ESP = EEP$ )
- ESP for 2006/07 through 2009/10 was calculated as follows:
  - $ESP = ERP + NV$
  - Where  $NV = (\text{Net Visitors } 2006 + \text{Net Visitors } 2011) / 2$
- The results demonstrate that the great majority of SSDs showed a small difference between ESP and ERP. For discussion purposes, in Queensland, in 2010/11, the majority of SSDs showed up to around 5% difference between ERP and ESP. In WA, the variability was greater with the majority of SSDs having up to 10% difference between ERP and ESP.
- Between 2009/10 and 2010/11, ERP increased in WA by 2.4% to 2.439 million persons and in Queensland by 1.6 % to 4.580 million persons. ESP increased in WA by 2% to 2.250 million persons and in Queensland by 0.02% to 4.388 million.

# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

- The results for 2010/11 show that the most dramatic differences between ERP and ESP for SSDs in Queensland are in Inner Brisbane (8%), Central West (18%), Mackay (10%), Thuringowa (-11%), Toowoomba (-10%) and North West (15%).
- In WA, there are very large differences for a number of SSDs where there is a small resident population (ERP): Pallinup (-13%), Lefroy (52%), Ord (37%), Gascoyne (51%) and Carnegie (84%). However, also in WA, regional SSDs with larger base populations also show large differences between ERP and ESP: De Grey (53%), Fortescue (66%) and Fitzroy (32%).
- These differences are likely to be explainable by the expected higher ESP (as opposed to a generally lower expected ERP) particularly related to mining in WA but also tourism and seasonal work in Queensland.

### ASGC REGIONAL UNITS

The Australian Standard Geographical Classification (ASGC) is used by the ABS for the collection and dissemination of geographically classified statistics. It provides seven hierarchies of geographical areas which allow coding of data into pre-established categories. In the Main Structure, jurisdictions are divided into Statistical Divisions (SDs) which are made up of Statistical Subdivisions (SSDs), which are in turn made up of Census Collection Districts (CCDs) aggregated into Statistical Local Areas (SLAs).

In Stage 4, the NASDP data for Queensland and WA were analysed at the level of SSDs. Different regional areas were used for the NT as detailed below. Regional units are presented in this report as maps and tables. The ACT data related to the Territory as whole and have been presented as a single jurisdictional region.

In this report we flag changes that will occur if the NASDP continues beyond Stage 4. From 1 July 2011, the ABS moved to a new geographical system: the Australian Statistical Geography Standard (ASGS). The structure has six hierarchical levels comprising in ascending order: Mesh Blocks, SA1s, SA2s, SA3s, SA4s and S/T's. Each level directly aggregates to the level above. Alcohol sales data collected after 1 July 2011 that are currently analysed in the NASDP as SSDs will be analysed under the new system. The closest approximation to SSD is SA3 and that will be the primary regional unit of analysis in future NASDP Stages.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **OVERVIEW OF PCC CALCULATION BY JURISDICTION**

- Alcohol sales data were prepared as below.
- In the ACT, sales data were aggregated for the ACT as a whole by ACT Health.
- In the NT, alcohol volume data were aggregated into Urban Centres and NT Balance. These areas were pre-determined by the NT Department of Business using amalgamations of ASGS units.
- In Queensland and WA, alcohol volume data were aggregated into SSDs using postcodes contained within the data sets.
- Volume data were partialled out to regional areas, where appropriate, and alcohol conversion factors (see below) were applied to volumes of different beverages to create total pure alcohol content by volume (PACV).
- Year appropriate population estimates were adjusted for the 15+ population, and *per capita* consumption calculated according to the above equation.
- For Queensland and WA, alcohol volumes and *per capita* consumption were not reported for SSDs with fewer than six clearly identifiable licensed premises.

## **PREPARATION OF ALCOHOL SALES DATA**

General considerations for data cleaning and preparation included:

- Anomalies in the data were identified and either corrected or removed.
- Apparent outliers in the data were queried with the relevant authority and appropriate action taken.
- In some data sets, postcodes were used as the basic geographical identifier. In these cases, a small number of records which did not contain a purchaser postcode were removed.
- Volumes of alcohol sold (litres) were the base unit of *per capita* consumption calculation. A small number of records which did not contain volume data were removed.
- Records were removed if they related to supply to other wholesalers or wine producers as these would otherwise be duplicated in wholesaler to retailer records.

### **The Australian Capital Territory**

The ACT utilises an annual return.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

The ACT Liquor Regulation 2010 applies to a licensee who sells liquor by wholesale under an off-licence. No later than 1 month after the end of each financial year, all such licensees must give the Commissioner of Fair Trading and ACT Health's Chief Health Officer information, in writing, about the volume in litres of all types of liquor sold by wholesale during the financial year.

Alcohol sales data for the financial year 2012/13, which was the first year of collection, were made available to the NASDP by ACT Health. ACT Health provided aggregated volumes by each beverage type for the whole of the ACT to the NASDP.

### **The Northern Territory**

The NT utilises a quarterly return.

At the end of every quarter of each year all licensed NT wholesalers are emailed, reminding them of their obligations under Section 114 of the Liquor Act which states they have 28 days from the end of the quarter to lodge with the Wholesale Quarterly Return of Liquor Sales, showing details of all purchases and sales of liquor made in the quarter.

Alcohol sales data were made available to the NASDP by the NT Department of Business for 2010/11, conveyed in an Excel spreadsheet. The Department supplied Reporting Areas for retailers, which allowed sales information to be aggregated into the six Urban Centres and NT Balance which is the Department's usual mode of presenting geographical information on alcohol sales. The numbers of Estimated Residential Population aged 15+ for the years 2005/06 to 2010/11 were supplied, as well as Department of Tourism estimates of the number of interstate and overseas visitors aged 15+ to the NT in the same years. Population figures had been amended in line with ABS changes to population estimates, which necessitated minor updating of previous NASDP NT population estimates.

The Department of Business has requested that the NASDP report *per capita* consumption for the NT using ERP plus tourism figures for the jurisdiction as a whole, but not for regional units where tourist estimations were not as reliable. It has been agreed that volumes of alcohol sold would be reported for Urban Centres and the NT Balance, and that *per capita* consumption for the NT as whole would be calculated primarily with the tourism estimate<sup>6</sup>.

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<sup>6</sup> Estimates of Northern Territory *per capita* consumption without the influence of tourism can be found in Appendix II. If pcc/ESP was presented for the Northern Territory, as in QLD and WA, the pcc estimates would likely be higher as absent residents would be accounted for as well as visitors/tourists.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

The Department has also updated regional definitions slightly to correspond to ABS Australian Statistical Geography Standard boundaries, which required previous NASDP regional volumes to be amended.

### **Queensland**

Queensland utilises two annual returns:

- Return of Liquor Sales under the Liquor Act 1992. This return should be completed by every holder of a producer/wholesaler licence.
- Annual return under the Wine Industry Act 1994. This return should be completed by every holder of a wine producer or wine merchant licence.

Alcohol sales data were made available to the NASDP by the Queensland Office of Liquor and Gaming Regulation (OLGR) for the year 2010/11. Data were conveyed in Excel spreadsheets and the purchaser postcode was the primary geographical information.

The records were aggregated by wholesaler, and licence numbers of purchasers examined to determine whether supply had been made to other wholesalers, wine producers and wine merchants. As noted above, these purchases were removed from the data set to avoid double counting.

### **Western Australia**

The Government of WA utilises two annual returns:

- Summary of Transaction Under a Wholesale Licence, Liquor Control Act, 1988. This return should be completed by every holder of a Wholesaler's Licence.
- Summary of Transaction Under a Producer's Licence, Liquor Control Act, 1988. This return should be completed by every holder of a Producer's Licence.

De-identified alcohol sales data for 2010/11 were made available to the NASDP through the WA Drug and Alcohol Office. These were conveyed in Excel spreadsheets. Postcode was the primary geographical information.

The records were aggregated, and examined to determine whether they were wholesalers and/or producers. Such records were removed from the data set to avoid double counting, thus leaving only sales made to retail licensees for further analysis.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

Postcodes were aggregated into Statistical Subdivisions (SSDs) using the 2011 Postcode to SSD Correspondence, prepared by the Geography Section within Population Labour and Social Statistics in the ABS.

### **ALCOHOL CONVERSION FACTORS**

Alcohol conversion factors are required to convert volumes of different alcoholic beverages (which may contain many other substances in addition to alcohol such as water and sugar) to volumes of absolute or 'pure' alcohol content (PACV). The NASDP has used national alcohol conversion factors in order to derive standardised rates which are used to compare *per capita* consumption across different regions and jurisdictions.

As an example, the NASDP PACV for mid-strength beer is 0.0348. This means that the average mid-strength beer contains 3.48% pure alcohol. In this example, the volume of mid-strength beer sold by retailers was multiplied by 0.0348 to obtain the volume of pure alcohol.

The NASDP relies on the ABS as a major source of information for its alcohol conversion factors. For the most part, the NASDP has used the ABS 2010 alcohol conversion factors for beer, table wine, fortified and sparkling wine (Australian Bureau of Statistics 2010). This publication observed that there had been an increase in the alcohol content of wine over the past decade. This fact was taken into consideration for the first time by the ABS national estimates of apparent *per capita* consumption. The new alcohol conversion estimates were also used to estimate new trends in Australian *per capita* consumption (Chikritzhs, Allsop et al. 2010) demonstrating that, contrary to previous official estimates that *per capita* consumption had remained stable for over a decade, actual alcohol consumption in Australia was at one of its highest points since 1991/92.

Information informing alcohol conversion factors for spirits and RTDs are derived from a review performed for the Department of Health on standard drink estimations, hereafter described as the NDRI review (Chikritzhs and Catalano 2008). (The ABS collects pure alcohol volumes data for spirits and RTDs and does not collect data on cider, therefore it does not publish pure alcohol contents for these beverages in its reports.) The NDRI review is based on market brand shares for each major beverage type (beer, wine and spirits) identified using Euromonitors data. Average alcohol contents of the most popular brands were identified using on-line liquor guides and reference books. When alcohol contents could not

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

be identified from these sources, visits were made to local liquor stores. Preliminary conversion factors were estimated for the following groups of beverages:

- **Beer:** low- (2.5-2.9%) mid- (3.0-3.5%) and full-strength (>3.5%)<sup>7</sup>
- **Bottled wine:** red, white, sparkling and fortified
- **Cask wine:** red and white
- **Spirits:** whisky, bourbon, brandy, dark rum and white rum, vodka, gin
- **RTDs**<sup>8</sup>: mid-strength (3.5% alcohol content); full-strength (3.5% to less than 6%) and super-strength (6% to 10%)<sup>9</sup>
- **Cider:** in keeping with previous consensus (Catalano, Chikritzhs et al. 2001) an alcohol content of 5%.

Where applied, the specific PACV derived from the NDRI review has been identified in Table 1. Specific considerations given to each jurisdiction are described below, with final jurisdiction-specific conversion factors also summarised in Table 1.

### **The Australian Capital Territory**

The ACT alcohol sales data contained the following categories:

- full-strength, mid-strength and low-strength beer;
- regular-strength bottled and cask wine, low-strength bottled and cask wine; fortified wine;
- spirits and pre-mixed spirit based drinks.

The PACV estimated for different categories of beer by the ABS in 2010 has been applied to ACT beers (see Table 1). The definition of full-strength, mid-strength and low-strength beer used in the ACT 'Liquor Sales Reporting Template' approximates those used by the ABS for the same categories. The ACT defines full-strength beer as 4% or greater, mid-strength beer as 3% to less than 4% and low-strength beer as less than 3% PACV.

The ACT sales data do not differentiate between red, white and sparkling table wines. The NDRI review estimates an overall pure alcohol content for table wine of 12.3% and this figure was applied to ACT regular-strength wine data. In other evaluations it has been assumed that cask wine has the same alcohol content as bottled wine (Gray, Chikritzhs et al.

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<sup>7</sup> 'Light' beer was not included

<sup>8</sup> Ready To Drink or pre-mixed spirit based drinks.

<sup>9</sup> Any product with greater alcohol content than 10% was considered full-strength spirit and not included.



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

1999) and this assumption has also been applied to ACT cask wine. The ABS estimate of the pure alcohol content of fortified wine has been used. Low-strength wine is defined by the ACT as containing less than 3.5% PACV and has been converted with a factor of 3.5% (Catalano, Chikritzhs et al. 2001).

Australian Capital Territory spirits and pre-mixed spirit based drinks are not defined in the ACT Liquor Regulation 2010. The PACV of spirits and RTDs estimated in the NDRI review have been applied.

### **The Northern Territory**

The NT alcohol sales data contained the following categories:

- full (strength) beer, mid (strength) beer, low (strength) beer;
- cask wine, bottled wine, fortified wine;
- pre-mixed spirits, standard spirits; and
- cider.

The PACV estimated for different categories of beer by the ABS in 2010 has been applied to NT beers. The definition of full-strength, mid-strength and low-strength used in the NT ‘Wholesaler Return of Liquor Sales’ approximated those used by the ABS for the same categories. The NT defines full-strength beer as greater than 3.99%, mid-strength beer as 3.01% to 3.99% and low-strength beer as 1.15% to 3.00%.

The NT sales data did not differentiate between red, white and sparkling table wines. The NDRI review estimates an overall pure alcohol content for table wine of 12.3% and this figure was applied to the NT wine data. In other evaluations it has been assumed that cask wine has the same alcohol content as bottled wine (Gray, Chikritzhs et al. 1999) and this assumption has also been applied to NT cask wine. The ABS estimate of the pure alcohol content of fortified wine has been used.

The pure alcohol contents for spirits and cider estimated by the NDRI review have been applied to the NT data.

The NASDP alcohol conversion factors are slightly different than those used by the Department of Business, hence there are small differences in estimated per capita consumption reported by the NASDP and by the NT.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## **Queensland**

Queensland alcohol sales data contained the following alcohol beverage categories:

- heavy beer, medium beer, light beer;
- cider;
- bottled table wine, bottled fortified wine, bulk table wine, bulk fortified wine;
- regular spirits, pre-mixed spirits; and
- alcoholic sodas.

The PACV estimated for different categories of beer by the ABS in 2010 has been applied to Queensland beers (see Table 1). The definition of 'heavy', 'medium' and 'light' beer used in the Queensland 'Return of Liquor Sales' approximated those used by the ABS for full-strength, mid-strength and low-strength beers. Queensland defines heavy beer as 4% or greater, medium beer as 3% to less than 4% and light beer as less than 3% PACV.

As in the NT, the Queensland sales data did not differentiate between red, white and sparkling wines, thus the NDRI overall conversion figure of 12.3% was applied. The ABS conversion factor for fortified wine has been applied.

There is also no differentiation in the Queensland data for cask wine. There is, however, a category referred to as 'bulk wine', which is a large quantity of table or fortified wine acquired or supplied in a container of more than 20 litres. This analysis has used the same alcohol content for Queensland bulk table and fortified wines as for bottled table and fortified wines respectively.

The PACV of spirits and RTDs and cider estimated in the NDRI review have been applied. The alcohol content of alcoholic sodas was established by (Catalano, Chikritzhs et al. 2001).

## **Western Australia**

The Western Australia alcohol sales data contained the following beverage categories:

- high (alcohol) beer, low (alcohol) beer;
- high (alcohol) wine, low (alcohol) wine; and
- spirits.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

The PACV estimated for full- and mid-strength beer by the ABS in 2010 has been applied to WA ‘high’ and ‘low’ beers, low beer having previously been defined in WA as having an alcohol content of 0.035 (Catalano *et al.*, 2001).

The WA data, like the NT and Queensland data, did not differentiate between different kinds of table wine so an overall average alcohol content of 12.3% was assumed. Low alcohol wine in the WA data has been converted with a factor of 3.5% as it was by Catalano *et al.* (2001).

WA alcohol sales data do not distinguish straight spirits (e.g. bottled vodka) from pre-mixed spirits (e.g. ‘vodka cruisers’), as they only record volumes for all spirit-based products combined. Thus, the alcohol content of ‘spirits’ in WA depends upon the proportion of RTD or pre-mixed spirits in the total volume sold. Information sourced from the Distilled Industry Council of Australia (DSICA) has identified that the proportion of the total spirits market made up of pre-mixed products has been steadily rising since 2001 (Distilled industry Council of Australia 2006). Using this information, the NDRI has calculated that the average alcohol content of spirits in WA was about 0.108 in 2005/06 and 0.106 in 2006/07. Information about the market share of pre-mixed spirits in subsequent years is not available. The NASDP, therefore, has used the alcohol conversion factor of 0.108 in 2005/06 and 0.106 in 2006/07 to 2010/11.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Summary of alcohol conversion factors**

**Table 1 Alcohol conversion factors by jurisdiction**

<b>Beverage</b>	<b>Source</b>	<b>Terms</b>	<b>PACV<sup>1</sup></b>
<b>Beer</b>	ABS, 2010	full beer	0.0476
		low beer	0.0269
	ACT 12/13	full beer	0.0476
		mid beer	0.0348
		low beer	0.0269
	NT 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	full beer	0.0476
		mid beer	0.0348
		low beer	0.0269
	Queensland 07/08, 08/09, 09/10, 10/11	heavy beer	0.0476
		medium beer	0.0348
		light beer	0.0269
	WA 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	high beer	0.0476
low beer		0.0348	
<b>Wine</b>	NDRI Review	table wine	0.1230
	ABS, 2010	fortified wine	0.1790
		regular bottled wine	0.1230
	ACT 12/13	regular cask wine	0.1230
		low bottled wine	0.0350
		low cask wine	0.0350
		fortified wine	0.1790
		NT 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	cask wine
	Queensland 07/08, 08/09, 09/10, 10/11	bottled wine	0.1230
		fortified wine	0.1790
		bottled table wine	0.1230
	WA 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	bulk table wine	0.1230
		bottled fortified wine	0.1790
		bulk fortified wine	0.1790
		high wine	0.1230
low wine	0.0350		
<b>Spirits</b>	NDRI review	spirits	0.4170
		ready to drink	0.0501
	ACT 12/13	spirits	0.4170
		pre-mixed spirit based	0.0501
	NT 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	standard spirits	0.4170
		pre-mixed spirits	0.0501
	Queensland 07/08, 08/09, 09/10, 10/11	regular spirits	0.4170
		pre-mixed spirits	0.0501
	WA 05/06	spirits	0.1080
	WA 06/07, 07/08, 08/09, 09/10, 10/11	spirits	0.1060

<sup>1</sup> Pure alcohol content by volume

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Table 1 Alcohol conversion factors by jurisdiction (Cont.)**

<b>Beverage</b>	<b>Source</b>	<b>Terms</b>	<b>PACV<sup>1</sup></b>
<b>Other</b>	NDRI review	cider	0.0500
	NT 05/06, 06/07, 07/08, 08/09, 09/10, 10/11	cider	0.0500
	Queensland 07/08, 08/09, 09/10, 10/11	alcoholic soda and cider	0.0500
	Queensland 07/08, 08/09, 09/10, 10/11	mead	0.1250

<sup>1</sup> Pure alcohol content by volume

### **MAPPING THE NASDP DATA**

*Per capita* consumption was calculated for SSDs in Queensland and WA and by aggregation of SA2s and SA3s into the NT Urban Centres and Balance. Volumes of pure alcohol sold and alcohol consumption were mapped using the software ArcGIS 10.0. ArcGIS is a geographic information system which allows the user to map information on geographic regions. The NASDP downloaded ABS shapefiles for the NT SA2s and SA3s and for Queensland and WA SSDs for the year ending 1 July 2011, and added *per capita* consumption for each regional area and SSD. The result is more visually informative than tables, and permits rapid comparison of regions.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

## RESULTS

### THE AUSTRALIA CAPITAL TERRITORY

Advice from ACT Health indicated that the 2012-13 sales data received by them and supplied to NASDP covered returns from 90% of wholesalers. The calculated *per capita* consumption figure was therefore expected to be lower than it would have been if all sales had been received. Preliminary calculations, however, found *per capita* consumption to be substantially lower than could reasonably be expected based on complete sales records from 1996/97 indicating an ACT *per capita* consumption estimate of 9.7 and a 2012/13 ABS national estimate of 9.88 litres of pure alcohol (Catalano, Chikritzhs et al. 2001; Australian Bureau of Statistics 2014). For this reason we have not included a *per capita* consumption estimate for the ACT in this report.

Volumes as reported to the NASDP of pure alcohol sold are shown in Table 2.

**Table 2 Volumes (litres) of alcohol sold, by beverage, and pure alcohol in the Australian Capital Territory 2012/13**

All beer	All wine	All spirits	All alcohol	All pure alcohol
12,705,927	2,933,013	1,793,123	17,432,063	1,157,454

### THE NORTHERN TERRITORY

*Per capita* pure alcohol consumption was estimated for the whole of the NT as shown in the following table. Data presented in earlier reports have been updated as previously described.

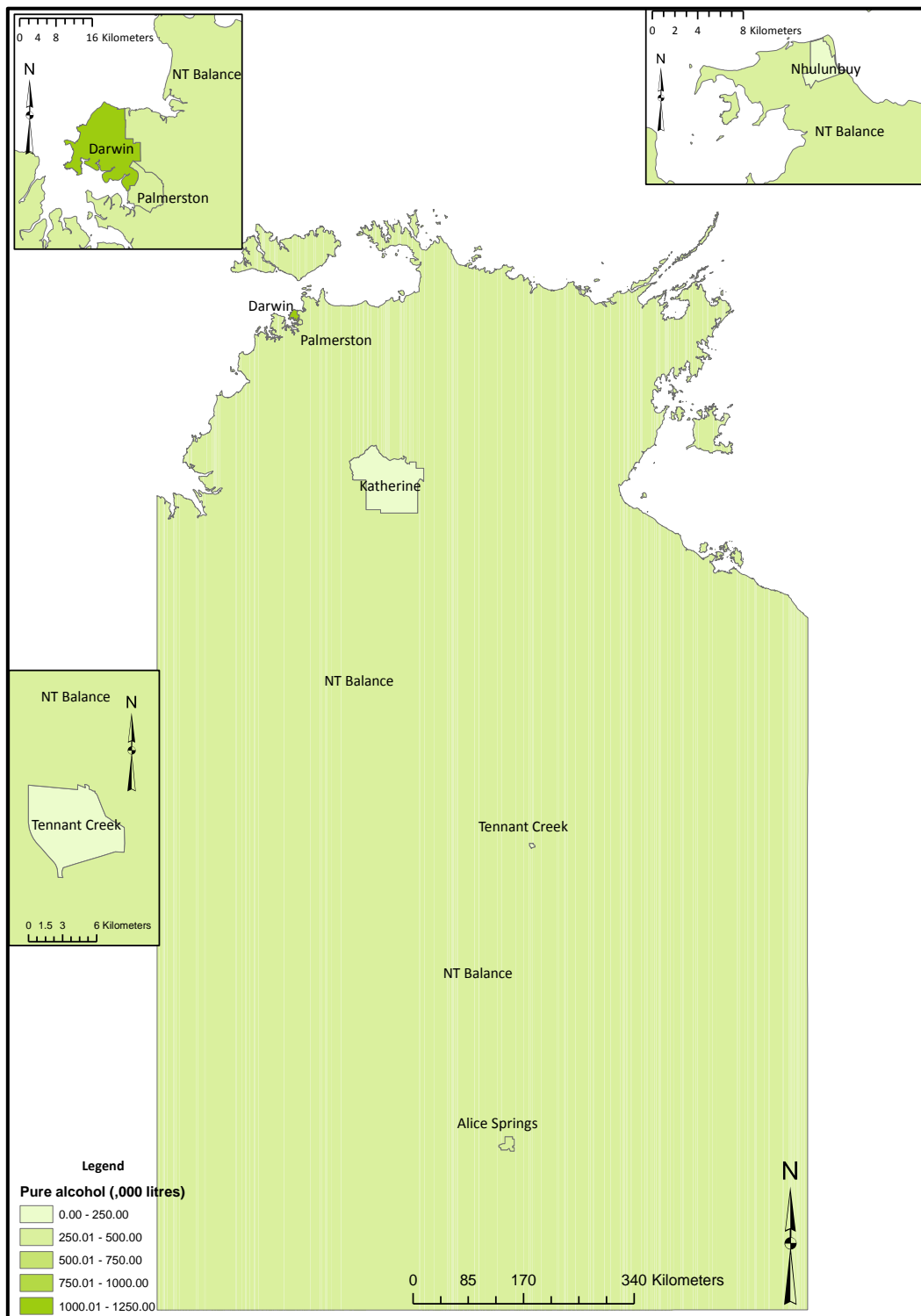
**Table 3 Estimated per capita alcohol consumption, Northern Territory, 2005/06 to 2010/11**

	Total pure alcohol (litres)	Adult ERP aged 15+ and tourism	NT <i>per capita</i> consumption	National <i>per capita</i> consumption <sup>1</sup>
2005/06	2,696,090	179,393	15.03	10.31
2006/07	2,699,391	187,088	14.43	10.76
2007/08	2,748,347	187,582	14.65	10.75
2008/09	2,719,986	194,370	13.99	10.63
2009/10	2,746,757	201,926	13.60	10.53
2010/11	2,682,155	201,598	13.30	10.30

<sup>1</sup>. Australian Bureau of Statistics 2014

Volumes of pure alcohol sold were estimated for Urban Centres and NT Balance. These estimates can be seen in Figure 2 with details in Table 4. It should be noted that *per capita* regional consumption has not been calculated at the request of the NT Department of Business.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



**Figure 2 Volumes of pure alcohol sold in Urban Centres and Northern Territory Balance, 2010/11**

**NATIONAL ALCOHOL SALES DATA PROJECT**

National Drug Research Institute, Curtin University

**STAGE 4, FINAL REPORT**

**Table 4 Volumes (litres) of alcohol sold by beverage and pure alcohol in Urban Centres and Northern Territory Balance, 2005/06 – 2010/11**

<b>Region</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All cider</b>	<b>All alcohol</b>	<b>All pure alcohol</b>
<b>Alice Springs</b>	2005/06	4,573,361	1,908,935	963,735	102,342	7,548,373	533,117
	2006/07	5,614,803	908,336	996,448	105,715	7,625,302	463,835
	2007/08	5,655,559	612,542	968,536	91,353	7,327,991	427,883
	2008/09	5,628,961	662,107	738,162	122,069	7,151,299	439,481
	2009/10	5,720,011	761,161	834,763	161,753	7,477,689	468,269
	2010/11	5,341,533	768,840	813,942	157,808	7,082,123	450,802
<b>Darwin</b>	2005/06	11,659,157	2,497,219	2,364,698	282,622	16,803,697	1,092,300
	2006/07	11,705,547	2,655,914	2,366,967	278,817	17,007,246	1,116,289
	2007/08	12,541,761	2,768,430	2,606,156	290,990	18,207,337	1,187,658
	2008/09	13,187,525	2,414,414	2,023,460	394,856	18,020,255	1,172,411
	2009/10	13,044,217	2,466,827	2,005,218	485,821	18,002,083	1,169,790
	2010/11	12,598,977	2,234,103	2,007,414	559,365	17,399,859	1,149,079
<b>Katherine</b>	2005/06	2,154,920	615,999	374,830	29,874	3,175,622	201,692
	2006/07	2,142,563	549,849	403,874	28,160	3,124,446	198,523
	2007/08	2,266,369	374,688	470,332	25,392	3,136,781	189,234
	2008/09	2,572,572	245,024	324,663	41,382	3,183,641	180,063
	2009/10	2,703,863	277,186	331,898	44,172	3,357,118	188,467
	2010/11	2,988,979	262,691	350,432	47,361	3,649,463	203,252
<b>Nhulunbuy</b>	2005/06	1,143,251	194,401	280,626	19,137	1,637,414	100,027
	2006/07	1,279,157	110,837	302,706	17,562	1,710,262	100,834
	2007/08	1,081,546	105,719	240,554	15,137	1,442,955	89,055
	2008/09	998,537	65,392	125,253	17,129	1,206,310	71,021
	2009/10	937,684	68,909	127,245	16,236	1,150,075	67,999
	2010/11	908,330	69,738	129,173	15,406	1,122,647	66,825
<b>Palmerston</b>	2005/06	3,133,527	471,526	778,152	86,100	4,469,305	264,522
	2006/07	3,291,274	579,163	796,490	88,486	4,755,413	285,880
	2007/08	3,556,880	628,167	935,323	84,833	5,205,203	314,964
	2008/09	4,048,572	529,019	778,976	113,571	5,470,137	325,538
	2009/10	4,060,241	553,434	875,751	125,948	5,615,374	333,345
	2010/11	4,002,070	477,328	841,505	134,429	5,455,332	321,938
<b>Tennant Creek</b>	2005/06	766,997	123,395	101,327	10,512	1,002,230	58,878
	2006/07	783,302	155,382	111,682	8,571	1,058,936	63,669
	2007/08	748,020	139,259	146,135	9,496	1,042,911	62,560
	2008/09	880,118	74,771	104,237	15,360	1,074,486	59,853
	2009/10	929,470	94,552	100,080	22,024	1,146,126	64,942
	2010/11	940,564	102,463	117,141	20,484	1,180,652	68,497
<b>NT Balance</b>	2005/06	6,764,517	480,866	929,714	222,784	8,397,881	445,553
	2006/07	7,024,425	588,344	1,049,137	174,107	8,836,012	470,361
	2007/08	7,084,484	620,162	1,140,465	159,842	9,004,953	476,992
	2008/09	7,166,178	564,190	896,290	213,464	8,840,121	471,619
	2009/10	7,032,792	537,331	886,996	229,690	8,686,810	453,946
	2010/11	6,318,194	486,333	879,176	237,641	7,921,345	421,763



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Table 4 Volumes (litres) of alcohol sold by beverage and pure alcohol in Urban Centres and Northern Territory Balance, 2005/06 – 2010/11 (Cont.)**

Region	Year	All beer	All wine	All spirits	All cider	All alcohol	All pure alcohol
Total	2005/06	30,195,730	6,292,339	5,793,082	753,370	43,034,522	2,696,090
Total	2006/07	31,841,070	5,547,824	6,027,303	701,419	44,117,617	2,699,391
Total	2007/08	32,934,619	5,248,966	6,507,502	677,045	45,368,131	2,748,347
Total	2008/09	34,482,463	4,554,916	4,991,040	917,830	44,946,250	2,719,986
Total	2009/10	34,428,279	4,759,400	5,161,951	1,085,644	45,435,274	2,746,757
Total	2010/11	33,098,648	4,401,497	5,138,782	1,172,493	43,811,421	2,682,155

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**QUEENSLAND**

Examination of Queensland alcohol sales data suggested that returns did not completely reflect alcohol consumption in Queensland for the financial year 2010/11. Preliminary calculations found *per capita* consumption to be unreasonably low, suggesting that returns were incomplete from a small number of wholesalers.

After discussion with the Queensland Office of Regulatory Policy (Liquor, Gaming and Fair Trading) in the Department of Justice and Attorney-General, it was agreed that apparent estimates of volumes of pure alcohol sold and *per capita* consumption in Queensland as a whole would be developed for 2010/11 using data from 2010/11 and selected data from 2009/10 to estimate shortfalls from the wholesalers identified by NASDP as having incomplete returns. Estimates at SSD level have not been calculated using these assumptions.

*Per capita* consumption (litres of absolute alcohol) based on ESP, using 2009/10 and 2010/11 returns, was estimated for the whole of Queensland as shown in the Table 5.

**Table 5 Estimated per capita consumption (litres of absolute alcohol), Queensland 2007/08 to 2010/11**

	<b>Total pure alcohol (litres)</b>	<b>ESP aged 15+</b>	<b>QLD <i>per capita</i> consumption</b>	<b>National <i>per capita</i> consumption<sup>1</sup></b>
<b>2007/08</b>	37,955,769	3,347,396	11.34	10.75
<b>2008/09</b>	37,817,375	3,443,413	10.98	10.63
<b>2009/10</b>	38,760,678	3,513,996	11.03	10.53
<b>2010/11<sup>2</sup></b>	38,295,916	3,509,694	10.91	10.30

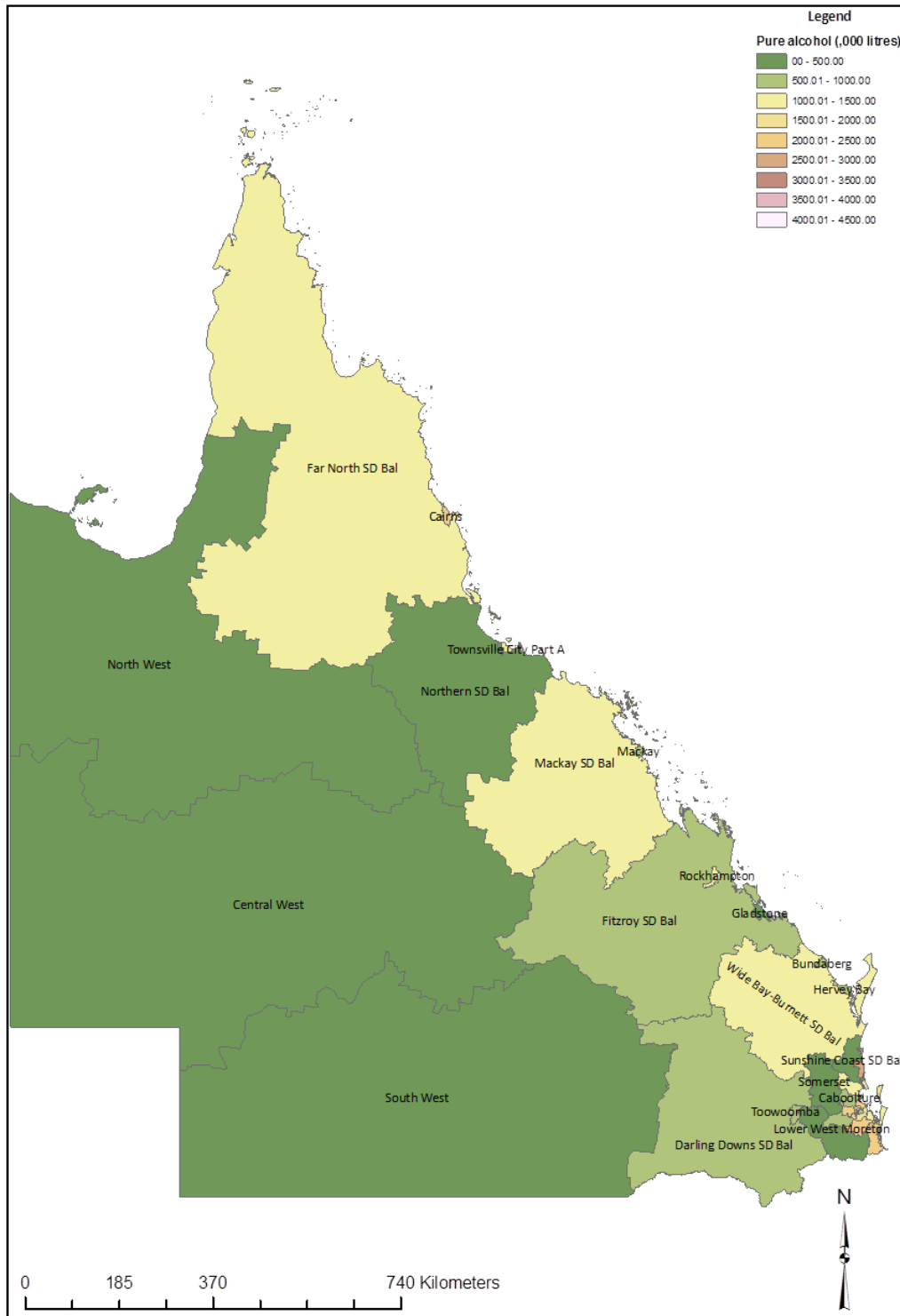
<sup>1</sup> Australian Bureau of Statistics 2014

<sup>2</sup> Apparent estimate based on 2009/10 and 2010/11.

As noted above, we have not calculated volumes of pure alcohol *per capita* consumption for Statistical Subdivisions (SSDs) for 2010/11. For that reason, we have reproduced maps and tables previously presented for SSDs in 2009/10.

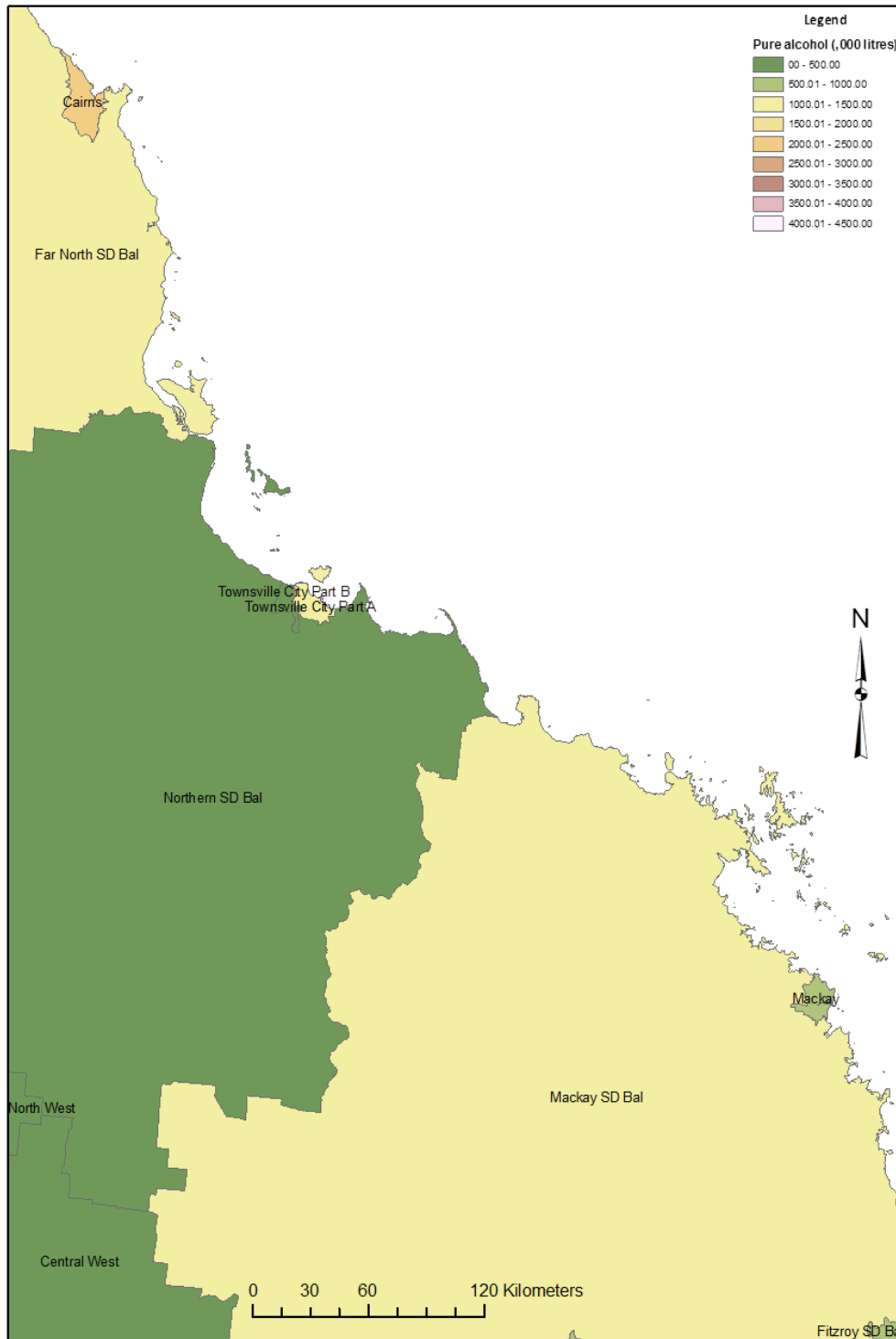
Estimates of volumes of pure alcohol sold and *per capita* consumption using ESP in 2009/10 can be seen in Figure 3 to Figure 8 with details in Table 6.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



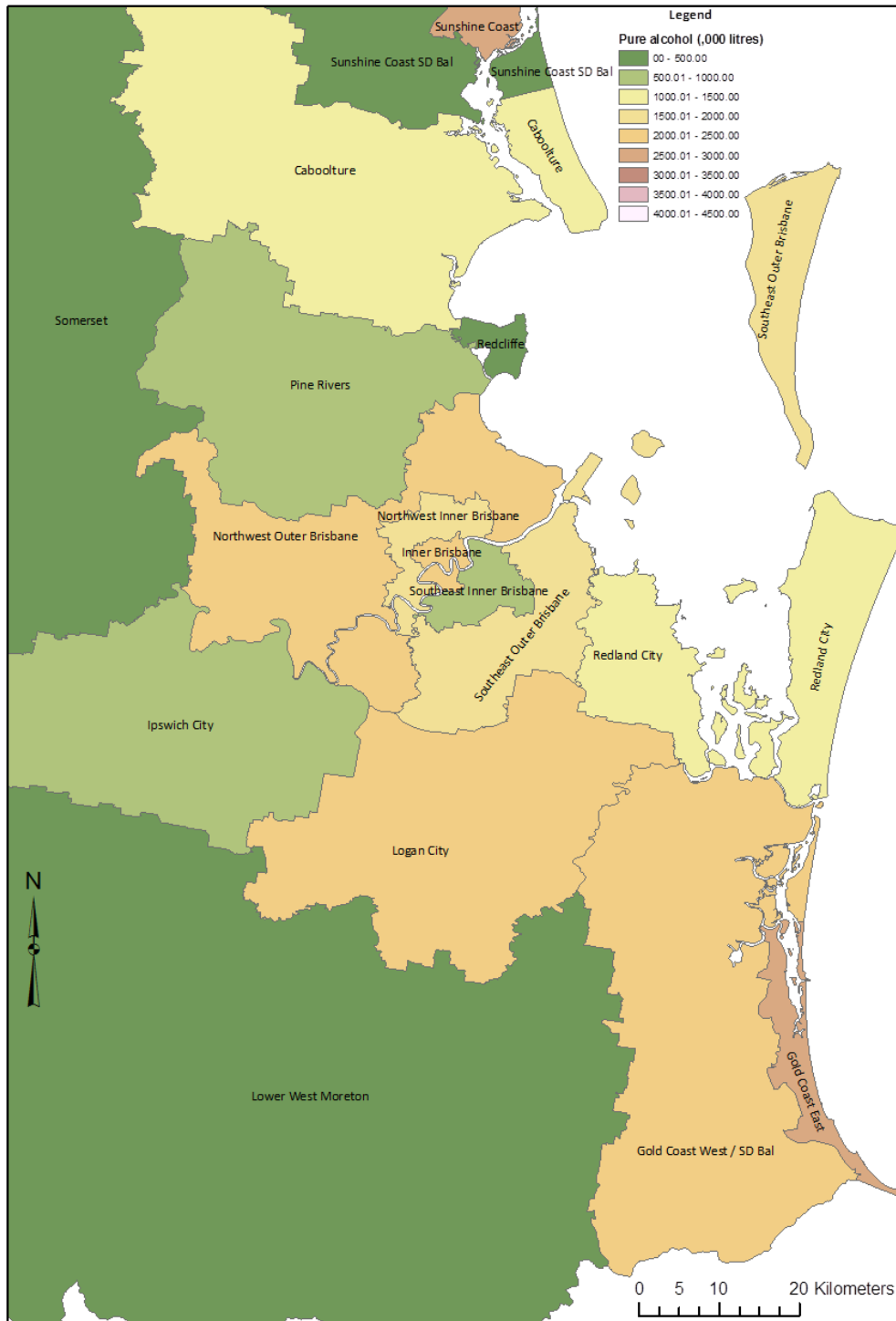
**Figure 3 Volumes of pure alcohol sold, Statistical Subdivisions, Queensland, 2009/10**

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT



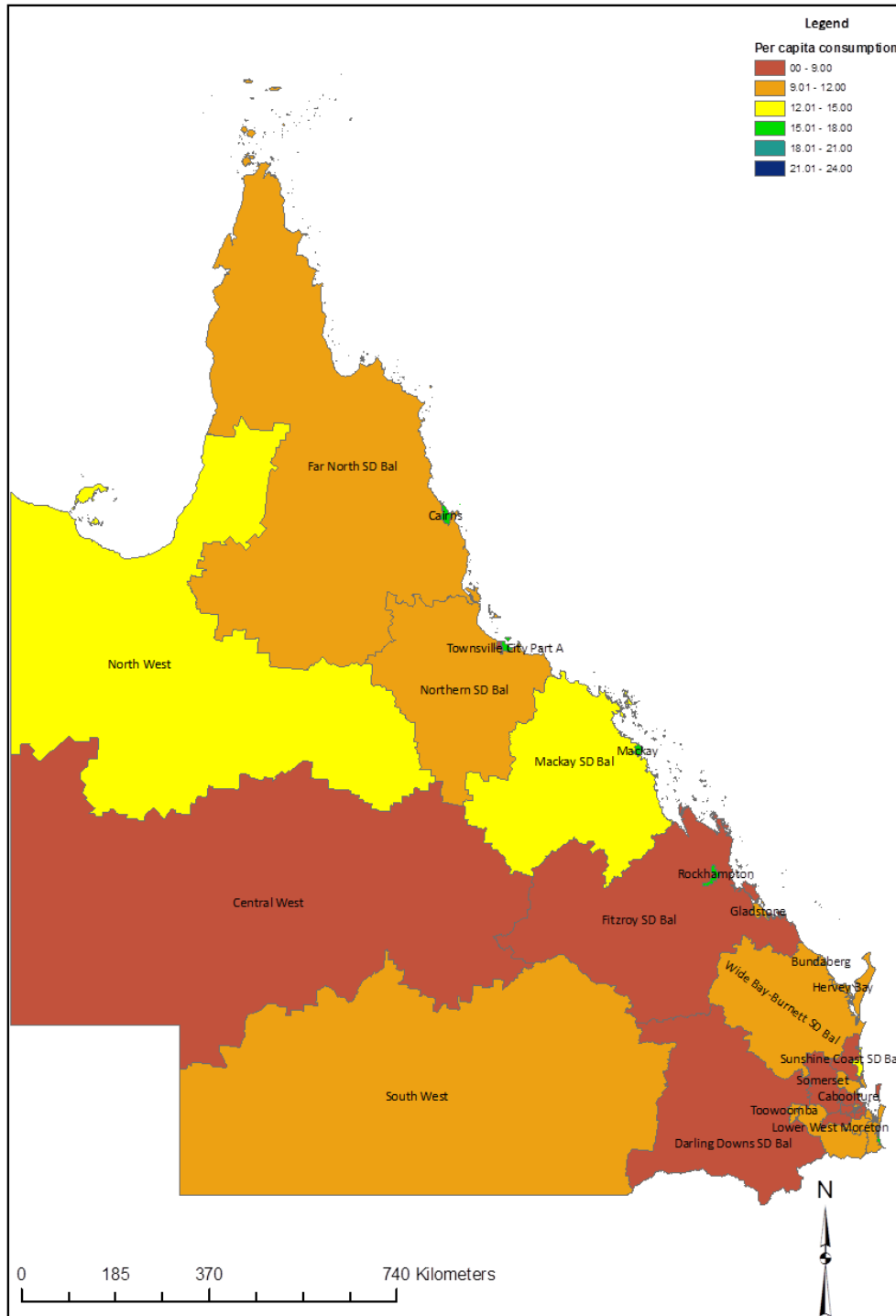
**Figure 4** Volumes of pure alcohol sold, Statistical Subdivisions, areas of high tourism, Queensland, 2009/10

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



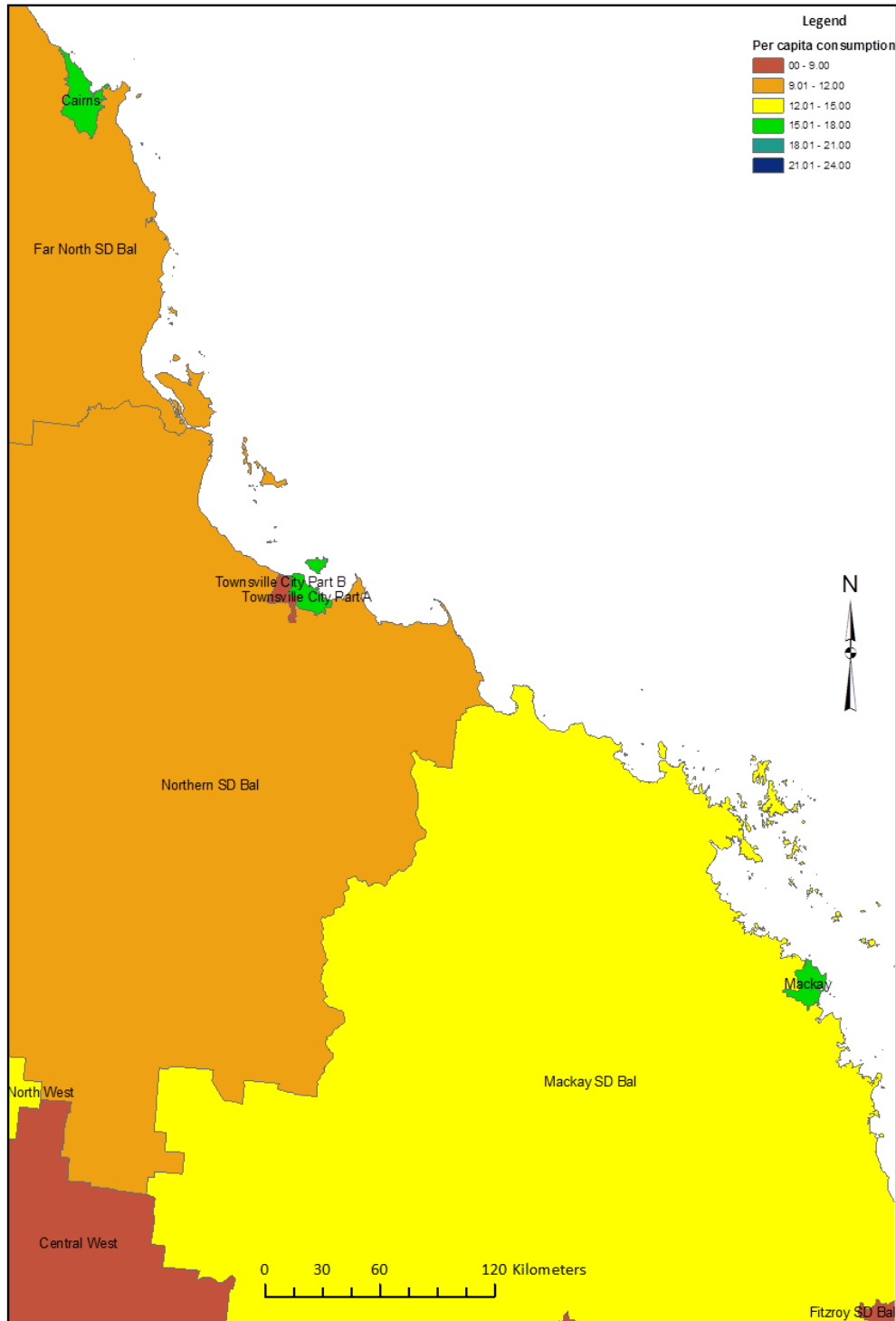
**Figure 5** Volumes of pure alcohol sold, Statistical Subdivisions, Brisbane and environs, Queensland, 2009/10

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



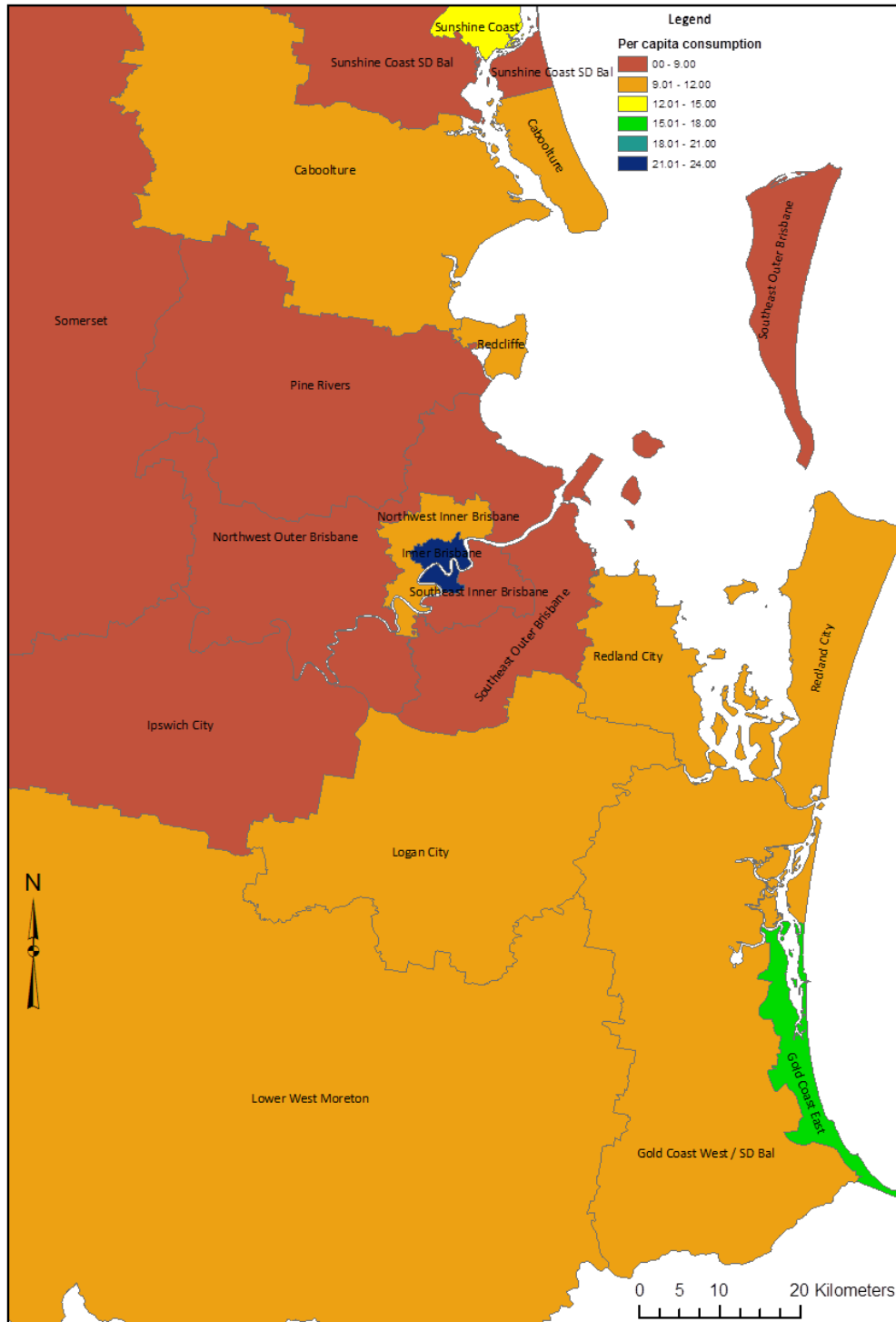
**Figure 6** Estimated *per capita* consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Queensland, 2009/10

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT



**Figure 7** Estimated *per capita* consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, areas of high tourism, Queensland, 2009/10

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



**Figure 8** Estimated *per capita* consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Brisbane and environs, Queensland, 2009/10



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Table 6 Volumes (litres) of alcohol sold by beverage, pure alcohol, and pcc/ ESP in SSDs, Queensland 2007/08 to 2009/101**

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
30501	Inner Brisbane	2007/08	20,031,020	6,254,852	4,184,702	275,687	30,746,262	2,290,449	24.26
		2008/09	21,868,893	5,420,338	3,136,763	389,815	30,815,809	2,189,956	22.84
		2009/10	20,810,966	5,072,975	2,917,372	551,252	29,352,565	2,113,694	21.87
30503	Northwest Inner Brisbane	2007/08	11,468,553	4,391,818	2,668,763	117,946	18,647,079	1,388,824	9.03
		2008/09	12,569,936	4,640,351	2,241,293	181,591	19,633,170	1,475,838	9.45
		2009/10	14,090,083	5,232,806	2,149,503	256,912	21,729,304	1,636,725	10.34
30507	Northwest Outer Brisbane	2007/08	19,711,062	6,706,825	4,523,324	190,578	31,131,789	2,140,284	8.28
		2008/09	26,160,197	5,478,986	3,300,148	209,551	35,148,882	2,150,884	8.14
		2009/10	21,205,572	5,760,909	4,168,368	330,808	31,465,658	2,149,493	7.99
30509	Southeast Inner Brisbane	2007/08	8,483,958	2,770,272	1,582,019	89,198	12,925,447	907,922	7.09
		2008/09	8,349,857	2,283,575	1,211,096	101,988	11,946,516	822,900	6.31
		2009/10	9,580,767	2,639,521	1,299,571	160,206	13,680,065	945,726	7.17
30511	Southeast Outer Brisbane	2007/08	12,108,612	5,856,534	3,368,305	146,451	21,479,902	1,655,400	8.56
		2008/09	15,834,063	4,202,976	2,558,023	151,172	22,746,233	1,513,496	7.61
		2009/10	15,889,052	3,809,842	2,672,305	200,987	22,572,186	1,502,973	7.45
30520	Caboolture	2007/08	11,092,220	2,577,338	3,460,788	136,645	17,266,991	1,084,755	9.90
		2008/09	16,927,467	2,488,516	2,786,151	158,965	22,361,099	1,233,937	10.83
		2009/10	12,692,531	3,092,555	2,785,233	235,731	18,806,050	1,226,786	10.41
30525	Ipswich City	2007/08	10,374,585	2,077,565	3,829,911	129,237	16,411,297	1,024,720	8.97
		2008/09	11,040,495	1,853,000	2,464,368	143,147	15,501,010	943,556	7.86
		2009/10	10,765,367	2,092,171	2,601,854	174,345	15,633,738	999,812	8.05

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
30530	Logan City	2007/08	17,704,305	4,300,939	6,697,034	206,638	28,908,916	1,882,451	8.88
		2008/09	19,450,775	3,616,880	4,797,139	216,410	28,081,204	1,796,702	8.22
		2009/10	22,225,718	5,007,216	4,774,237	279,805	32,286,976	2,100,507	9.41
30540	Pine Rivers	2007/08	8,668,196	3,071,068	2,484,311	105,396	14,328,971	990,877	8.63
		2008/09	10,559,806	2,446,004	2,080,366	119,571	15,205,748	975,444	8.14
		2009/10	9,559,248	2,716,516	1,982,462	166,927	14,425,153	995,750	8.03
30545	Redcliffe	2007/08	3,758,515	1,158,132	1,162,838	55,342	6,134,827	425,363	9.71
		2008/09	3,756,729	1,042,261	792,965	57,846	5,649,801	383,560	8.55
		2009/10	3,607,237	1,260,494	812,042	81,160	5,760,932	417,944	9.14
30550	Redland City	2007/08	9,168,065	3,194,018	2,862,317	123,912	15,348,313	1,086,720	10.46
		2008/09	11,764,092	2,885,453	2,006,757	131,058	16,787,360	1,100,694	10.31
		2009/10	11,176,455	2,957,704	1,885,582	186,066	16,205,807	1,094,372	10.08
30710	Gold Coast East	2007/08	23,566,544	9,061,169	6,180,895	269,206	39,077,814	2,904,879	16.49
		2008/09	24,651,929	7,770,039	4,675,222	298,219	37,395,410	2,711,945	15.09
		2009/10	28,271,145	8,049,676	4,514,078	366,083	41,200,981	2,937,896	16.07
30715	Gold Coast West	2007/08	20,421,723	7,860,125	5,702,341	269,656	34,253,845	2,473,181	11.97
		2008/09	20,312,941	6,162,922	4,208,068	284,231	30,968,162	2,186,896	10.18
30720	Gold Coast SD Bal	2007/08	CONFIDENTIALISED						
		2008/09	CONFIDENTIALISED						
30715/30720	Gold Coast West/SD Bal	2009/10	24,039,540	6,816,131	4,229,040	366,495	35,451,206	2,460,448	10.51

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
30905	Sunshine Coast	2007/08	22,363,481	10,382,673	5,741,719	271,260	38,759,134	2,881,894	15.18
		2008/09	25,947,017	8,551,822	4,601,426	330,282	39,430,548	2,760,356	14.11
		2009/10	26,951,874	8,579,206	4,121,149	474,884	40,127,114	2,813,833	14.05
30910	Sunshine Coast SD Bal	2007/08	4,359,523	1,362,496	1,359,799	81,678	7,163,497	476,084	8.60
		2008/09	5,493,701	1,137,010	896,186	85,793	7,612,690	466,084	8.08
		2009/10	4,120,522	1,072,178	870,015	93,763	6,156,478	403,686	6.82
31205	Upper West Moreton Somerset	2007/08	1,476,137	229,452	401,105	15,568	2,122,261	119,364	7.91
		2008/09	1,692,809	183,721	239,837	19,282	2,135,649	114,698	7.24
		2009/10	1,325,597	200,979	269,603	17,446	1,813,625	105,497	6.38
31210	Lower West Moreton	2007/08	4,358,329	915,616	1,225,613	48,785	6,548,342	397,181	9.75
		2008/09	5,181,457	754,562	814,780	51,236	6,802,034	389,328	9.12
		2009/10	4,628,693	990,629	909,865	62,041	6,591,228	411,382	9.35
31505	Bundaberg	2007/08	5,172,629	1,268,950	1,500,257	54,541	7,996,377	497,618	9.88
		2008/09	7,931,326	1,289,720	1,200,535	65,275	10,486,857	603,713	11.69
		2009/10	5,588,559	1,681,225	1,267,952	86,871	8,624,606	600,450	11.40
31507	Hervey Bay	2007/08	CONFIDENTIALISED						
		2008/09	6,323,043	1,279,219	883,452	85,321	8,571,035	536,387	11.37
		2009/10	5,527,415	1,465,167	885,254	132,305	8,010,141	535,067	10.98
31510	Wide Bay-Burnett SD Bal	2007/08	14,863,653	2,913,918	3,656,510	156,839	21,590,919	1,283,418	10.54
		2008/09	20,462,780	2,316,934	2,391,479	162,318	25,333,511	1,352,012	10.77
		2009/10	14,955,379	2,886,628	2,528,011	191,133	20,561,151	1,267,228	9.90

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
32001	Toowoomba	2007/08	8,398,949	2,561,390	2,690,512	76,340	13,727,191	944,630	10.48
		2008/09	9,639,930	2,050,376	2,016,707	91,213	13,798,226	916,672	9.91
		2009/10	10,496,249	2,097,809	2,149,095	94,945	14,838,097	957,058	10.11
32005	Darling Downs SD Bal	2007/08	9,776,719	1,591,944	2,269,747	71,525	13,709,935	791,045	9.89
		2008/09	14,814,379	1,201,365	1,495,940	67,995	17,579,678	879,408	10.75
		2009/10	8,957,068	1,473,056	1,581,495	74,102	12,085,721	722,005	8.68
32505	South West	2007/08	4,260,380	269,058	701,408	9,533	5,240,379	257,687	12.29
		2008/09	4,444,870	270,096	497,407	22,645	5,235,019	258,576	12.29
		2009/10	3,693,467	353,302	557,592	14,236	4,618,596	250,037	11.81
33005	Rockhampton	2007/08	11,302,218	1,408,513	2,841,558	81,041	15,633,330	881,987	15.64
		2008/09	13,425,994	1,466,398	2,294,747	108,985	17,296,125	961,900	16.77
		2009/10	12,754,084	1,720,123	2,339,575	121,568	16,935,351	1,004,391	17.32
33010	Gladstone	2007/08	4,779,588	597,240	1,229,470	56,500	6,662,798	376,995	10.61
		2008/09	8,319,796	592,751	935,478	63,276	9,911,301	508,443	13.82
		2009/10	5,122,223	674,152	950,079	64,586	6,811,041	406,518	10.89
33015	Fitzroy SD Bal	2007/08	8,390,937	1,274,119	2,255,305	88,767	12,009,128	699,269	10.37
		2008/09	10,351,511	1,027,871	1,551,739	91,633	13,022,753	709,252	10.25
		2009/10	7,680,137	1,035,725	1,507,202	119,093	10,342,158	612,398	8.73
33505	Central West	2007/08	1,740,883	143,527	290,016	7,096	2,181,522	112,198	10.71
		2008/09	1,584,712	112,369	154,290	6,435	1,857,806	88,153	8.38
		2009/10	1,302,120	137,677	168,585	7,765	1,616,146	88,694	8.38

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
34005	Mackay	2007/08	11,248,840	1,676,191	2,734,248	117,466	15,776,745	913,507	15.54
		2008/09	9,306,092	1,273,394	2,344,887	130,348	13,054,721	818,081	13.47
		2009/10	13,437,951	1,192,201	2,392,627	156,743	17,179,522	953,765	15.32
34010	Mackay SD Bal	2007/08	13,100,251	1,829,374	3,102,168	163,996	18,195,790	1,074,703	13.74
		2008/09	16,887,400	1,672,313	2,226,969	162,049	20,948,731	1,167,858	14.58
		2009/10	13,092,808	1,850,996	2,757,511	225,161	17,926,476	1,114,816	13.71
34505	Townsville City Part A	2007/08	15,165,861	3,018,275	3,395,824	199,896	21,779,856	1,331,680	16.40
		2008/09	25,305,733	2,504,331	2,895,162	250,713	30,955,939	1,567,855	18.85
		2009/10	17,991,589	2,468,677	2,888,590	302,595	23,651,451	1,421,986	16.78
34510	Townsville City Part B	2007/08	2,639,622	338,713	761,376	33,474	3,773,186	207,167	5.07
		2008/09	3,191,428	449,346	817,140	39,741	4,497,654	262,965	6.08
		2009/10	4,513,568	479,836	919,439	78,138	5,990,980	331,164	7.39
34515	Northern SD Bal	2007/08	6,255,679	749,521	1,237,735	54,190	8,297,125	444,091	9.92
		2008/09	6,452,059	613,298	767,868	38,097	7,871,323	403,883	8.87
		2009/10	5,437,128	791,515	1,054,568	60,679	7,343,891	421,856	9.20
35005	Cairns	2007/08	18,319,120	4,196,580	4,287,710	355,827	27,159,238	1,731,593	14.91
		2008/09	23,986,864	4,495,517	3,425,454	371,713	32,279,548	1,994,343	16.65
		2009/10	26,255,562	4,611,789	3,620,166	580,443	35,067,960	2,136,730	17.43
35010	Far North SD Bal	2007/08	13,753,546	2,816,187	3,073,542	201,364	19,844,639	1,188,965	12.27
		2008/09	14,081,326	2,521,194	2,166,264	160,941	18,929,725	1,106,733	11.19
		2009/10	13,680,977	2,849,867	2,477,797	176,713	19,185,354	1,174,709	11.73

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All beer	All wine	All spirits	All other <sup>2</sup>	All alcohol	All pure alcohol	pcc/ESP
35505	North West	2007/08	5,822,305	616,507	1,640,791	42,978	8,122,582	439,398	14.58
		2008/09	5,793,598	597,725	1,091,363	44,183	7,526,868	420,306	14.03
		2009/10	6,092,176	662,912	1,076,068	49,118	7,880,273	445,283	14.83
<b>Total</b>	<b>Queensland</b>	<b>2007/08</b>	<b>370,470,237</b>	<b>101,367,242</b>	<b>96,478,749</b>	<b>4,396,134</b>	<b>572,712,362</b>	<b>37,955,769</b>	<b>11.34</b>
<b>Total</b>	<b>Queensland</b>	<b>2008/09</b>	<b>444,286,004</b>	<b>86,776,624</b>	<b>72,053,441</b>	<b>4,899,241</b>	<b>608,015,309</b>	<b>37,817,375</b>	<b>10.98</b>
<b>Total</b>	<b>Queensland</b>	<b>2009/10</b>	<b>417,518,828</b>	<b>93,784,168</b>	<b>74,083,886</b>	<b>6,541,102</b>	<b>591,927,984</b>	<b>38,760,678</b>	<b>11.03</b>

1. Details for SSDs with fewer than 6 clearly identified licensed premises have been excluded including Gold Coast SD Bal (30720) in 2007/08 and 2009/09 and Hervey Bay (31507) in 2007/08. Gold Coast SD Bal and Gold Coast West have been amalgamated in 2009/10 to accommodate boundary changes.
2. Alcoholic soda, cider and mead.
3. Totals include all SSDs and may not equal the sum of individual SSDs shown.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**WESTERN AUSTRALIA**

*Per capita* consumption (litres of absolute alcohol) based on ESP was estimated for the whole of WA as shown in the following table.

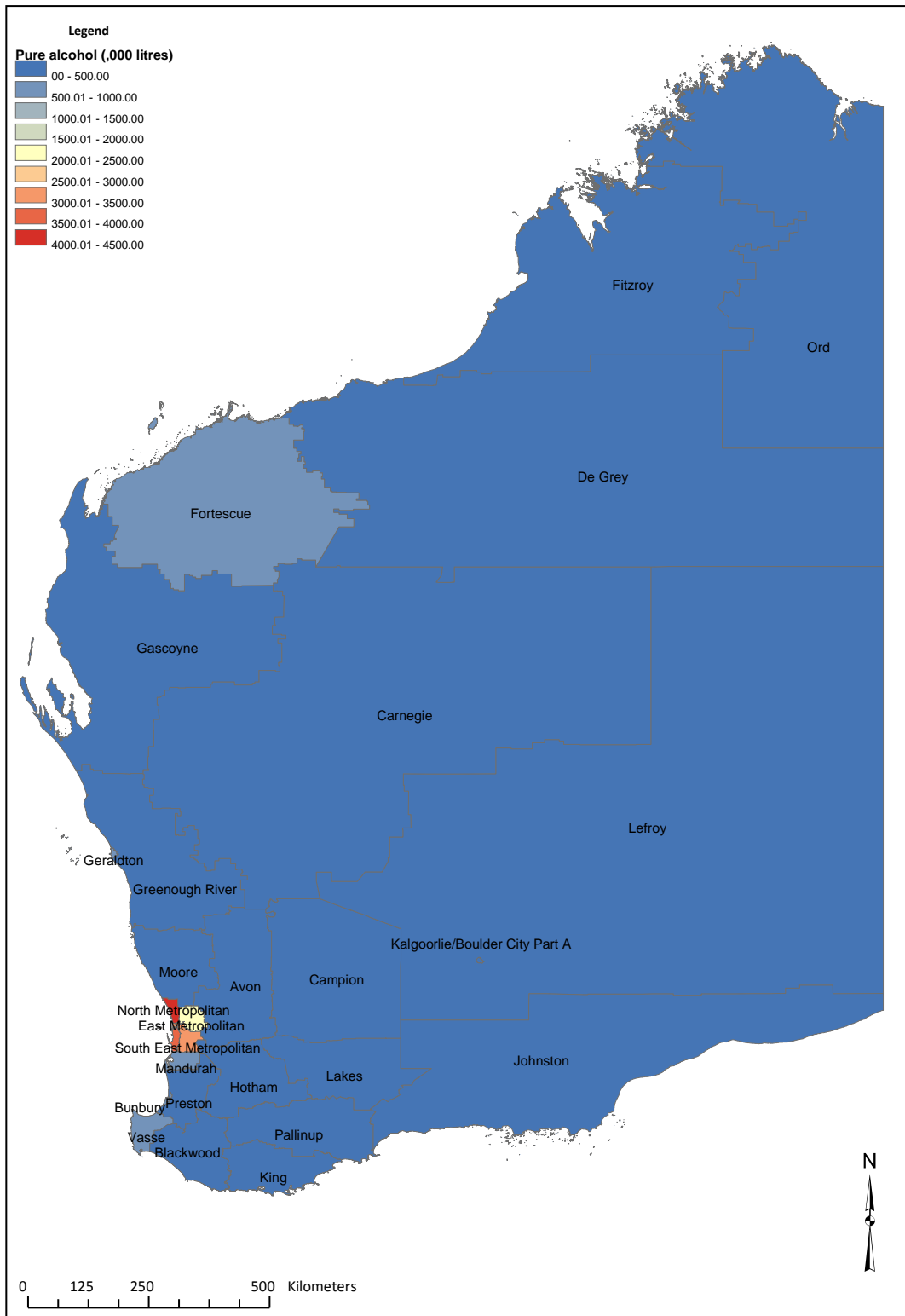
**Table 7 Estimated per capita pure alcohol consumption (litres of absolute alcohol), Western Australia, 2005/06 to 2010/11**

Year	Total pure alcohol (litres)	ESP aged 15+	WA <i>per capita</i> consumption/ESP	National <i>per capita</i> consumption <sup>1</sup>
<b>2005/06</b>	17,797,940	1,584,784	11.23	10.31
<b>2006/07</b>	18,006,305	1,621,830	11.10	10.76
<b>2007/08</b>	21,312,499	1,675,644	12.72	10.75
<b>2008/09</b>	20,245,103	1,732,319	11.69	10.63
<b>2009/10</b>	21,959,374	1,774,718	12.37	10.53
<b>2010/11</b>	23,965,481	1,810,507	13.24	10.30

<sup>1</sup> Australian Bureau of Statistics 2014

Volumes of alcohol sold and *per capita* pure alcohol consumption were estimated for Statistical Subdivisions (SSDs) for 2010/11. These estimates can be seen in Figure 9 to Figure 12 with details in Table 8. *Per capita* pure alcohol consumption in maps has been estimated using ESP as the population base. Data presented previously have been updated as detailed above.

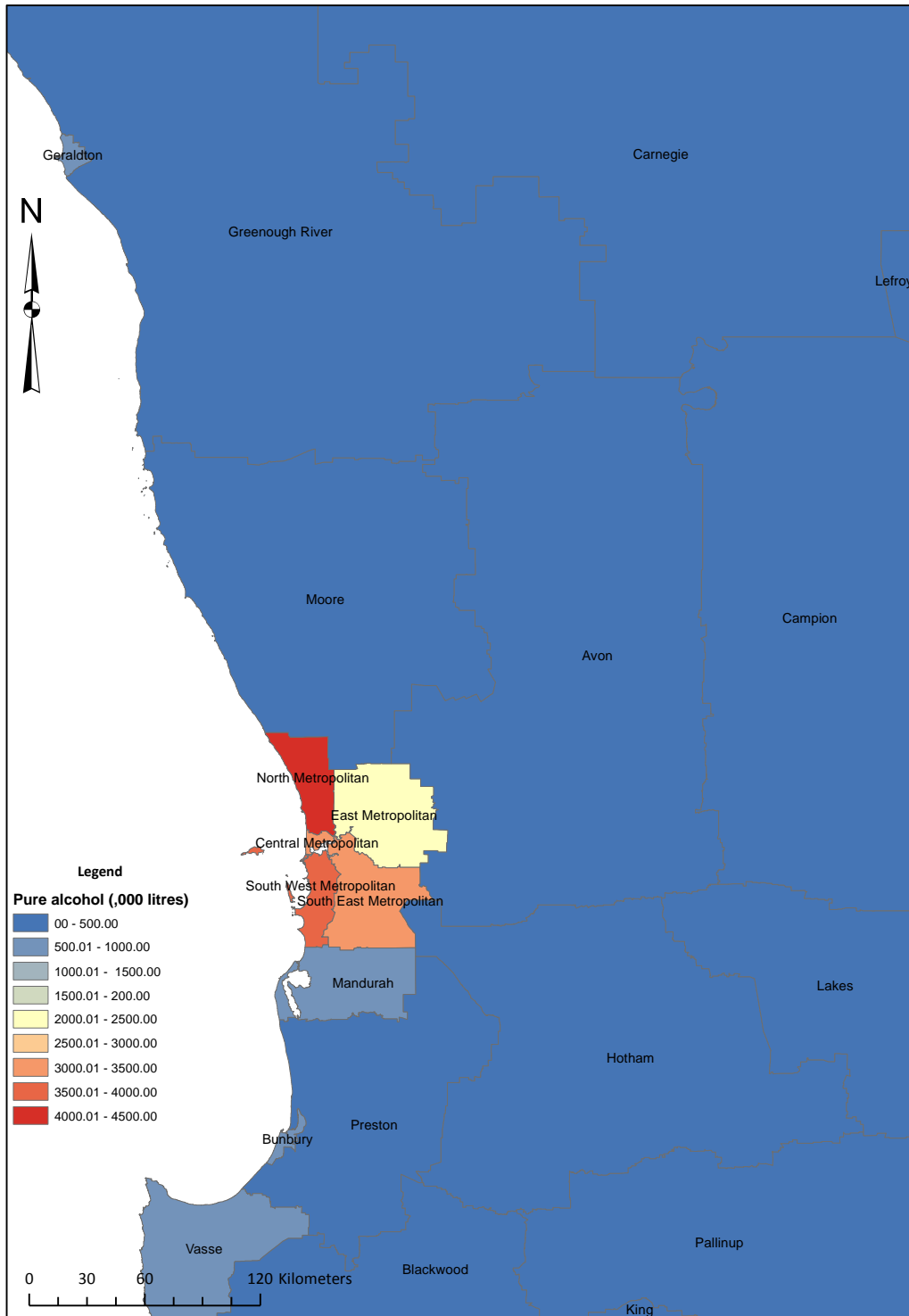
**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



**Figure 9** Volumes of pure alcohol sold, Statistical Subdivisions, Western Australia, 2010/11

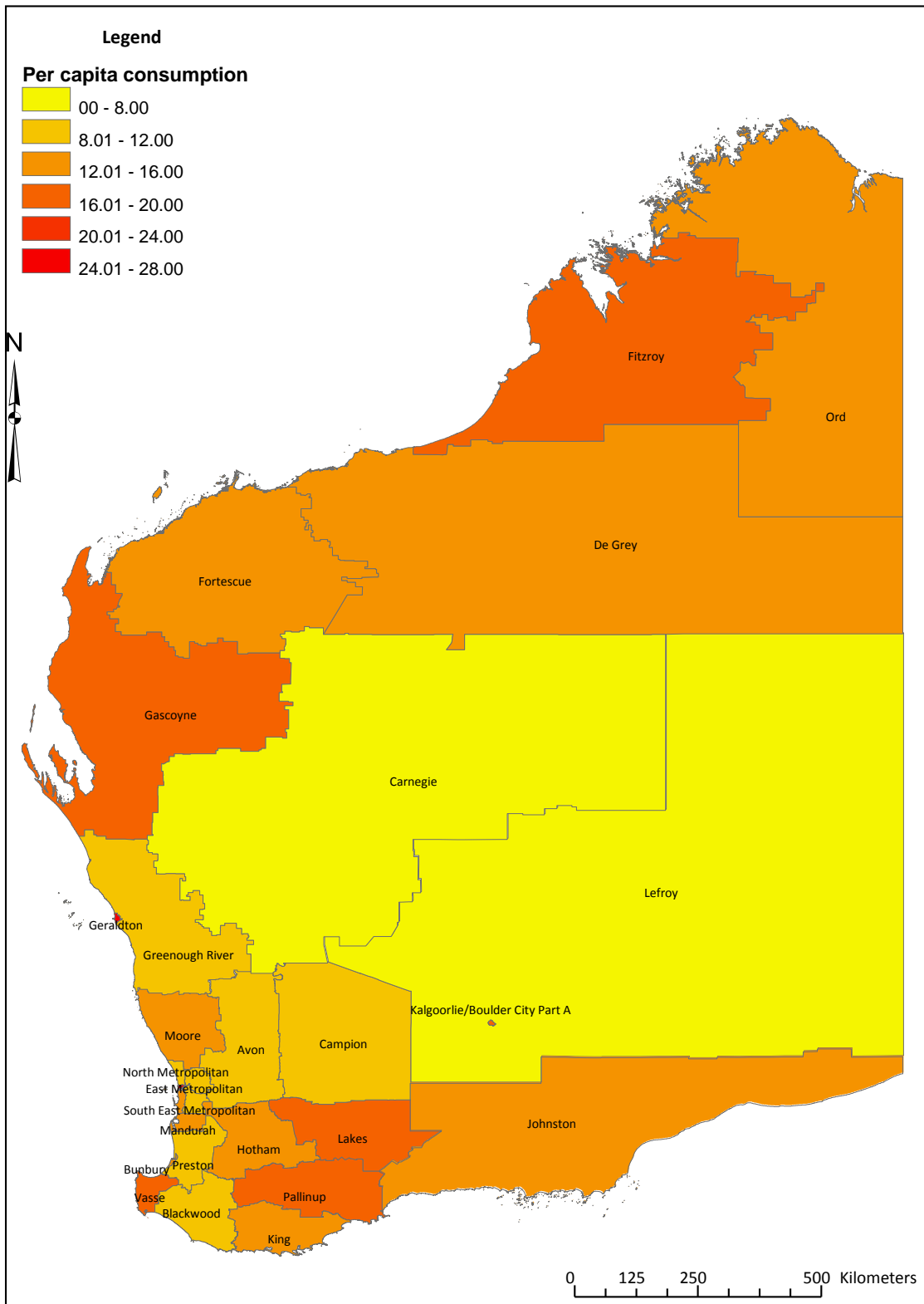


**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



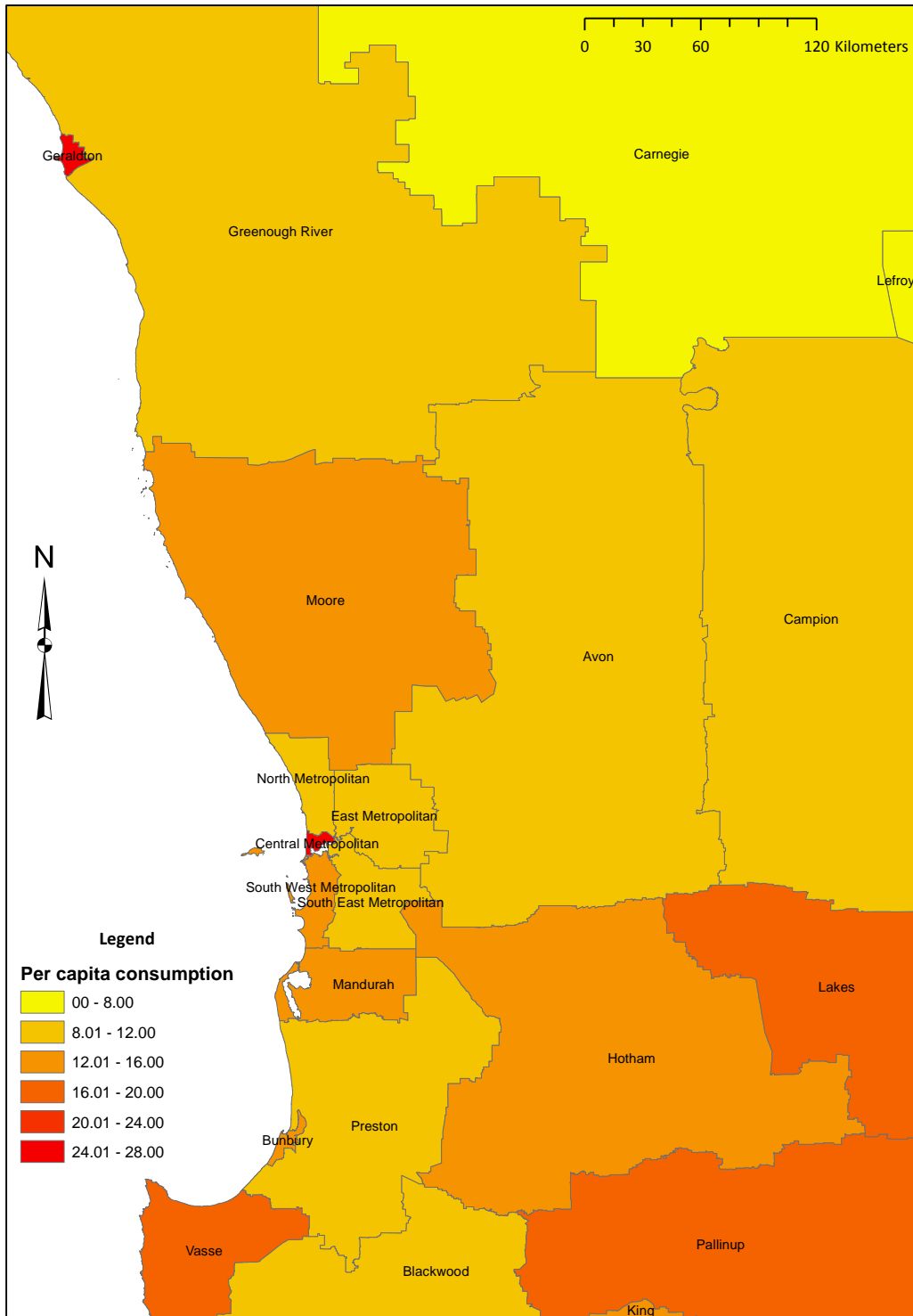
**Figure 10 Volumes of pure alcohol sold, Statistical Subdivisions, Perth and West Coast, Western Australia, 2010/11**

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



**Figure 11 Estimated *per capita* consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Western Australia, 2010/11**

**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT



**Figure 12 Estimated *per capita* consumption (litres of absolute alcohol) based on ESP, Statistical Subdivisions, Perth and West Coast, Western Australia, 2010/11**

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Table 8 Volumes (litres) of alcohol sold by beverage, pure alcohol and consumption in SSDs, Western Australia, 2005/06 to 2010/11**

SSD code	SSD name	Year	All beer	All wine	All spirits	All alcohol	All pure alcohol	pcc/ESP
50505	Central Metropolitan	2005/06	17,248,607	7,258,490	2,035,995	26,543,092	1,894,608	16.61
		2006/07	18,265,400	6,070,811	3,178,137	27,514,348	1,897,047	16.75
		2007/08	28,932,979	4,687,754	2,368,757	35,989,490	2,134,699	18.37
		2008/09	18,150,270	6,416,269	2,349,059	26,915,599	1,870,402	15.59
		2009/10	25,932,975	8,318,219	3,855,636	38,106,830	2,598,033	21.33
		2010/11	28,331,687	8,580,325	6,430,944	43,342,957	3,053,558	25.26
50510	East Metropolitan	2005/06	18,692,695	4,243,287	3,647,112	26,583,094	1,758,871	9.10
		2006/07	19,905,179	4,047,972	3,432,631	27,385,782	1,730,017	8.83
		2007/08	30,977,368	4,615,083	4,054,507	39,646,958	2,380,088	11.79
		2008/09	20,724,211	5,512,715	3,935,032	30,171,958	2,019,055	9.69
		2009/10	22,191,020	6,017,558	3,515,228	31,723,805	2,095,112	9.82
		2010/11	26,158,056	6,135,567	4,856,178	37,149,802	2,456,198	11.41
50515	North Metropolitan	2005/06	29,365,073	7,994,220	4,961,644	42,320,937	2,856,734	8.27
		2006/07	30,752,196	8,928,726	5,386,876	45,067,798	3,026,932	8.60
		2007/08	60,269,880	7,787,075	4,653,816	72,710,771	4,201,931	11.53
		2008/09	37,032,674	12,551,909	6,799,177	56,383,759	3,937,121	10.44
		2009/10	39,258,724	12,551,431	7,167,265	58,977,420	4,084,360	10.56
		2010/11	43,434,296	12,419,212	7,682,276	63,535,785	4,324,636	11.02

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
50520	South West Metropolitan	2005/06	23,889,339	7,280,395	4,543,175	35,712,909	2,468,477	10.19
		2006/07	26,378,785	7,068,077	5,138,986	38,585,848	2,568,979	10.47
		2007/08	40,947,881	8,515,527	4,346,084	53,809,492	3,354,285	13.22
		2008/09	28,756,693	9,180,629	5,872,010	43,809,332	3,045,848	11.57
		2009/10	30,947,594	10,017,220	5,995,152	46,959,965	3,258,725	12.01
		2010/11	33,821,284	9,780,892	7,484,683	51,086,859	3,537,137	12.84
50525	South East Metropolitan	2005/06	25,285,454	7,121,300	4,888,628	37,295,382	2,545,291	9.58
		2006/07	26,628,132	7,547,412	5,700,917	39,876,461	2,697,521	9.98
		2007/08	31,831,646	4,916,426	5,256,687	42,004,759	2,575,784	9.20
		2008/09	28,584,766	7,782,109	5,445,905	41,812,779	2,819,128	9.71
		2009/10	30,122,604	8,046,547	5,092,610	43,261,761	2,871,242	9.64
		2010/11	33,512,160	8,095,953	6,943,128	48,551,241	3,249,672	10.66
51001	Mandurah	2005/06	7,403,499	1,598,272	1,241,463	10,243,234	658,586	12.58
		2006/07	7,472,082	1,625,707	1,364,667	10,462,456	660,975	12.30
		2007/08	10,180,296	1,648,656	1,421,490	13,250,442	796,299	13.90
		2008/09	9,015,162	2,269,713	1,582,181	12,867,056	837,867	13.79
		2009/10	8,757,102	2,497,440	1,391,673	12,646,215	838,957	13.28
		2010/11	9,423,950	2,489,418	1,861,515	13,774,883	917,507	14.24

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
51003	Bunbury	2005/06	6,230,267	990,367	1,279,093	8,499,727	540,164	12.84
		2006/07	6,199,175	1,255,455	1,681,833	9,136,463	600,674	13.94
		2007/08	7,568,656	1,223,668	1,205,603	9,997,927	610,293	13.45
		2008/09	6,614,537	1,313,645	1,219,473	9,147,655	584,042	12.27
		2009/10	7,241,419	1,534,140	1,373,461	10,149,021	657,154	13.30
		2010/11	8,346,583	1,570,259	1,629,336	11,546,178	737,809	14.94
51010	Preston	2005/06	4,288,249	481,717	782,515	5,552,481	336,787	13.74
		2006/07	3,394,334	417,386	487,377	4,299,097	248,589	9.54
		2007/08	4,843,193	409,127	495,062	5,747,382	313,838	11.69
		2008/09	3,826,009	505,572	752,240	5,083,821	310,244	11.27
		2009/10	3,948,639	508,728	600,301	5,057,667	300,838	10.67
		2010/11	3,977,627	500,598	811,436	5,289,662	324,244	10.87
51015	Vasse	2005/06	4,286,815	1,469,871	925,286	6,681,972	476,061	17.04
		2006/07	4,609,592	1,204,809	1,038,667	6,853,068	463,585	16.34
		2007/08	5,468,754	824,968	556,188	6,849,910	407,722	13.74
		2008/09	5,176,074	1,390,120	843,114	7,409,308	497,317	16.03
		2009/10	4,759,258	1,634,738	974,463	7,368,459	521,702	16.18
		2010/11	6,941,708	1,516,384	963,289	9,421,380	609,942	19.01

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
51020	Blackwood	2005/06	1,213,283	231,718	302,382	1,747,383	115,771	9.42
		2006/07	1,218,419	224,291	239,624	1,682,334	105,647	8.66
		2007/08	1,172,152	132,114	81,587	1,385,853	75,544	6.03
		2008/09	1,667,206	351,706	278,614	2,297,526	146,393	11.44
		2009/10	1,688,533	342,070	274,763	2,305,366	146,028	11.27
		2010/11	1,626,760	329,547	257,064	2,213,371	140,088	11.12
51505	Pallinup	2005/06	1,549,939	169,624	296,778	2,016,341	123,418	15.44
		2006/07	1,253,409	148,293	270,096	1,671,798	101,571	13.30
		2007/08	1,581,389	145,028	207,471	1,933,888	109,005	14.12
		2008/09	1,339,734	154,029	206,791	1,700,553	100,784	12.71
		2009/10	1,817,855	165,065	317,357	2,300,277	135,329	17.04
		2010/11	1,632,757	161,545	287,643	2,081,945	123,913	16.05
51510	King	2005/06	3,409,659	1,138,254	930,163	5,478,076	394,550	12.26
		2006/07	3,501,588	1,009,226	987,792	5,498,606	381,011	11.79
		2007/08	5,305,570	885,786	765,778	6,957,134	426,919	12.79
		2008/09	3,967,696	1,043,498	765,391	5,776,584	385,670	11.23
		2009/10	4,468,700	1,238,968	952,517	6,660,184	452,838	12.96
		2010/11	4,419,692	1,279,317	925,224	6,624,232	453,372	13.11

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
52005	Hotham	2005/06	1,865,509	141,939	223,318	2,230,766	127,260	12.53
		2006/07	3,162,542	253,145	295,480	3,711,167	204,354	20.25
		2007/08	1,438,353	647,762	271,385	2,357,500	171,072	16.75
		2008/09	2,357,104	212,255	238,004	2,807,363	158,818	15.33
		2009/10	1,816,511	245,081	239,967	2,301,559	136,882	13.20
		2010/11	1,831,730	189,472	223,449	2,244,651	129,169	12.69
52010	Lakes	2005/06	1,227,244	68,923	198,092	1,494,259	86,521	25.36
		2006/07	768,439	51,626	105,158	925,223	50,884	15.12
		2007/08	1,330,301	49,514	94,891	1,474,706	75,465	22.41
		2008/09	585,849	51,250	160,016	797,115	49,515	14.49
		2009/10	689,036	51,574	84,144	824,754	46,479	13.67
		2010/11	765,335	142,478	137,227	1,045,040	66,962	19.66
52505	Moore	2005/06	1,903,034	213,163	391,801	2,507,998	153,934	13.90
		2006/07	1,863,514	332,467	339,238	2,535,219	155,914	14.03
		2007/08	1,825,863	116,814	222,467	2,165,144	116,127	10.14
		2008/09	2,068,567	350,771	358,480	2,777,817	171,318	14.40
		2009/10	2,244,093	398,784	373,514	3,016,392	186,517	15.29
		2010/11	1,935,324	379,347	269,045	2,583,716	160,574	13.23



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
**STAGE 4, FINAL REPORT**

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
52510	Avon	2005/06	3,478,411	530,264	669,059	4,677,734	293,611	14.39
		2006/07	2,766,474	446,972	567,541	3,780,987	231,796	11.42
		2007/08	3,322,239	293,414	309,085	3,924,738	211,009	10.14
		2008/09	2,730,065	463,487	417,785	3,611,337	219,242	10.28
		2009/10	2,944,851	488,487	465,993	3,899,330	237,308	10.92
		2010/11	2,678,026	423,410	451,429	3,552,865	216,954	10.10
52515	Campion	2005/06	2,121,959	171,462	323,709	2,617,130	151,969	19.30
		2006/07	1,286,476	164,111	212,274	1,662,861	96,788	12.11
		2007/08	2,236,742	113,975	153,428	2,504,145	127,827	15.97
		2008/09	1,108,822	131,652	138,534	1,379,009	79,415	9.91
		2009/10	1,147,088	127,074	149,140	1,423,301	81,818	10.15
		2010/11	1,219,821	148,526	151,574	1,519,921	88,443	10.85
53001	Kalgoorlie/Boulder City Part A	2005/06	5,283,787	654,274	646,879	6,584,940	386,608	17.55
		2006/07	5,478,822	651,341	970,955	7,101,118	415,038	18.50
		2007/08	7,003,119	706,377	1,219,569	8,929,065	519,521	22.52
		2008/09	5,665,201	816,165	1,021,058	7,502,423	453,949	19.29
		2009/10	5,273,317	813,916	764,443	6,851,676	411,522	17.31
		2010/11	5,903,548	758,075	1,079,524	7,741,146	463,981	19.29

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
53005	Lefroy	2005/06	1,343,079	37,099	69,835	1,450,013	75,418	9.29
		2006/07	571,906	85,588	137,320	794,814	50,195	5.29
		2007/08	626,624	10,452	14,214	651,290	30,854	3.21
		2008/09	801,700	85,902	169,005	1,056,607	64,041	6.66
		2009/10	626,231	15,901	217,723	859,854	53,042	5.43
		2010/11	712,872	43,250	131,340	887,462	50,663	4.56
53010	Johnston	2005/06	2,381,306	378,440	495,627	3,255,373	207,386	15.29
		2006/07	2,564,401	404,704	507,046	3,476,151	213,623	15.75
		2007/08	2,776,545	382,061	485,153	3,643,759	218,655	15.58
		2008/09	2,390,902	420,676	418,850	3,230,428	200,897	14.31
		2009/10	2,379,921	420,602	329,541	3,130,064	191,676	13.66
		2010/11	2,361,365	357,550	339,052	3,057,968	184,326	13.54
53503	Geraldton	2005/06	4,617,263	1,086,851	864,328	6,568,442	433,696	18.22
		2006/07	4,420,101	819,332	914,844	6,154,277	384,754	16.01
		2007/08	7,339,747	1,023,493	802,068	9,165,308	531,486	21.38
		2008/09	4,965,502	954,794	780,974	6,701,270	416,357	16.30
		2009/10	6,625,611	1,154,269	1,479,862	9,259,743	584,982	22.45
		2010/11	6,331,940	1,195,572	2,151,531	9,679,042	650,007	24.89

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
53505	Gascoyne	2005/06	2,509,911	428,969	489,716	3,428,596	217,794	16.78
		2006/07	2,514,026	439,439	431,294	3,384,759	206,525	16.23
		2007/08	3,004,602	266,005	254,444	3,525,051	188,999	14.69
		2008/09	2,413,646	501,072	349,442	3,264,160	203,245	15.57
		2009/10	2,807,287	568,763	416,366	3,792,416	237,189	17.98
		2010/11	2,785,065	513,541	424,461	3,723,067	230,114	17.49
53510	Carnegie	2005/06	1,397,438	123,963	221,776	1,743,177	102,979	22.55
		2006/07	895,929	102,775	151,488	1,150,192	68,063	13.15
		2007/08	1,365,392	49,914	133,289	1,548,595	80,128	15.52
		2008/09	742,217	56,851	108,939	908,007	51,628	9.90
		2009/10	707,574	45,020	92,855	845,449	46,903	9.02
		2010/11	711,549	40,810	77,859	830,218	45,121	7.88
53515	Greenough River	2005/06	2,975,188	365,517	479,245	3,819,951	231,087	19.44
		2006/07	2,099,985	304,800	364,796	2,769,580	165,172	13.00
		2007/08	3,192,533	218,305	215,176	3,626,015	188,474	14.63
		2008/09	2,189,443	329,155	264,788	2,783,387	163,550	12.53
		2009/10	2,215,179	627,041	318,786	3,161,006	206,791	15.77
		2010/11	2,133,220	305,321	338,499	2,777,040	167,219	11.95

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
54005	De Grey	2005/06	4,316,558	351,769	885,187	5,553,514	335,010	17.14
		2006/07	4,335,420	333,957	828,163	5,497,540	315,905	13.17
		2007/08	5,759,766	351,009	909,296	7,020,071	391,159	15.94
		2008/09	5,008,800	381,559	796,558	6,186,917	352,190	13.91
		2009/10	5,760,784	424,846	1,016,045	7,201,676	414,019	15.99
		2010/11	5,856,863	393,043	1,165,919	7,415,826	429,081	14.11
54010	Fortescue	2005/06	1,677,077	594,135	950,394	3,221,606	246,458	11.47
		2006/07	4,970,823	591,263	1,123,433	6,685,519	408,080	13.92
		2007/08	6,815,362	521,791	1,013,243	8,350,396	471,877	15.96
		2008/09	6,251,309	694,781	1,175,913	8,122,003	488,649	16.35
		2009/10	6,922,036	768,478	1,416,210	9,106,724	553,385	18.34
		2010/11	6,771,796	780,862	1,481,827	9,034,485	555,287	14.56
54505	Ord	2005/06	2,435,159	210,364	242,366	2,887,889	161,642	14.92
		2006/07	2,365,639	278,213	250,055	2,893,907	163,884	14.33
		2007/08	2,420,616	279,928	256,277	2,956,821	167,330	14.24
		2008/09	2,642,344	232,364	257,329	3,132,038	172,026	14.44
		2009/10	2,663,267	233,719	155,749	3,052,735	159,651	13.28
		2010/11	2,595,647	171,005	208,587	2,975,240	153,990	12.07

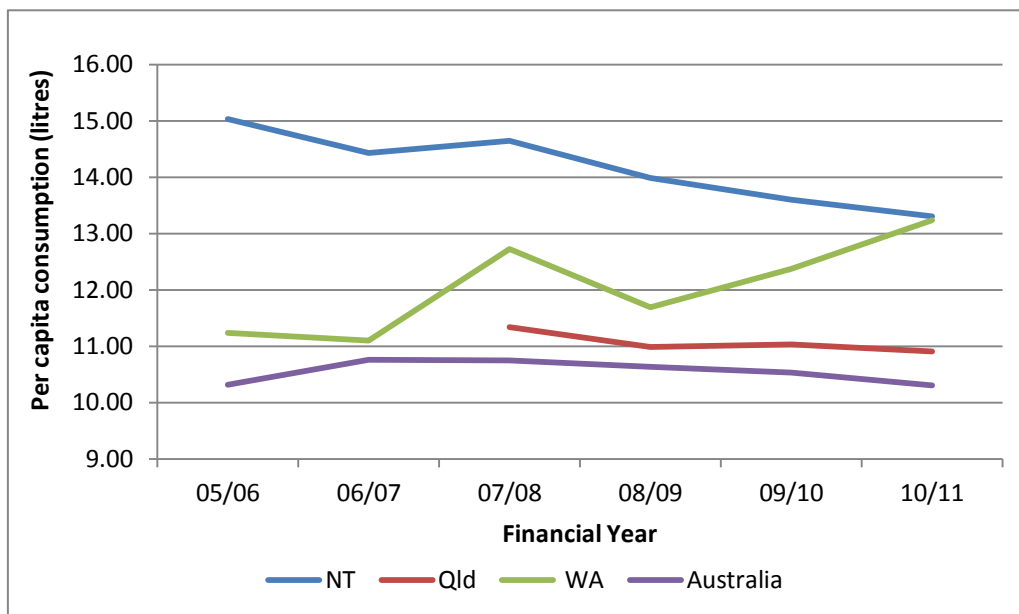
**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All beer</b>	<b>All wine</b>	<b>All spirits</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ESP</b>
54510	Fitzroy	2005/06	5,288,575	704,337	872,040	6,864,952	417,250	18.31
		2006/07	5,144,392	676,047	821,119	6,641,558	392,782	16.40
		2007/08	6,741,933	653,520	606,178	8,001,631	436,109	17.78
		2008/09	5,425,776	966,075	850,692	7,242,543	446,391	17.87
		2009/10	6,030,754	880,746	730,454	7,641,954	450,889	17.64
		2010/11	5,801,603	773,384	898,782	7,473,769	445,511	16.72
<b>Totals</b>	<b>Western Australia</b>	<b>2005/06</b>	<b>187,684,377</b>	<b>46,038,984</b>	<b>33,857,607</b>	<b>267,580,968</b>	<b>17,797,940</b>	<b>11.23</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2006/07</b>	<b>194,787,180</b>	<b>45,483,945</b>	<b>36,927,807</b>	<b>277,198,931</b>	<b>18,006,305</b>	<b>11.10</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2007/08</b>	<b>286,279,501</b>	<b>41,475,546</b>	<b>32,373,194</b>	<b>360,128,241</b>	<b>21,312,499</b>	<b>12.72</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2008/09</b>	<b>212,202,279</b>	<b>55,120,724</b>	<b>37,555,353</b>	<b>304,878,355</b>	<b>20,245,103</b>	<b>11.69</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2009/10</b>	<b>231,987,963</b>	<b>60,136,426</b>	<b>39,761,216</b>	<b>331,885,604</b>	<b>21,959,374</b>	<b>12.37</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2010/11</b>	<b>252,022,265</b>	<b>59,474,663</b>	<b>49,662,823</b>	<b>361,159,751</b>	<b>23,965,481</b>	<b>13.24</b>

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**TRENDS IN *PER CAPITA* CONSUMPTION**

The following figure illustrates trends in *per capita* consumption in jurisdictions for which there were NASDP consumption estimates.



**Figure 13 *Per capita* consumption in NASDP jurisdictions and nationally from 2005/06 to 2010/11<sup>10</sup>**

In the NT the clear trend has been decreasing alcohol consumption over six years. In Queensland there appears to be a less marked decreasing trend. In WA consumption increased in 2007/08 and has been increasing again since 2008/09. Nationally, alcohol consumption has been decreasing since 2007/08<sup>11</sup>.

Alcohol sales and consumption figures for the NT and WA, where 6 years of data are available, demonstrate that trends in alcohol sales are not necessarily related to changes in population.

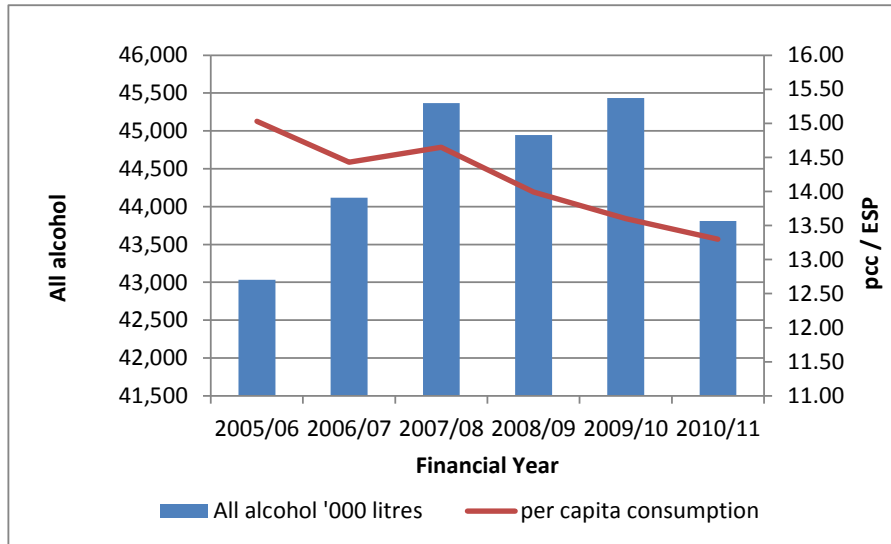
In the NT, population plus tourism figures, as supplied by the Department of Business, increased until 2009/10 after which there was a small reduction. In WA ESP steadily increased over the series.

<sup>10</sup> Queensland 2010/11 has been estimated.

<sup>11</sup> Australia trend sourced from Australian Bureau of Statistics, 2014.

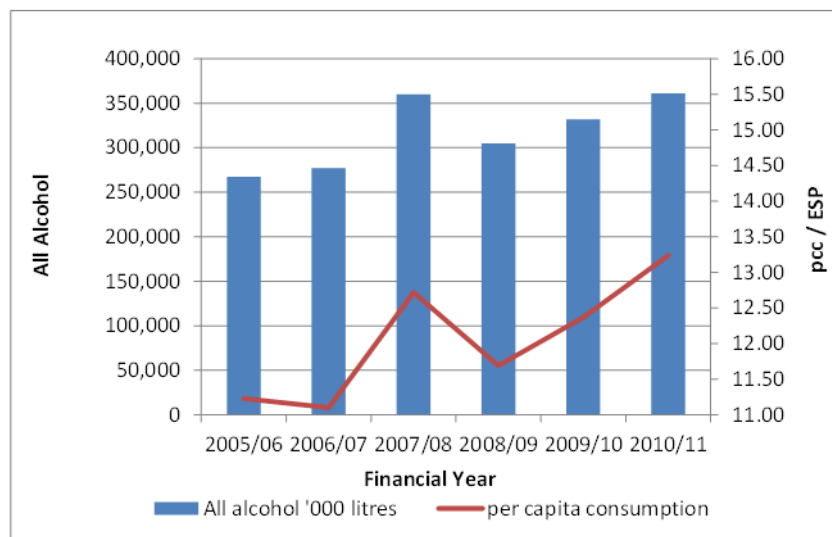
**NATIONAL ALCOHOL SALES DATA PROJECT**  
 National Drug Research Institute, Curtin University  
 STAGE 4, FINAL REPORT

Figure 14 shows that in the NT alcohol sales decreased in 2008/09 and 2010/11 despite growth in the population and there was an apparent steady decline in *per capita* consumption of the NT population.



**Figure 14 Northern Territory all alcohol volumes and pcc, 2005/06 to 2010/11**

Alcohol sales and consumption in WA show a different pattern as seen in Figure 15.



**Figure 15 Western Australia all alcohol volumes and pcc/ESP, 2005/06 to 2010/11**

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

WA alcohol sales generally increased between 2006/07 and 2010/11 and were highest in 2007/08 and 2010/11. *Per capita* consumption figures which factor in population size also increased over time but with a notable spike in 2007/08.

## **DISCUSSION**

### **SUMMARY OF REGIONAL DATA**

#### **The Australian Capital Territory**

The ACT provided data from the first year of collection (2012/13) submitted by 90% of wholesalers required to submit sales data. We found estimated *per capita* consumption unlikely to be a reasonable account of actual consumption levels and have not presented it in this report. Our supposition is that while 90% of wholesalers may have submitted their data, the data submitted did not approximate 90% of alcohol purchased in the ACT during the financial year 2012/13.

In a recent review of the ACT Liquor Act 2010 and Liquor Regulation (Acil Allen Consulting 2014), it was noted that:

“The Act requires only licensees selling liquor by wholesale under an off-licence to provide sales data information. While the Act defines off-licences, it does not include a specific ‘wholesaler’ category and there is no definition of the term ‘wholesale’ in the Act” (p. 61).

The Review Report discussed concerns that had been raised about how effective the legislation was in requiring wholesalers to provide sales data in a timely manner and recommendations that the provision of alcohol sales data should be a licence requirement.

The NASDP team congratulates the ACT for establishing an alcohol sales data collection, and thanks them for making the inaugural data available to the NASDP. We hope that the comprehensiveness of the collection will improve in the next few years as the new recording process becomes established and the recommendations of the review are taken into consideration.

#### **The Northern Territory**

- The estimated alcohol *per capita* consumption in the NT in 2010/11 was 13.30 litres of pure alcohol per individual aged 15+, using population figures which included tourists. This is the lowest level seen in the time period reported for the NT by the NASDP.



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

- Less pure alcohol was sold in 2010/11 than in any preceding year in the NASDP analysis. Pure alcohol sales reduced between 2009/10 and 2010/11 in every reporting region except Katherine and Tennant Creek.
- Between 2009/10 and 2010/11 sales of most beverage types across the NT were relatively stable, with the exception of cider. There was a 7% increase in cider sales overall.
- Cider sales increased from 2009/10 to 2010/11 in Darwin, Katherine, Palmerston and NT Balance and reduced in all other regions.

### **Queensland<sup>12</sup>**

- The overall estimated alcohol pcc/ESP for Queensland for 2010/11 was 10.91 litres of pure alcohol per individual aged 15+. Queensland pcc/ESP was relatively stable, ranging from 11.34 in 2008/09 to 10.98 in 2007/08.
- Regional estimates were not available for 2010/11. In 2009/10 high alcohol consumption (pcc/ESP >15 litres of pure alcohol) was found in Inner Brisbane, Gold Coast East and several coastal cities: Rockhampton, Mackay, Townsville City A, and Cairns. Low alcohol consumption (pcc/ESP < 8 litres of pure alcohol) was found in some parts of Brisbane and the Sunshine Coast, Somerset, and Townsville City B. These findings are similar to those in 2008/09 where it was posited that the inner Brisbane area had particularly high alcohol consumption because of a combination of relatively low resident population, its status as an entertainment area and alcohol sales to city workers, and that the coastal cities with high alcohol consumption had relatively high levels of tourism.
- Across the state, sales of pure alcohol were increased in 2009/10 compared to the previous year, and the largest amounts of alcohol were generally sold on the eastern seaboard, particularly in the South East, although these did not necessarily translate into high *per capita* consumption because of large populations.
- Queensland beer sales decreased by approximately 6% from the previous year, while sales of wine, spirits and ‘other’ beverages (which include cider and alcoholic sodas) increased by 8%, 3% and 33% respectively. Further analysis revealed that sales of standard spirits decreased by approximately 7%, and sales of pre-mixed spirits (RTDs) increased by approximately 5% between 2008/09 and 2009/10.

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<sup>12</sup> This summarises 2009/10 data as complete data for 2010/11 are not available.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Western Australia**

- The overall estimated alcohol pcc/ESP for WA for 2010/11 was 13.24 litres of pure alcohol per individual aged 15+. WA had the highest pcc/ESP in 2010/11 in the six years of the NASDP, having increased steadily during the last three years of the period. The previous highest pcc/ESP was 12.72 in 2007/08.
- Compared to 2009/10, pcc/ESP decreased by at least 2 litres in Moore, Greenough River and Fortescue and increased by at least 2 litres in Central Metropolitan, Vasse, Lakes and Geraldton. The falls in Greenough River and Fortescue can be set against rises of a similar magnitude in 2009/10 compared to 2008/09.
- In 2010/11, pcc/ESP more than 3 litres above the state average was found in Central Metropolitan, Vasse, Lakes, Kalgoorlie/Boulder City A, Geraldton, Gascoyne and Fitzroy. As we commented in Stage 3, many of these are regions with highly mobile workforces and/or regions of high tourism, and relatively low resident population, status as an entertainment area and alcohol sales to city workers are likely to have influenced alcohol consumption in Central Metropolitan.
- Between 2009/10 and 2010/11, WA pure alcohol sales increased by 8.1% which is similar to the increase between 2008/09 and 2009/10. Beer sales increased by 7.9% although wine sales decreased by 1.1%. The biggest rise was found in spirits, sales of which increased by 19.9%. It should be noted that WA data do not separate regular and pre-mixed spirits, and do not include sales of cider and other alcoholic beverages.

**TRENDS IN *PER CAPITA* CONSUMPTION**

A comparison of population with alcohol sales and consumption in the NT and WA demonstrates that trends in sales are not directly related to trends in population. In the NT, population steadily increased over the first five years for which the NASDP data are available, and alcohol volumes sold fluctuated across the same period, but per capita consumption has been decreasing across the entire period. Population has also been rising in WA and sales, although fluctuating a little, have generally increased, but consumption has also been increasing across the period demonstrating that rising sales are not likely to be a function of increasing population.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**POSSIBLE CROSS-BORDER SALES OF WHOLESALE ALCOHOL**

During the preparation of this report, the possibility that wholesale alcohol might be sold across jurisdictional borders has been discussed. If it were the case, it might help to account for apparently diminished retail sales within jurisdictions. Legislation to deal with this varies from jurisdiction to jurisdiction - it has been noted, for example, that proposed Victorian legislation (see below) will require wholesalers in other jurisdictions to obtain a Victorian licence if they intend to sell alcohol to Victorian retailers. The NASDP Advisory Committee believes that this possible development is one that should be closely monitored in the future as it could limit the use of alcohol sales data for research and evaluation purposes .

**FUTURE DEVELOPMENTS IN THE NASDP**

As noted above, there have been significant changes to the ABS geographical reporting scheme which will affect the NASDP if the project continues beyond Stage 4. From 1 July 2011, the ABS moved to a new geographical system: the Australian Statistical Geography Standard (ASGS) and alcohol sales data collected after 1 July 2011 will be analysed in the NASDP under the new system. The closest approximation to Statistical Sub Division (SSD), which is the primary regional unit currently used in the NASDP, is SA3 and that will be the primary regional unit of analysis in future NASDP Stages.

We particularly thank the relevant agency from the ACT for providing data to the NASDP for the first time. We also wish to thank the relevant agencies from the NT, Queensland and WA for continuing to provide data to the NASDP and working with us to ensure that the best possible analysis is undertaken.

In Victoria, legislation to tackle alcohol related harm has been introduced by the Victorian Government, and this will include requiring liquor licensees to report wholesale alcohol sales information. It is anticipated that this collection would commence in 2015/16. Smaller wholesalers such as small breweries, distillers and winemakers will be exempt from the requirement to provide the data. Wholesalers in other jurisdictions will require a Victorian licence to sell alcohol to Victorian retailers.

In Tasmania and South Australia, collection of alcohol sales data is under consideration and consultation.

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

The NASDP team look forward to welcoming jurisdictions which have new sales data collections and we trust that this report and the reports that preceded it will continue to demonstrate the policy and practice value of alcohol sales data analysis.

# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

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# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

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**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**APPENDIX I ESTIMATES OF QUEENSLAND AND WESTERN AUSTRALIAN *PER CAPITA* CONSUMPTION BY ERP**

In the main body of the current report we have presented pcc/ESP for Queensland and WA for all available years.

In this Appendix we have presented all pcc/ERP data presented in previous reports extended to include the current year. This will permit direct comparability with previous data although readers are reminded that the ABS revise their ERP figures from year to year so that some further slight alteration from previous data may be apparent.

**QUEENSLAND**

Because complete data for 2010/11 for Queensland are not available, we have re-presented tables developed for the Stage 3 report.

Table 9 shows Queensland ERP and pcc/ERP calculated in two ways: by ABS ERP (ERP1) and NASDP-revised ERP (ERP2) together with pcc/ESP for the current year.

**Table 9 Estimated per capita consumption (litres of absolute alcohol), Queensland 2009/10, by two different ERP, and ESP estimates.**

SSD code	SSD name	ERP1*	ERP2**	pcc/ERP1	pcc/ERP2	pcc/ESP
30501	Inner Brisbane	87,709	87,588	24.10	24.13	21.87
	NW Inner					10.34
30503	Brisbane	163,602	163,424	10.00	10.02	
	NW Outer					7.99
30507	Brisbane	281,246	280,951	7.64	7.65	
30509	SE Inner Brisbane	137,790	137,646	6.86	6.87	7.17
30511	SE Outer Brisbane	209,259	209,035	7.18	7.19	7.45
30520	Caboolture	122,178	122,046	10.04	10.05	10.41
30525	Ipswich City	128,079	129,059	7.81	7.75	8.05
30530	Logan City	217,249	233,540	9.67	8.99	9.41
30540	Pine Rivers	129,685	129,547	7.68	7.69	8.03
30545	Redcliffe	47,370	47,310	8.82	8.83	9.14
30550	Redland City	114,541	114,408	9.55	9.57	10.08
30710	Gold Coast East	175,936	175,706	16.70	16.72	16.07
30715/3070	Gold Coast West/SD Bal****	258,226	252,117	9.53	9.76	10.51
30905	Sunshine Coast	205,399	205,145	13.70	13.72	14.05

# NATIONAL ALCOHOL SALES DATA PROJECT

National Drug Research Institute, Curtin University

## STAGE 4, FINAL REPORT

SSD code	SSD name	ERP1*	ERP2**	pcc/ER P1	pcc/ER P2	pcc/ES P
30910	Sunshine Coast SD Bal	63,788	63,711	6.33	6.34	6.82
31205	Somerset	17,919	17,902	5.89	5.89	6.38
31210	Lower West Moreton	59,169	47,321	6.95	8.69	9.35
31505	Bundaberg	55,357	55,289	10.85	10.86	11.40
31507	Hervey Bay	49,567	49,506	10.79	10.81	10.98
31510	Wide Bay-Burnett SD Bal	130,084	134,885	9.74	9.39	9.90
32001	Toowoomba	103,770	103,666	9.22	9.23	10.11
32005	Darling Downs SD Bal	86,671	87,577	8.33	8.24	8.68
32505	South West	20,332	20,319	12.30	12.31	11.81
33005	Rockhampton	61,331	61,267	16.38	16.39	17.32
33010	Gladstone	39,087	39,042	10.40	10.41	10.89
33015	Fitzroy SD Bal	73,385	68,154	8.34	8.99	8.73
33505	Central West	9,955	9,170	8.91	9.67	8.38
34005	Mackay	67,793	67,719	14.07	14.08	15.32
34010	Mackay SD Bal	71,907	71,822	15.50	15.52	13.71
34505	Townsville City A	87,115	87,024	16.32	16.34	16.78
34510	Townsville City B	49,581	49,526	6.68	6.69	7.39
34515	Northern SD Bal	46,488	46,441	9.07	9.08	9.20
35005	Cairns	118,399	118,276	18.05	18.07	17.43
35010	Far North SD Bal	96,880	96,798	12.13	12.14	11.73
35505	North West	25,461	25,438	17.49	17.50	14.83
<b>Queensland total</b>		<b>3,612,308</b>	<b>3,608,375</b>	<b>10.73</b>	<b>10.74</b>	<b>11.03</b>

\*ERP for persons aged 15+. ABS 2010

\*\*ERP for persons aged 15+ . Calculated by the NASDP in the process of developing ESP.

\*\*\* Gold Coast SD Bal has been amalgamated with Gold Coast West because it is a very tiny SSD and its boundaries have changed considerably over time. It was confidentialised in Stage 2.

Table 9 shows that the two different ERPS made little difference to the estimation of *per capita* consumption in almost all SSDs. The biggest difference was in Lower West Moreton where there was a 20% higher estimation in consumption calculated with ERP2.

Table 10 shows all previously presented ERP data extended to include 2009/10.



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**Table 10 Volumes of alcohol, pure alcohol and estimated *per capita* consumption (litres of absolute alcohol) by ERP in SSDs, Queensland 2007/08 to 2009/10**

SSD code	SSD name	Year	All alcohol	All pure alcohol	pcc/ERP
30501	Inner Brisbane	2007/08	30,746,262	2,290,449	26.93
		2008/09	30,815,809	2,189,956	25.23
		2009/10	29,352,565	2,113,694	24.10
30503	Northwest Inner Brisbane	2007/08	18,647,079	1,388,824	8.77
		2008/09	19,633,170	1,475,838	9.15
		2009/10	21,729,304	1,636,725	10.00
30507	Northwest Outer Brisbane	2007/08	31,131,789	2,140,284	7.94
		2008/09	35,148,882	2,150,884	7.78
		2009/10	31,465,658	2,149,493	7.64
30509	Southeast Inner Brisbane	2007/08	12,925,447	907,922	6.81
		2008/09	11,946,516	822,900	6.05
		2009/10	13,680,065	945,726	6.86
30511	Southeast Outer Brisbane	2007/08	21,479,902	1,655,400	8.28
		2008/09	22,746,233	1,513,496	7.35
		2009/10	22,572,186	1,502,973	7.18
30520	Caboolture	2007/08	17,266,991	1,084,755	9.56
		2008/09	22,361,099	1,233,937	10.44
		2009/10	18,806,050	1,226,786	10.04
30525	Ipswich City	2007/08	16,411,297	1,024,720	8.71
		2008/09	15,501,010	943,556	7.62
		2009/10	15,633,738	999,812	7.81
30530	Logan City	2007/08	28,908,916	1,882,451	9.10
		2008/09	28,081,204	1,796,702	8.44
		2009/10	32,286,976	2,100,507	9.67
30540	Pine Rivers	2007/08	14,328,971	990,877	8.26
		2008/09	15,205,748	975,444	7.78
		2009/10	14,425,153	995,750	7.68
30545	Redcliffe	2007/08	6,134,827	425,363	9.40
		2008/09	5,649,801	383,560	8.26
		2009/10	5,760,932	417,944	8.82
30550	Redland City	2007/08	15,348,313	1,086,720	9.94
		2008/09	16,787,360	1,100,694	9.78
		2009/10	16,205,807	1,094,372	9.55

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

SSD code	SSD name	Year	All alcohol	All pure alcohol	pcc/ERP
30710	Gold Coast East	2007/08	39,077,814	2,904,879	17.24
		2008/09	37,395,410	2,711,945	15.72
		2009/10	41,200,981	2,937,896	16.70
30715	Gold Coast West	2007/08	34,253,845	2,473,181	10.46
		2008/09	30,968,162	2,186,896	8.86
30720	Gold Coast SD Bal	2007/08	CONFIDENTIALISED		
		2008/09	CONFIDENTIALISED		
30715/30720	Gold Coast West/SD Bal	2009/10	35,451,206	2,460,448	9.53
30905	Sunshine Coast	2007/08	38,759,134	2,881,894	14.85
		2008/09	39,430,548	2,760,356	13.77
		2009/10	40,127,114	2,813,833	13.70
30910	Sunshine Coast SD Bal	2007/08	7,163,497	476,084	7.97
		2008/09	7,612,690	466,084	7.49
		2009/10	6,156,478	403,686	6.33
31205	Upper West Moreton	2007/08	2,122,261	119,364	7.28
	Somerset	2008/09	2,135,649	114,698	6.67
		2009/10	1,813,625	105,497	5.89
31210	Lower West Moreton	2007/08	6,548,342	397,181	7.19
		2008/09	6,802,034	389,328	6.76
		2009/10	6,591,228	411,382	6.95
31505	Bundaberg	2007/08	7,996,377	497,618	9.42
		2008/09	10,486,857	603,713	11.13
		2009/10	8,624,606	600,450	10.85
31507	Hervey Bay	2007/08	CONFIDENTIALISED		
		2008/09	8,571,035	536,387	11.18
		2009/10	8,010,141	535,067	10.79
31510	Wide Bay-Burnett SD Bal	2007/08	21,590,919	1,283,418	10.39
		2008/09	25,333,511	1,352,012	10.60
		2009/10	20,561,151	1,267,228	9.74
32001	Toowoomba	2007/08	13,727,191	944,630	9.56
		2008/09	13,798,226	916,672	9.03
		2009/10	14,838,097	957,058	9.22
32005	Darling Downs SD Bal	2007/08	13,709,935	791,045	9.51
		2008/09	17,579,678	879,408	10.33
		2009/10	12,085,721	722,005	8.33

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
32505	South West	2007/08	5,240,379	257,687	12.85
		2008/09	5,235,019	258,576	12.81
		2009/10	4,618,597	250,037	12.30
33005	Rockhampton	2007/08	15,633,330	881,987	14.83
		2008/09	17,296,125	961,900	15.87
		2009/10	16,935,351	1,004,391	16.38
33010	Gladstone	2007/08	6,662,798	376,995	10.15
		2008/09	9,911,301	508,443	13.20
		2009/10	6,811,041	406,518	10.40
33015	Fitzroy SD Bal	2007/08	12,009,128	699,269	9.97
		2008/09	13,022,753	709,252	9.81
		2009/10	10,342,158	612,398	8.34
33505	Central West	2007/08	2,181,522	112,198	11.46
		2008/09	1,857,806	88,153	8.94
		2009/10	1,616,146	88,694	8.91
34005	Mackay	2007/08	15,776,745	913,507	14.26
		2008/09	13,054,721	818,081	12.37
		2009/10	17,179,522	953,765	14.07
34010	Mackay SD Bal	2007/08	18,195,790	1,074,703	15.69
		2008/09	20,948,731	1,167,858	16.55
		2009/10	17,926,476	1,114,816	15.50
34505	Townsville City Part A	2007/08	21,779,856	1,331,680	16.01
		2008/09	30,955,939	1,567,855	18.36
		2009/10	23,651,451	1,421,986	16.32
34510	Townsville City Part B	2007/08	3,773,186	207,167	4.56
		2008/09	4,497,654	262,965	5.49
		2009/10	5,990,980	331,164	6.68
34515	Northern SD Bal	2007/08	8,297,125	444,091	9.82
		2008/09	7,871,323	403,883	8.77
		2009/10	7,343,891	421,856	9.07
35005	Cairns	2007/08	27,159,238	1,731,593	15.54
		2008/09	32,279,548	1,994,343	17.28
		2009/10	35,067,960	2,136,730	18.05
35010	Far North SD Bal	2007/08	19,844,639	1,188,965	12.75
		2008/09	18,929,725	1,106,733	11.59
		2009/10	19,185,354	1,174,709	12.13

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
35505	North West	2007/08	8,122,582	439,398	17.44
		2008/09	7,526,868	420,306	16.58
		2009/10	7,880,273	445,283	17.49
<b>Total</b>	<b>Queensland</b>	<b>2007/08</b>	<b>572,712,362</b>	<b>37,955,769</b>	<b>11.07</b>
<b>Total</b>	<b>Queensland</b>	<b>2008/09</b>	<b>608,015,309</b>	<b>37,817,375</b>	<b>10.69</b>
<b>Total</b>	<b>Queensland</b>	<b>2009/10</b>	<b>591,927,984</b>	<b>38,760,678</b>	<b>10.73</b>

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**WESTERN AUSTRALIA**

Table 11 shows all previously presented ERP data extended to include 2010/11

**Table 11 Volumes of alcohol, pure alcohol and estimated per capita consumption (litres of absolute alcohol) by ERP in SSDs, Western Australia, 2005/06 to 2010/11**

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
50505	Central Metropolitan	2005/06	26,543,092	1,894,608	16.72
		2006/07	27,514,348	1,897,047	16.35
		2007/08	35,989,490	2,134,699	17.95
		2008/09	26,915,599	1,870,402	15.19
		2009/10	38,106,830	2,598,033	20.80
		2010/11	43,342,957	3,053,558	24.14
50510	East Metropolitan	2005/06	26,583,094	1,758,871	8.53
		2006/07	27,385,782	1,730,017	8.22
		2007/08	39,646,958	2,380,088	10.99
		2008/09	30,171,958	2,019,055	9.02
		2009/10	31,723,805	2,095,112	9.17
		2010/11	37,149,802	2,456,198	10.54
50515	North Metropolitan	2005/06	42,320,937	2,856,734	7.73
		2006/07	45,067,798	3,026,932	7.98
		2007/08	72,710,771	4,201,931	10.73
		2008/09	56,383,759	3,937,121	9.70
		2009/10	58,977,420	4,084,360	9.83
		2010/11	63,535,785	4,324,636	10.13
50520	South West Metropolitan	2005/06	35,712,909	2,468,477	9.54
		2006/07	38,585,848	2,568,979	9.68
		2007/08	53,809,492	3,354,285	12.26
		2008/09	43,809,332	3,045,848	10.73
		2009/10	46,959,965	3,258,725	11.17
		2010/11	51,086,859	3,537,137	11.77
50525	South East Metropolitan	2005/06	37,295,382	2,545,291	9.04
		2006/07	39,876,461	2,697,521	9.39
		2007/08	42,004,759	2,575,784	8.68
		2008/09	41,812,779	2,819,128	9.14
		2009/10	43,261,761	2,871,242	9.09
		2010/11	48,551,241	3,249,672	10.01

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
51001	Mandurah	2005/06	10,243,234	658,586	11.40
		2006/07	10,462,456	660,975	10.88
		2007/08	13,250,442	796,299	12.38
		2008/09	12,867,056	837,867	12.32
		2009/10	12,646,215	838,957	11.92
		2010/11	13,774,883	917,507	12.48
51003	Bunbury	2005/06	8,499,727	540,164	11.88
		2006/07	9,136,463	600,674	12.58
		2007/08	9,997,927	610,293	12.13
		2008/09	9,147,655	584,042	11.14
		2009/10	10,149,021	657,154	12.12
		2010/11	11,546,178	737,809	13.26
51010	Preston	2005/06	5,552,481	336,787	12.50
		2006/07	4,299,097	248,589	9.09
		2007/08	5,747,382	313,838	11.28
		2008/09	5,083,821	310,244	10.73
		2009/10	5,057,667	300,838	10.17
		2010/11	5,289,662	324,244	10.76
51015	Vasse	2005/06	6,681,972	476,061	16.09
		2006/07	6,853,068	463,585	14.92
		2007/08	6,849,910	407,722	12.59
		2008/09	7,409,308	497,317	14.69
		2009/10	7,368,459	521,702	14.89
		2010/11	9,421,380	609,942	16.91
51020	Blackwood	2005/06	1,747,383	115,771	8.89
		2006/07	1,682,334	105,647	7.93
		2007/08	1,385,853	75,544	5.54
		2008/09	2,297,526	146,393	10.49
		2009/10	2,305,366	146,028	10.35
		2010/11	2,213,371	140,088	9.88
51505	Pallinup	2005/06	2,016,341	123,418	13.99
		2006/07	1,671,798	101,571	11.72
		2007/08	1,933,888	109,005	12.46
		2008/09	1,700,553	100,784	11.21
		2009/10	2,300,277	135,329	15.03
		2010/11	2,081,945	123,913	13.75

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
51510	King	2005/06	5,478,076	394,550	11.32
		2006/07	5,498,606	381,011	10.64
		2007/08	6,957,134	426,919	11.58
		2008/09	5,776,584	385,670	10.16
		2009/10	6,660,184	452,838	11.75
		2010/11	6,624,232	453,372	11.59
52005	Hotham	2005/06	2,230,766	127,260	11.58
		2006/07	3,711,167	204,354	18.45
		2007/08	2,357,500	171,072	15.27
		2008/09	2,807,363	158,818	13.95
		2009/10	2,301,559	136,882	12.03
		2010/11	2,244,651	129,169	11.34
52010	Lakes	2005/06	1,494,259	86,521	23.54
		2006/07	925,223	50,884	14.19
		2007/08	1,474,706	75,465	21.01
		2008/09	797,115	49,515	13.55
		2009/10	824,754	46,479	12.78
		2010/11	1,045,040	66,962	18.53
52505	Moore	2005/06	2,507,998	153,934	13.20
		2006/07	2,535,219	155,914	13.10
		2007/08	2,165,144	116,127	9.49
		2008/09	2,777,817	171,318	13.48
		2009/10	3,016,392	186,517	14.34
		2010/11	2,583,716	160,574	12.18
52510	Avon	2005/06	4,677,734	293,611	13.31
		2006/07	3,780,987	231,796	10.35
		2007/08	3,924,738	211,009	9.21
		2008/09	3,611,337	219,242	9.33
		2009/10	3,899,330	237,308	9.33
		2010/11	3,552,865	216,954	8.97
52515	Campion	2005/06	2,617,130	151,969	18.99
		2006/07	1,662,861	96,788	12.03
		2007/08	2,504,145	127,827	15.86
		2008/09	1,379,009	79,415	9.81
		2009/10	1,423,301	81,818	10.06
		2010/11	1,519,921	88,443	10.79

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
53001	Kalgoorlie/Boulder City Part A	2005/06	6,584,940	386,608	16.97
		2006/07	7,101,118	415,038	17.92
		2007/08	8,929,065	519,521	21.83
		2008/09	7,502,423	453,949	18.64
		2009/10	6,851,676	411,522	16.75
		2010/11	7,741,146	463,981	18.61
53005	Lefroy	2005/06	1,450,013	75,418	11.99
		2006/07	794,814	50,195	7.90
		2007/08	651,290	30,854	4.78
		2008/09	1,056,607	64,041	9.84
		2009/10	859,854	53,042	7.97
		2010/11	887,462	50,663	7.55
53010	Johnston	2005/06	3,255,373	207,386	15.87
		2006/07	3,476,151	213,623	15.72
		2007/08	3,643,759	218,655	15.56
		2008/09	3,230,428	200,897	14.24
		2009/10	3,130,064	191,676	13.59
		2010/11	3,057,968	184,326	12.93
53503	Geraldton	2005/06	6,568,442	433,696	16.94
		2006/07	6,154,277	384,754	14.59
		2007/08	9,165,308	531,486	19.53
		2008/09	6,701,270	416,357	14.88
		2009/10	9,259,743	584,982	20.54
		2010/11	9,679,042	650,007	22.29
53505	Gascoyne	2005/06	3,428,596	217,794	29.34
		2006/07	3,384,759	206,525	27.95
		2007/08	3,525,051	188,999	25.10
		2008/09	3,264,160	203,245	26.25
		2009/10	3,792,416	237,189	30.12
		2010/11	3,723,067	230,114	28.44
53510	Carnegie	2005/06	1,743,177	102,979	38.43
		2006/07	1,150,192	68,063	24.37
		2007/08	1,548,595	80,128	28.83
		2008/09	908,007	51,628	18.16
		2009/10	845,449	46,903	16.59
		2010/11	830,218	45,121	15.73



**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

<b>SSD code</b>	<b>SSD name</b>	<b>Year</b>	<b>All alcohol</b>	<b>All pure alcohol</b>	<b>pcc/ERP</b>
53515	Greenough River	2005/06	3,819,951	231,087	20.01
		2006/07	2,769,580	165,172	14.34
		2007/08	3,626,015	188,474	16.14
		2008/09	2,783,387	163,550	13.73
		2009/10	3,161,006	206,791	17.28
		2010/11	2,777,040	167,219	13.89
54005	De Grey	2005/06	5,553,514	335,010	21.98
		2006/07	5,497,540	315,905	20.49
		2007/08	7,020,071	391,159	24.48
		2008/09	6,186,917	352,190	20.94
		2009/10	7,201,676	414,019	23.80
		2010/11	7,415,826	429,081	24.23
54010	Fortescue	2005/06	3,221,606	246,458	13.78
		2006/07	6,685,519	408,080	22.22
		2007/08	8,350,396	471,877	25.37
		2008/09	8,122,003	488,649	25.73
		2009/10	9,106,724	553,385	28.70
		2010/11	9,034,485	555,287	27.83
54505	Ord	2005/06	2,887,889	161,642	20.22
		2006/07	2,893,907	163,884	20.93
		2007/08	2,956,821	167,330	20.58
		2008/09	3,132,038	172,026	20.67
		2009/10	3,052,735	159,651	18.96
		2010/11	2,975,240	153,990	17.65
54510	Fitzroy	2005/06	6,864,952	417,250	25.62
		2006/07	6,641,558	392,782	23.22
		2007/08	8,001,631	436,109	24.93
		2008/09	7,242,543	446,391	24.75
		2009/10	7,641,954	450,889	24.24
		2010/11	7,473,769	445,511	23.53
<b>Totals</b>	<b>Western Australia</b>	<b>2005/06</b>	<b>267,580,968</b>	<b>17,797,940</b>	<b>10.79</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2006/07</b>	<b>277,198,931</b>	<b>18,006,305</b>	<b>10.66</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2007/08</b>	<b>360,128,241</b>	<b>21,312,499</b>	<b>12.23</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2008/09</b>	<b>304,878,355</b>	<b>20,245,103</b>	<b>11.21</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2009/10</b>	<b>331,885,604</b>	<b>21,959,374</b>	<b>11.88</b>
<b>Totals</b>	<b>Western Australia</b>	<b>2010/11</b>	<b>361,159,751</b>	<b>23,965,481</b>	<b>12.66</b>

**NATIONAL ALCOHOL SALES DATA PROJECT**  
National Drug Research Institute, Curtin University  
STAGE 4, FINAL REPORT

**APPENDIX II ESTIMATES OF NORTHERN TERRITORY *PER*  
*CAPITA* CONSUMPTION EXCLUDING CONSUMPTION BY  
TOURISTS**

As we did in earlier Stages, we have presented consumption estimates for the NT using ERP which is not adjusted for tourism, so that direct comparisons can be made with the similar NT estimates in previous years, and also with pcc/ERP estimates for Queensland and WA (Appendix I).

Table 12 shows that the 2010/11 NT consumption figure which included tourists was 11.8% lower than the non-tourist figure. This is similar to the extent of differences found in preceding years.

Our work with ESP underlies our belief that that consumption estimates which allow for the influence of tourists are more likely to be accurate than those which do not, and we therefore recommend that readers use the NT consumption estimates given in the main text.

**Table 12 Estimated *per capita* pure alcohol consumption, Northern Territory 2005/06 – 2010/11**

	<b>Total pure alcohol (litres)</b>	<b>ERP aged 15+</b>	<b>NT pcc<sup>1</sup></b>	<b>ERP aged 15+ and tourism</b>	<b>NT pcc<sup>2</sup></b>	<b>National pcc<sup>3</sup></b>
<b>2005/06</b>	2,696,090	156,261	17.17	179,393	15.03	10.31
<b>2006/07</b>	2,699,391	160,071	16.86	187,088	14.43	10.76
<b>2007/08</b>	2,748,347	165,012	16.66	187,582	14.65	10.75
<b>2008/09</b>	2,719,986	170,552	15.95	194,370	13.99	10.63
<b>2009/10</b>	2,746,757	175,154	15.68	201,926	13.60	10.53
<b>2010/11</b>	2,682,155	177,821	15.08	201,598	13.30	10.30

<sup>1</sup> Total pure alcohol divided by ERP aged 15+

<sup>2</sup> Total pure alcohol divided by ERP aged 15+ and estimated tourism.

<sup>3</sup> Australian Bureau of Statistics 2014





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