



KEY POINTS

- While illicit opium production remained relatively stable in 2020, the total area under opium cultivation increased—primarily due to an increase in the area under cultivation in Afghanistan, which remained the largest cultivator of illicit opium in the world.
- Forensic profiling of both border and domestic seizures indicates that the vast majority of heroin in Australia continued to originate from South-East Asia.
- Indicators of heroin supply and demand point to a relatively small market which had increased seizures and detections during the review period.
 - Both the number and weight of heroin detections at the Australian border increased to record levels in 2020–21.
 - According to the National Wastewater Drug Monitoring Program, the populationweighted average consumption of heroin from August 2020 to August 2021 decreased in both capital city and regional sites. Heroin consumption remained low compared to other illicit drugs, particularly methylamphetamine.
 - The number and weight of heroin seizures nationally increased in 2020–21, with the weight of seizures increasing to a record level.
 - The number of heroin arrests decreased in 2020–21.









National heroin market point in time annual and decade trend comparison

		2019–20 and 2020–21	2011–12 and 2020–21	
Border detections Number		∩ 251% 177 > 622°	179 → 622°	
	Weight	1,027% 110kg → 1,246kg ^a	∩ 387% 256kg → 1,246kg ^a	
National seizures Number		U -4% 2,230 → 2,130	∩ 21% 1,758 → 2,130	
	Weight	1 506% 210kg → 1,278kg ^a	○ 229% 388kg → 1,278kg ^a	
National arrests ^b		U -20% 3,514 → 2,826	1 4% 2,714 → 2,826	
Price ^c (\$)		() \$85 → \$100	() \$60.0 → \$100	
Annual median purity range		⇒ 39.7% to 77.0% → 29.1% to 64.5%	14.6% to 46.0% → 29.1% to 64.5%	
DUMA ^d	Urinalysis	() 7% → 6%	() 10% → 6%	
NDSHS ^e	Use in lifetime	○ 1% → 1%	○ 1% → 1%	
	Recent use	○ <1% → <1%	⇒ <1% → <1%	

- a. Highest on record.
- b. Heroin arrests include arrests for heroin and other opioids.
- c. National median price for a street deal, one taste/cap, of heroin (0.1–0.3 grams) of heroin.
- d. Drug Use Monitoring in Australia program. Data reflects the proportion of detainees testing positive to heroin.
- e. National Drug Strategy Household Survey. Data reflects the proportion of the Australian population aged 14 years or older who reported having used heroin in 2010 and 2019 (decade trend) and 2016 and 2019 (annual trend).

MAIN FORMS

Heroin (diacetylmorphine or diamorphine) is a derivative of morphine—an alkaloid contained in raw opium.

- Illicit cultivation of opium occurs on a large scale in 3 primary regions:
 - South-West Asia, known as the 'Golden Crescent', which encompasses large areas of Afghanistan and parts of Pakistan.
 - South-East Asia, known as the 'Golden Triangle', which encompasses the border regions of Myanmar, Thailand and Laos.
 - Latin America, primarily Mexico and Colombia.
- Of the four main 'grades' of heroin, grades 1 and 2 refer to heroin base, not commonly found in Australia. Grade 3 heroin is more refined than heroin base and less granular. Unsuitable for injection, it is most commonly heated and the vapours inhaled. Grade 4 powdered heroin is the most common grade used in developed countries. It is the purest form and is suitable for injection.
- In Australia, heroin is most commonly found either as a powder or a hard granular material, usually white or off-white in colour (though colour is not a reliable indicator of origin or purity).
- The most common route of administration for heroin is injection, followed by snorting, inhalation (through smoking), swallowing or as an additive to cannabis or tobacco (ADF 2021; EMCDDA 2021; UNODC 2016).

INTERNATIONAL TRENDS

The total area under opium cultivation worldwide increased 24% to 294,350 hectares in 2020— primarily due to the 37% increase in area under opium poppy cultivation in Afghanistan. Afghanistan reported 224,000 hectares of land under opium cultivation in 2020, which was more than 80% higher than a decade earlier. By contrast, the area under opium poppy cultivation in Myanmar decreased 11% to 29,500 hectares in 2020. In 2019, Afghanistan (69%), Myanmar (14%) and Mexico (9%) combined accounted for 92% of global illicit cultivation of opium poppy. Global opium production remained relatively stable at 7,410 tonnes in 2020, which was almost 60% higher than a decade earlier. Of this, between 5,898 and 6,205 tonnes is processed into heroin, producing between 454 and 694 tonnes of heroin. Afghanistan remains the largest illicit opium producing country in the world, accounting for an estimated 83% of global opium production between 2015 and 2020 (UNODC 2021a).

Detailed reporting on opium cultivation varies from country to country, with the latest available data available for Mexico covering the 2018–19 period, Myanmar the 2020–21 period, and Afghanistan the 2020–21 period. The total area under opium cultivation in Mexico decreased 23%, from 28,000 hectares in 2017–18 to 21,500 hectares in 2018–19. Although the total area under cultivation decreased, the national average yield of opium increased 27%, from 16.1 kilograms per hectare in 2017–18 to 20.5 kilograms per hectare in 2018–19. The weight of heroin seized decreased 25%, from 496 kilograms in 2018 to 374 kilograms in 2019 (UNODC 2021b).



While the total area under opium poppy cultivation in Afghanistan decreased 21%, from 224,000 hectares in 2020 to 177,000 hectares in 2021, the area under opium poppy cultivation has been increasing steadily over the past 2 decades. The estimated production of opium in 2021 increased 8%, from 6,300 tonnes in 2020 to 6,800 tonnes in 2021 (UNODC 2021c; UNODC 2022).

The area under opium cultivation in Myanmar increased 2%, from 29,500 hectares in 2020 to 30,200 hectares in 2021, and has stabilised after the continuous reduction which started in 2014. Due to scarcity of data²⁹, the average opium yield and opium production in 2021 was estimated based on average opium yield data from previous years. Both the estimated average opium yield and estimated opium production increased in 2021, increasing by 2% and 4% respectively. The weight of heroin seized in Myanmar also increased to 2,003 kilograms in 2021 (UNODC 2021d).

According to the World Drug Report, the weight of global opiate seizures increased over the last decade (2009 to 2019). While the weight of opiates seized globally decreased 7% in 2019, mostly due to the 41% decrease in weight of morphine seized globally, the weight of opiate seized remains the fifth highest weight on record. The weight of opium seized globally increased 3%, from 704 tonnes in 2018 to 727 tonnes in 2019, and the weight of heroin seized remained relatively stable at 96 tonnes in 2019 (UNODC 2020; UNODC 2021a).

Most opiate seizures are reported in or in close proximity to the main opium production areas. In 2019, more than 90% of global illicit opium production took place in Asia—the region accounting for the greatest proportion of the total weight of opiates seized globally (76% of the global total). The Islamic Republic of Iran continued to account for the greatest proportion of the weight of opiates seized globally in 2019 (52%), followed by Turkiye (10%) and Pakistan (9%) (UNODC 2021a).

While the Near and Middle East/South-West Asia regions continued to account for the largest proportion of the weight of heroin and morphine seized globally in 2019 (45% of the global total), the total weight seized in Near and Middle East/South-West Asia and East and South-East Asia continued to decrease. Turkiye accounted for the greatest proportion of the weight of heroin seized globally in 2019 (21%), followed by the Islamic Republic of Iran (18%) and Pakistan (9%) (UNODC 2021a).

According to the World Customs Organization (WCO), the number of 'opioids and opiates' category seizures increased from 2020 to 2021 by 143% (5,992 to 14,569) and replaced cannabis as the second most seized category by number. The weight seized decreased 29% over the same period (30,557 kilograms to 21,590 kilograms). Heroin continued to account for the greatest proportion of the weight of opioids and opiates seized globally in 2021 (13,761.5 kilograms, accounting for 64% of all opioids and opiates seizures). Within the opioids and opiates category, heroin and poppy straw reported a decrease in 2021, while opium and morphine increased (WCO 2022).

²⁹ Due to COVID-19 mobility restrictions, yield survey was only carried out in East and South Shan and a reduced number of fields were visited compared to previous years.

DOMESTIC TRENDS

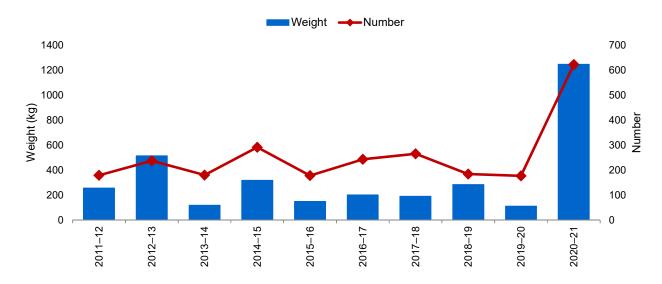
AUSTRALIAN BORDER SITUATION

The number of heroin detections at the Australian border fluctuated greatly, increasing 247% from 179 in 2011–12 to a record 622 in 2020–21. The number of heroin detections increased 251% this reporting period, from 177 in 2019–20.

The weight of heroin detected also fluctuated, increasing 387% from 256.2 kilograms in 2011–12 to a record 1,246.8 kilograms in 2020–21, more than double the previous record weight in 2012–13 (513.8 kilograms). The weight of heroin detected increased 1,027% this reporting period, from 110.6 kilograms in 2019–20 (see Figure 14).

In 2019–20, 79 of the 622 heroin detections (13%) weighed one kilogram or more. With a combined weight of 1,118.9 kilograms, these 79 detections accounted for 90% of the total weight of heroin detected in 2020-21.

FIGURE 14. Number and weight of heroin detections at the Australian border, 2011–12 to 2020–21 (Source: Department of Home Affairs)



IMPORTATION METHODS

In 2020–21, detections of heroin at the Australian border occurred in the air cargo, international mail and sea cargo streams. By number, the international mail stream continued to account for the greatest proportion of heroin detections (62%), followed by air cargo (38%) and sea cargo (<1%). By weight, the air cargo stream continued to account for the greatest proportion of detections (86%), followed by international mail (7%) and sea cargo (7%).



EMBARKATION POINTS

In 2020–21, 33 countries were identified as embarkation points for heroin detected at the Australian border, compared to 15 countries in 2019–20. By weight, Malaysia was the primary embarkation point for heroin detected in 2020–21. Other key embarkation points by weight this reporting period include Thailand, Laos, Vietnam, Singapore, South Africa, Nigeria, Kenya, Taiwan and Mozambique.

DRUG PROFILING

According to the Australian Federal Police (AFP) Forensic Drug Intelligence (FDI) team³¹:

- In the reporting period, South-East Asia (SEA) remained the dominant geographical origin for heroin seized by the AFP (see Tables 7 and 8). In 2020, the majority of the total seizure weight was attributed to a single seizure, weighing 348.4 kilograms.
- However, in 2020 there were 2 seizures that contained heroin of both South-West Asian (SWA) and SEA origin. This occurrence is rare and has not been observed by the AFP since 2014. These seizures were the result of domestic search warrants, where mixed heroin batches from separate sources are likely to be stored together. This demonstrates that organised crime syndicates were able to source heroin from different regions for import into Australia.
- While the proportion of heroin of SWA origin seized in the first 6 months of 2021 increased slightly, its prevalence remains low in the Australian market. The proportion of SWA heroin seized in 2021 accounted for 8.0 kilograms of a total 374.0 kilograms analysed.
- Heroin of South American origin was not detected in this reporting period.

³¹ Profiling data relate to seizures investigated by the AFP and from which samples were submitted to the National Measurement Institute (NMI) for routine analysis and profiling. For all reporting years, the data represent a snapshot across the applicable reporting period. These figures cannot reflect seizures that have not been submitted for forensic examination due to prioritisation of law enforcement resources or those that have passed through the border undetected. Certain seizures/samples, such as those containing swabs or trace material, have been omitted from the analysis as they are not amenable to chemical profiling. It is difficult to extrapolate the impact of any observed border trends on drugs reaching consumers i.e. street level seizures in Australia. Samples from selected state and territory jurisdictions are submitted for chemical profiling as part of the Enhanced National Intelligence Picture on Illicit Drugs (ENIPID) capability.

TABLE 7. Geographic origin of heroin samples as a proportion of analysed AFP border seizures, 2012–June 2021³² (Source: Australian Federal Police, Forensic Drug Intelligence)

Year	South-East Asia %	South-West Asia %	South America %	Unclassified %	South-East Asia & Unclassified %	South-West Asia & Unclassified %	South-West Asia & South-East Asia %
Jan-Jun 2021	70.0	20.0	-	10.0	-	-	-
2020	70.0	-	-	10.0	-	-	20.0
2019	81.0	14.3	4.7	-	-	-	-
2018	92.3	-	-	7.7	-	-	-
2017	94.1	5.9	-	-	-	-	-
2016	95.2	4.8	-	-	-	-	-
2015	77.8	18.5	-	3.7	-	-	-
2014	52.2	37.0	-	2.2	4.3	-	-
2013	74.6	18.2	5.5	-	1.8	-	_
2012	70.7	25.9	-	3.4	-	-	-

TABLE 8: Geographical origin of heroin samples as a proportion of total bulk weight of analysed AFP border seizures, 2012–June 2021³³ (Source: Australian Federal Police, Forensic Drug Intelligence)

Year	South-East Asia %	South-West Asia %	South America %	Unclassified %	South-East Asia & Unclassified %	South-West Asia & Unclassified %
Jan-Jun 2021	97.6	2.1	_	0.3	-	_
2020	97.9	0.6	-	1.5	-	_
2019	92.5	0.5	7.0	-	-	_
2018	99.9	-	-	<0.1	-	_
2017	99.9	0.1	-	-	-	_
2016	100.0	-	_	-	-	_
2015	97.4	1.8	-	0.8	-	_
2014	89.9	7.8	_	<0.01	0.2	_
2013	84.3	8.9	4.3	-	2.5	_
2012	98.4	1.3	-	0.3	-	_

³² This data may also include seizures destined for Australia which occurred offshore.

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According to the AFP's Enhanced National Intelligence Picture on Illicit Drugs (ENIPID) capability34:

- Heroin samples submitted to the ENIPID capability in 2020 and the first 6 months of 2021 continue
 to reflect the situation at the border, highlighting the continued dominance of SEA heroin in the
 Australian market (see Appendix 3, Table 2).
- Fourteen samples of unclassified origin were mainly attributed to heroin which had broken down (hydrolysed), thus altering the chemical composition and ability to determine geographical origin. Unclassified and SWA origin samples generally represent a minor portion of all heroin samples submitted for chemical profiling in comparison to heroin of SEA origin.³⁵

DOMESTIC MARKET INDICATORS

According to data from the National Drug Strategy Household Survey (NDSHS):

- Over the last decade, the proportion of the Australian population aged 14 years or older who
 reported having used heroin at least once in their lifetime remained stable at 1% in 2010, 2016
 and 2019.
- Over the last decade, the proportion of the Australian population aged 14 years or older who reported having recently³⁶ used heroin remained stable at <1% in 2010, 2016 and 2019 (AIHW 2020).

The National Wastewater Drug Monitoring Program (NWDMP) has provided a measure of the consumption of heroin since August 2017. Since the Program began measuring heroin, the population-weighted average consumption increased in capital city sites and decreased in regional sites.

According to data from the NWDMP for August 2020 to August 2021:

- Heroin consumption fluctuated, with per capita consumption higher in capital city sites than regional sites.
- The population-weighted average consumption of heroin decreased in both capital city and regional sites.
- Demand for heroin remains low compared to other illicit drugs, particularly methylamphetamine.
- The ACIC estimates around 984 kilograms of heroin was consumed in Australia during the year ended 31 August 2021, a decrease from the estimated one tonne of heroin consumed in the previous year (ACIC 2022).

The below data reflect drug use within sentinel groups which provide valuable insight into patterns of drug use and market trends and can assist in the identification of emerging issues that require further monitoring.

³⁴ The Proceeds of Crime Act-funded ENIPID project officially concluded on 30 June 2016. Since then, the ENIPID capability has been integrated into core AFP Forensic Drug Intelligence duties to ensure its continued delivery through AFP Forensics.

³⁵ A large proportion of heroin seized in 2020 had not been profiled at the time of data collection for this report, due to delays in forensic examination and subsequent delays in analysis.

³⁶ In the NDSHS, recent use refers to reported use in the 12 months preceding the survey.

According to data from the Illicit Drug Reporting System (IDRS):

- The proportion of respondents reporting heroin as their drug of choice decreased, from 54% in 2012 to 40% in 2021. In 2020 this proportion was 50%. For the first time since monitoring began in 2000, methylamphetamine (45%) replaced heroin as the drug of choice in 2021.
- Over the last decade, the proportion of respondents reporting heroin as the drug most injected in the past month decreased, from 42% in 2012 to 34% in 2021. In 2020 this proportion was 46%.
- Methylamphetamine replaced heroin as the drug most injected in the past month in 2021.
- The reported recent use³⁷ of heroin in this population decreased, from 60% in 2012 to 50% in 2021. In 2020 this proportion was 63%.
- While fluctuating, the reported median number of days of heroin use in the 6 months preceding interview remained stable at 72 days in 2012 and 2021. In 2020 the reported number of days was 96 (Sutherland et al. 2021a).

According to data from the Ecstasy and Related Drugs Reporting System (EDRS):

The proportion of respondents reporting recent use of heroin remained relatively stable, with 5% of this population reporting the recent use of heroin in 2012, compared to 3% in 2021. In 2020 this proportion was 1% (Sutherland et al. 2021b).

According to data from the Australian Needle and Syringe Program Survey (ANSPS):

■ The proportion of respondents reporting heroin as the drug last injected nationally decreased, from 33% in 2011 to 22% in 2020. This continued a decreasing trend observed since 2000, where 56% of respondents reporting heroin as the drug last injected. The proportion reported in 2020 is a decrease from the 27% reported in 2019 (Heard et al. 2020; Heard et al. 2021).

According to data from the Drug Use Monitoring in Australia (DUMA) program³⁸:

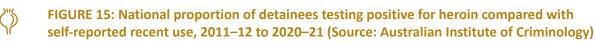
- The proportion of detainees testing positive to heroin and self-reporting heroin use generally decreased over the last decade.
- The proportion of detainees testing positive³⁹ to heroin ranged from 5% in 2018–19 to 10% in 2011–12. In 2020–21 this proportion was 6%, a slight decrease from 7% in 2019–20.
- The proportion of detainees self-reporting recent heroin use⁴⁰ ranged from 10% in 2020–21 to 14% in 2011–12. In 2019–20 this proportion was 13% (see Figure 15).

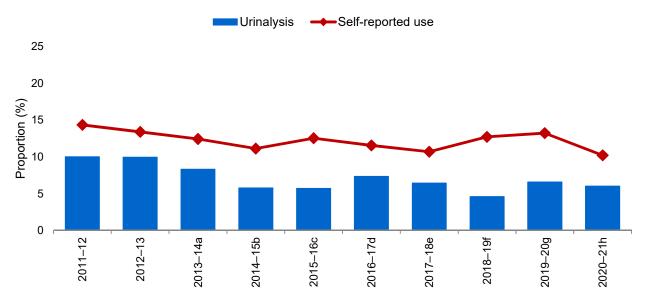
³⁷ In both the IDRS and EDRS studies, recent use refers to reported use in the 6 months preceding interview.

³⁸ Detainees can participate in the survey without providing a urine sample. Cases with missing data are excluded from the relevant analysis.

³⁹ Heroin and its metabolite can be detected in urine for 6 hours after administration.

⁴⁰ Recent use in the DUMA program refers to self-reported use in the 12 months prior to arrest.





- a. Urine was collected in the third and fourth quarter of 2013 and the first quarter of 2014.
- b. Urine was collected in the third quarter of 2014 and the first and second quarter of 2015.
- c. Urine was collected in the third quarter of 2015 and the first and second quarter of 2016.
- d. Urine was collected in the third quarter of 2016 and the second quarter of 2017.
- e. Urine was collected in the third quarter of 2017 in Adelaide, Brisbane and Perth; the fourth quarter of 2017 in Bankstown; and the first quarter of 2018 in Adelaide, Brisbane, Perth and Surry Hills.
- f. Urine was collected in the third quarter of 2018 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2019 in Adelaide, Brisbane, Perth and Surry Hills.
- g. Urine was collected in the third quarter of 2019 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2020 in Adelaide, Brisbane, Perth and Surry Hills.
- h. Urine was collected in the second quarter of 2021 in Adelaide, Bankstown, Brisbane and Perth.

PRICE

At the street level the price of heroin is generally measured as a 'taste/cap' or in grams. Nationally, the price range for one taste/cap of heroin (0.1 to 0.3 grams) increased, ranging between \$40 and \$150 in 2011–12 to between \$50 and \$200 in 2020–21. In 2019–20 the reported price ranged from \$50 to \$150. The national median price increased, from \$60 in 2011–12 to \$100 in 2020–21. In 2019–20 the national median price was \$85.

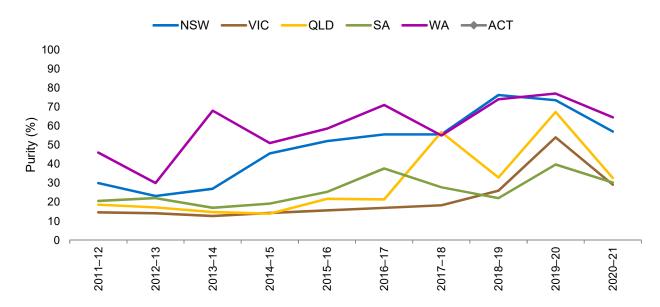
The price range for one gram of heroin decreased, ranging between \$200 and \$1,000 in 2011–12 to between \$50 and \$588.23 in 2020–21. In 2019–20 the reported price ranged from \$200 to \$750. The national median price increased, from \$330 in 2011–12 to \$450 in 2020–21 (reported in New South Wales, Victoria and Tasmania). In 2019–20 the national median price was \$462.50.

The price range for a kilogram of heroin increased, from \$280,000 in 2011–12 (reported in New South Wales) to between \$90,000 and \$500,000 in 2020–21. In 2019–20, the reported price ranged from \$90,000 to \$220,000 (reported in New South Wales, Victoria and the Australian Capital Territory). The national median price increased from \$165,000 in 2019–20 to \$190,000 in 2020–21.

PURITY

Since 2011–12, the annual median purity of analysed heroin samples ranged between 13% (reported in 2013–14) and 77% (reported in 2019–20). While fluctuating, the annual median purity of heroin increased over the last decade. In 2020–21, the annual median purity ranged from 29% in Victoria to 65% in Western Australia. This reporting period all states reported a decrease in the annual median purity of heroin (see Figure 16).

FIGURE 16: Annual median purity of heroin samples, 2011–12 to 2020–21



AVAILABILITY

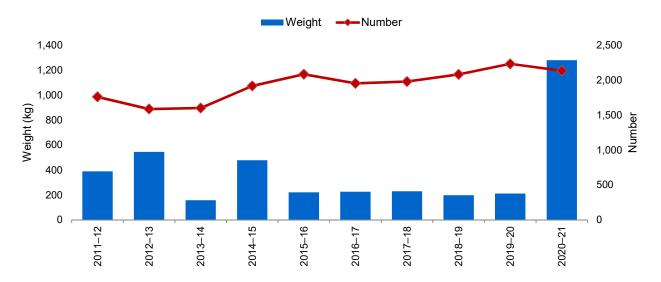
User surveys indicate an increase in the reported availability of heroin in 2020–21. In a 2021 survey of people who regularly inject drugs, the proportion of respondents reporting heroin as 'easy' or 'very easy' to obtain increased, from 77% in 2020 to 84% in 2021. This is a decrease from the 87% reported in 2012 (Sutherland et al. 2021a).

SEIZURES

The number of national heroin seizures increased 21%, from 1,758 in 2011–12 to 2,130 in 2020–21. The number of national heroin seizures decreased 4% this reporting period from a record 2,230 in 2019–20.

The weight of heroin seized nationally increased 229%, from 388.3 kilograms in 2011–12 to a record 1,278.0 kilograms in 2020–21. The weight seized nationally more than doubled this reporting period, increasing 506% from 210.7 kilograms in 2019–20 (see Figure 17).

FIGURE 17: National heroin seizures, by number and weight, 2011–12 to 2020–21



Tasmania reported the greatest percentage increase in the number of heroin seizures in 2020–21, while New South Wales reported the greatest percentage increase in the weight of heroin seized. This reporting period New South Wales continued to account for the greatest proportion of both the number (57%) and weight (66%) of heroin seized nationally (see Table 9).

TABLE 9: Number, weight and percentage change of national heroin seizures, 2019-20 and 2020-21

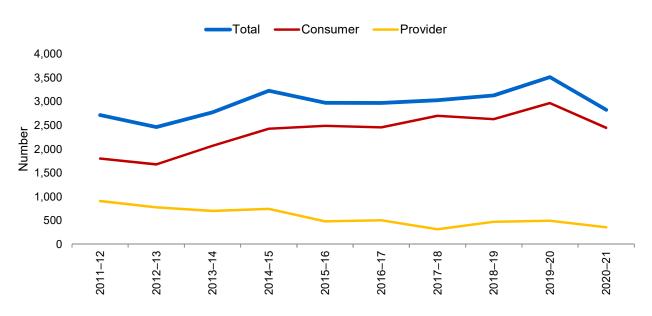
State /Touritous a	Number			Weight (grams)		
State/Territory ^a	2019–20	2020–21	% change	2019–20	2020–21	% change
New South Wales	1,298	1,213	-6.5	127,646	846,366	563.1
Victoria	308	338	9.7	62,411	309,998	396.7
Queensland	195	168	-13.8	2,105	8,385	298.3
South Australia	27	27	0.0	595	2,420	306.7
Western Australia	332	334	0.6	17,756	110,328	521.4
Tasmania	17	27	58.8	52	104	100.0
Northern Territory	6	0	-100.0	35	0	-100.0
Australian Capital Territory	47	23	-51.1	125	409	227.2
Total	2,230	2,130	-4.5	210,725	1,278,010	506.5

a. Includes seizures by state/territory police and Australian Federal Police for which a valid seizure weight was recorded.

ARRESTS

The number of national heroin and other opioid arrests increased 4%, from 2,714 in 2011–12 to 2,826 in 2020–21. The number of arrests decreased 20% this reporting period from the record 3,514 in 2019–20. Consumer arrests continue to account for the greatest proportion of arrests, accounting for 87% of national heroin and other opioid arrests in 2020–21 (see Figure 18).

FIGURE 18: Number of national heroin and other opioid arrests, 2011–12 to 2020–21



All states and territories reported a decrease in the number of heroin and other opioid arrests in 2020–21. This reporting period Victoria accounted for the greatest proportion of national heroin and other opioid arrests (48%; see Table 10).

TABLE 10. Number and percentage change of national heroin and other opioid arrests, 2019–20 and 2020–21

Shaha /Tamiham a	Arrests						
State/Territory ^a	2019–20	2020–21	% change				
New South Wales	1,257	855	-32.0				
Victoria	1,464	1,357	-7.3				
Queensland	355	305	-14.1				
South Australia	94	92	-2.1				
Western Australia	284	186	-34.5				
Tasmania	33	13	-60.6				
Northern Territory	1	0	-100.0				
Australian Capital Territory	26	18	-30.8				
Total	3,514	2,826	-19.6				

a. The arrest data for each state and territory include Australian Federal Police data.



In 2020, the global cultivation of opium increased while the global production of opiates remained relatively stable. Afghanistan remains the main illicit opium producing country. According to the World Customs Organization agencies, in 2021 the weight of heroin seized decreased.

Indicators of supply and demand suggest that the Australian heroin market remains small but point to a potential expansion of the market, although some indicators are equivocal.

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