



The Oceania Cannabis Report™

NOVEMBER 2018



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About Prohibition Partners

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The Oceania Cannabis Report™

Introduction

The cannabis industry in Oceania is in an exciting phase of development. Medical cannabis is legalised in one of the region's powerhouses (Australia) and is set to become legal in New Zealand by 2020. There are signs of progress across the region's smaller island nations too with the Commonwealth of Northern Mariana Islands recently moving from total prohibition to total legalisation for both medical and recreational use. At present, foreign companies dominate Oceania's commercial landscape. However, local players are ramping up operations which will see them take a bigger slice of the global industry, and also ensures they are well-placed to take first-mover advantage for when the region's cannabis market starts to mature.

Prohibition Partners' first report on the cannabis industry in the Oceania region (The Oceania Cannabis Report™) provides a comprehensive guide to the governing legislation

and regulatory environment in the region. We provide independent market data, segmented commercial analysis and expert commentary to support the development of the industry. As the global cannabis market enters the second phase of development, data, insights and intelligence will play a key role in defining the new market dynamics.

Stephen Murphy
Co-Founder & Managing Director
Prohibition Partners



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Executive Summary

Prohibition Partners' first report on the cannabis industry in the Oceania region provides an industry overview of the market. The report outlines regulations and changing attitudes towards cannabis for medical, recreational and industrial use as well as providing an estimate of market sizes in 2018 and their potential value in 2028. The report provides opportunity analysis and an overview of the medical cannabis programs across the region. Although primarily focused on Australia and New Zealand, a topline view on other Oceanic countries is also provided.

Oceania is comprised of more than 30 countries and territories, including Australia, New Zealand and the numerous Pacific Island Countries and Territories (PICT) of Polynesia, Micronesia and Melanesia. The fact that more than 1,000 languages and dialects are spoken in the region, is testament to Oceania's cultural and political diversity. Although Australia and New Zealand are highly developed, the PICT face numerous challenges owing to poverty, governance and technical capacity. The cannabis industry in each of Oceania's constituent countries and territories varies significantly.

Cannabis is produced in Australia and New Zealand, but in 2017, Australia was the second largest destination for medical cannabis products from Canada. According to the International Drug Policy Consortium, most cannabis produced in the region, is consumed in the region with little evidence of export or smuggling to other regions. However, in August 2018, Little Green Pharma became the first company (based in West Australia) to grow and produce medicinal cannabis for sale to Australian patients. Although the company is part-owned by Canadian LGC Capital, this milestone move could help to reduce the country's dependence on Canadian imports.

Oceania's annual prevalence of cannabis use is relatively high compared to other regions in the world, (between 9.1% and 14.6% of 15 – 64 year olds). Although some data is available for Australia and New Zealand, little is known about the prevalence of drug use in the PICT due to a lack of reliable data. The region adopts a supply reduction approach to enforcing the prohibition of non-medical use of controlled drugs through border and domestic policing.

In the region's more developed nations of Australia and New Zealand, the criminal justice system deals with drug dependence although some policies have a focus on public health. In June 2017, New Zealand extended a pilot drug courts scheme which seeks to integrate drug treatment into the criminal justice system. Research and reports commissioned by the New Zealand Drug Foundation have found that cannabis penalties and convictions under the Misuse of Drugs Act in New Zealand remain inconsistent, disproportionate and largely ineffective for Māori, the indigenous people.

The current Government has committed to a referendum on the legalisation of cannabis by 2020 with recent public opinion polls showing the majority of New Zealanders favour decriminalisation, cannabis possession may soon be permitted. Possession of any amount may lead to a criminal charge, though people caught with small quantities often only receive a warning from the police. In November 2018, the New Zealand parliament is expected to approve a bill that will lay the groundwork for regulating the country's future medical cannabis industry. Although medical cannabis is expected to become legalised in 2018, it is unlikely to be implemented until 2019 at the earliest.

In the largest country in the region, Australia, there are a number of models of cannabis decriminalisation across its constituent states. The country's legal process seeks to help treat drug users rather than imposing custodial sentences. In addition, South Australia, the Northern Territory, and the Australian Capital Territory have decriminalised cannabis in some way. However, in 2011, the centre right liberal party repealed the Cannabis Infringement Notice in Western Australia (this meant that people were fined for possession rather than receiving a prosecution).

It has been reported that cannabis use in Australia has actually increased in states that have not decriminalised cannabis.



Oceania Insights



Cultivation Hotspot

The region could become very attractive to investors in the near future as Australia boasts an optimum climate for growing some strains of cannabis that are expensive to produce in more established markets such as Canada. Furthermore, anticipated changes to the law will create an environment that will enable the region to capitalise on strong growth within the industry.



Progressive Politics

Australia has improved accessibility to medical cannabis through a new streamlined process, New Zealand is expected to legalise medical cannabis by 2020 and in September 2018, the Commonwealth of the Northern Mariana Islands legalised recreational cannabis.



Education and Outreach

Will be key to influencing the narrative in the region and maximising market potential. At present, a lack of public, and medical knowledge as well as obstacles from with some governments will put the brakes on Oceania's role within the global cannabis industry, particularly for hemp production and use.



High Consumption

Existing levels of cannabis consumption in the region suggest a ready market for cannabis products. With recent studies showing that consumers are prepared to pay more for legal products (as they are perceived to be better quality), and that cannabis users are prepared to switch to legal supplies following legalisation, changes to the law could boost the value of the market in the region.



Canadian-Influenced

Most cannabis produced in the region is consumed within the region, but the Oceanic nations remain highly dependent on Canadian imports for medical use. A number of companies in the region are ramping up efforts to reduce reliance on imports, and are making great strides towards securing the region's position as a major producer in the future for the global export market.





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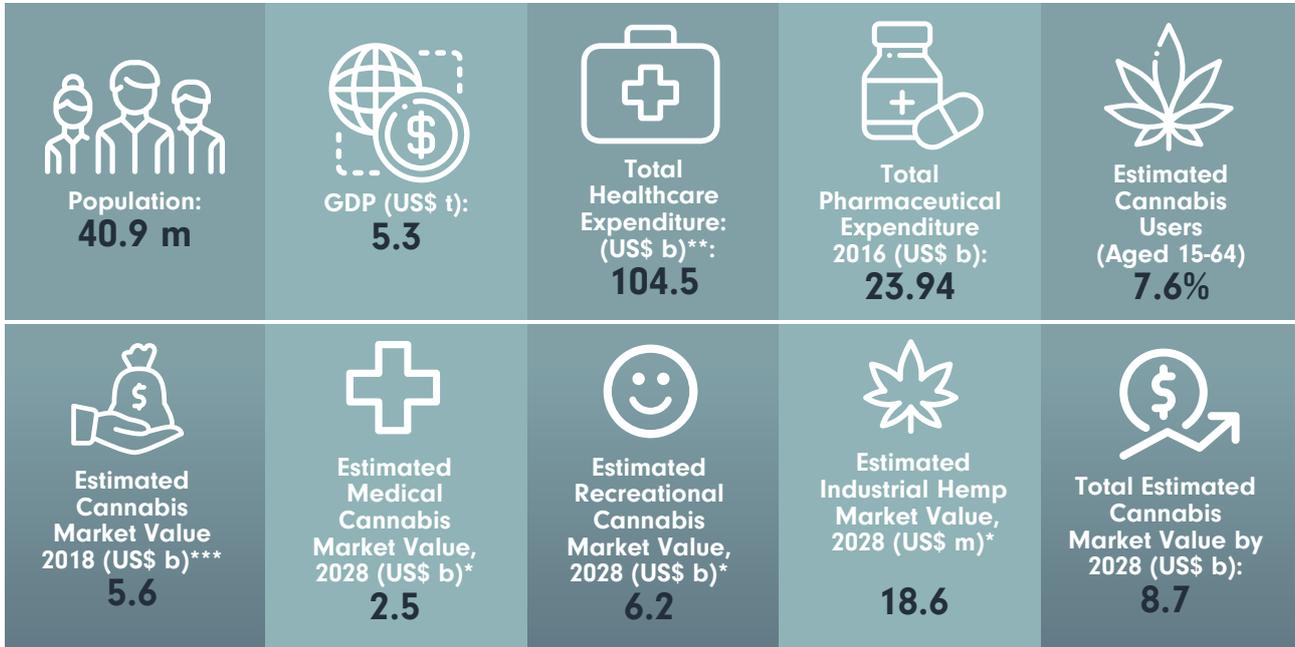


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+ Topline figures

Key Statistics for the Oceania Cannabis Industry



*Estimates assume that by 2023, Australia and New Zealand have legalised medical cannabis and regulated recreational use.
**Estimate based on average regional Health expenditure

***Calculated as total black market and legal market value
Source: Prohibition partners

Market Size

+ Medical

The region boasts a population of almost 41 million with a total GDP of US\$5.3 trillion. Total healthcare spend stands at US\$104.5 billion.

This report has analysed 2 key countries (Australia and New Zealand) and multiple independent island nations in the region, and estimates that the medical cannabis market will be worth US\$2.5 billion by 2028 across these countries (assuming a fully legal and regulated market is in place). Potential patient numbers in the region could rise to almost 400,000 by 2028 owing to population growth in the region.

Australia accounts for the largest market in terms of value in the region, but access to medical cannabis varies by state. Patient access has been limited to date, but new, streamlined, single-application measures, introduced in March, have seen patient numbers grow in some states. In states such as Victoria, patient numbers are low, because of the process rather than the demand.

If Australia is able to unify its application process across its states, it can expect to see a significant uptick in patient numbers.

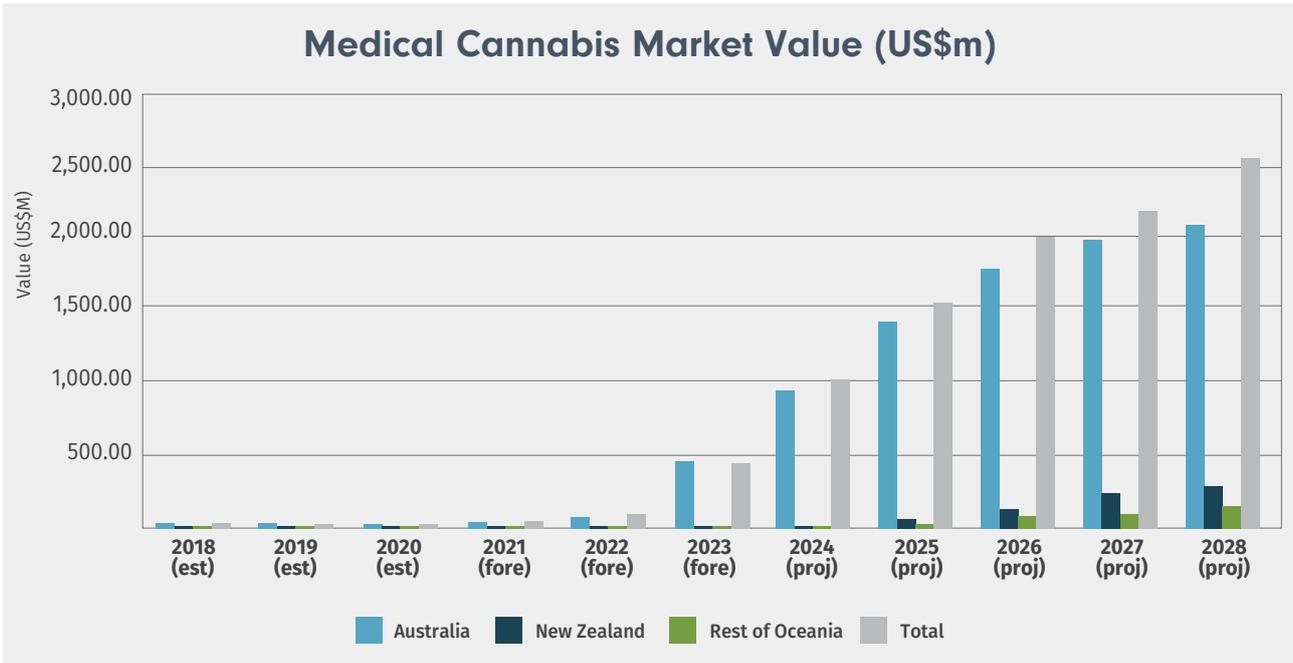
Although patient numbers are a fraction of those in the US and Canada, the number of medical cannabis patients in Australia passed the 1,000 mark (around 0.004% of the total population) for the first time in 2018. This was due to a rise in the number of approvals for applications for medical cannabis. Procedural change underpins this growth; measures put in place in March 2018 have streamlined collaboration between state and federal governments. This made it easier for doctors to prescribe cannabis and helped boost patient access. In the state of New South Wales for example, the local government joined its federal counterpart to improve access to medical cannabis. This was done through the introduction of a simplified, single application process, which could be accessed on the Therapeutic Goods Administration's website.



The expanding medical cannabis market will boost the bottom line of the Canadian companies for whom Australia is a major export market. In the medium-term, we expect Australia to act as both a production and distribution hub for the majority of the countries in Oceania, whilst also representing the largest market value in the region.

In 2017, Australia imported 145 kilograms of cannabis oil from Canada, making it the second-biggest destination

for cannabis products in the world. In August 2018, a number of Canadian cannabis companies saw share prices rocket ahead of Canada’s impending legalisation of the market, expansion into new sectors via joint ventures in the alcoholic drinks industry, and Australia’s rising patient numbers are expected to further bolster the main suppliers.



Source: Prohibition partners

+ Recreational

Oceania’s recreational cannabis market is expected to be worth some US\$6.2 billion by 2028, assuming a fully regulated and legalised market is in place.

Analysing the United Nations Office on Drugs and Crime (UNODC) data, we estimate that almost 8% of 15-64 year olds in the region are cannabis users. Within the region, Fiji has the lowest recorded usage among 15-64 year olds (5%) but regional usage is skewed by Australia (10.2%) and New Zealand (11%). This is high compared to Latin America (more than 5%) but slightly lower than Europe (12%). However, a lack of data collection in the Oceania region means that this figure may not be a true reflection of cannabis use in Oceania.

The value of the estimated market (by 2028) is relatively low in comparison to the large, high value consumer market of Europe (US\$135 billion) but closer in valuation

to Latin America (US\$12.7 billion). In part this is owing to the fact that Oceania is less populous than Europe and Latin America but cannabis prices are also significantly higher than Latin America. At US\$9.6 per gram, the average price of cannabis is significantly higher than other markets, although some countries in the region are reported to command prices as high as US\$72 per gram (Kiribati) whilst others (Palau) are much lower at closer to US\$1 per gram.

+ Industrial

The industrial market in the Oceania region is expected to be worth some US\$18.6 million by 2028, (assuming a fully regulated and legalised market). Australia is expected to be the largest market in the region and would account for around 99 cent of every dollar of the region’s industrial hemp industry.



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+ Commercial Opportunities

Market segmentation of the cannabis industry

Core Segment	Production	Processing	Distribution & Retail	Digital	Ancillary
Sub-segment	Commercial seed growers & suppliers	Industrial Processing	Distribution	Information	Real Estate
	Production equipment manufacturers & suppliers	Industrial Manufacturing	Transport (standard and secure)	Communities	Legal
	Cultivation of Medical grade Cannabis	Medicinal Processing	Online (ecommerce)	Data	Finance
	Cultivation of Recreational grade Cannabis	Medicinal Manufacturing	Off line (Bricks & Mortar)	Marketing	Consulting
	Cultivation of Industrial grade Hemp	Recreational Processing		Software	Technology
	Testing & Quality Control	Recreational Manufacturing			

Source: Prohibition Partners

The Canadian giants still dominate the supply of medical cannabis in the countries in the region where it is legal. However, there has been evidence of local companies positioning themselves as domestic suppliers, in order to take first-mover advantage following the much anticipated rise in demand for medical cannabis, either as a result of improved access (Australia), or legalisation (New Zealand). There is also evidence that local cannabis companies are poised to become significant exporters enabling them to take a slice of the rapidly expanding global cannabis market.

+ In 2015, Norfolk Island’s government struck a groundbreaking deal to allow AusCann Group Holdings to grow a high-grade medicinal strain of cannabis. Norfolk Island’s self-governing administration granted a licence to legally export the sativa and sativa-dominant strains of the drug bound for Canada. These strains are unsuitable for growing in Canada’s indoor facilities.

+ In New Zealand, Cannasouth has been working with the University of Waikato with the intention to launch a commercial enterprise once cannabis is legalised in the country. The University of Waikato was awarded the country’s first ever licence to grow medical cannabis by the Ministry of Health. In

August 2018 Hikurangi Cannabis Company was the first private company to be awarded a medical cannabis cultivation license. The company has since secured institutional investors and has GMP growing and production facilities being built near Ruatoria on the East Coast and is in negotiations with indoor growing partners in three other locations around New Zealand.

+ The Ausabis Group is an international medical marijuana startup with interests in Australia, Canada and Fiji and the company is currently in the process of acquiring cultivation and manufacturing licenses to produce its own medical cannabis for patient and pharmacy distribution in Australia. In August 2018, it began its bid to establish South Australia’s first commercial medicinal cannabis hub by applying for planning permission for a facility in Onkaparinga.

+ In September 2018, Australian Natural Therapeutics Group (ANTG) announced a partnership with Cannamedical Pharma (one of the leading independent cannabis wholesalers in the European Union) that will facilitate the export and distribution of its cannabis across German pharmacies from 2019.



- + In September 2018, the territorial government of the Commonwealth of the Northern Mariana Islands decided to make recreational cannabis legal in the US Territory. It is the first US jurisdiction to move straight to adult use bypassing legal medicinal use.**
- + In October 2018, Helius Therapeutics took a gamble on the law changing in New Zealand and leased the country's first commercial facility to produce cannabis for medicinal purposes. The 8,800m2 property is located in Auckland and will become the site for its new medicinal cannabis cultivation, extraction, research and manufacturing operations.**

The climate and geopolitical stability of the region make the area ideal for cannabis production. Some strains of cannabis (sativa and sativa-dominant strains) that are harder (and more costly) to grow in the labs of more established country markets such as Canada can be easily grown in the region for export.

According to Anspec CEO, Peter Comerford, the fact that Australia is the most significant pharmaceutical reference country in the Oceania region helps to make it

the most trusted source of medicines in the region too. It is estimated that more than 72% of Australian exports are destined for Asia - worth A\$22.1 billion (US\$16 billion) in June 2018 alone. At present, mining and agriculture make up the lion's share of these exports. However, as Asian countries liberalise their drug policies, a strong, cultivation, and cannabis export framework in Australia will be critical, as most countries will rely on imports (at least whilst in the early stage of regulation).

China, the largest of these export partners, accounting for more than 30% of Asian exports, is forecast to have a medical cannabis market worth A\$177.5 billion (US\$128.8 billion).

The second largest export partner, Japan (12% of Australian exports) is expected to see a A\$16 billion (US\$11.6) medical cannabis market. However, Anspec CEO Comerford highlights that the legacy of opium wars still influences governing authorities in China. As a result, the unfortunate stigma associated with cannabis continues to have a negative impact on its proper use as a medicine.

Regulation and Legislation

The legal status of cannabis varies significantly across the region and even by state within the country of Australia. The region is highly conservative with cannabis being illegal for medical and recreational uses across most of the territories and islands.

In July 2018, it was reported that a state crackdown on cannabis possession in South Australia will see the drug

elevated to the status of 'other controlled drugs' such as ecstasy and heroin. The fines for smoking cannabis could quadruple from A\$500 to A\$2,000 (US\$362 - US\$1,449) and result in a possible jail sentence of up to two years. Under New Zealand's Misuse of Drugs Act (1975), cannabis oil is classed B and seeds or plants are classed C on the controlled substances list, making it a criminal offence to consume, possess, cultivate or traffic either.

Medicinal Cannabis



Is legal across Australasia, but is illegal across Melanesia with varying policy throughout Polynesia and Micronesia.

Recreational Cannabis



Although currently illegal, it has been decriminalised in the Chilean territory of Easter Island.

Industrial Hemp



Is legal in all of the Australian states and in New Zealand.





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Legal status in key markets



Australasia

Ashmore and Cartier Islands (AUS)	Legal	Illegal
Coral Sea Islands (AUS)	Legal	Illegal
Australia	Legal	Illegal
New Zealand	Legal	Illegal
Norfolk Island (AUS)	Legal	Illegal

Melanesia

Fiji	Illegal	Illegal
New Caledonia (France)	Illegal	Illegal
Papua	Illegal	Illegal
West Papua	Illegal	Illegal
Papua New Guinea	Illegal	Illegal
Solomon Islands	Illegal	Illegal
Vanuatu	Legal	Illegal

Micronesia

Federated States of Micronesia	Legal	Illegal
Guam (US)	Legal	Illegal
Kiribati	Illegal	Illegal
Marshall Islands	Illegal	Illegal
Nauru	Illegal	Illegal
Northern Mariana Islands (US)	Legal	Legal
Palau	Illegal	Illegal
Wake Island (US)	Illegal	Illegal

Source: Prohibition Partners



Legal status in key markets

	 Medical*	 Recreational
Polynesia		
American Samoa (US)	Illegal	Illegal
Cook Islands (NZ)	Illegal	Illegal
Easter Island (Chile)	Legal	Decriminalised
French Polynesia (France)	Illegal	Illegal
Niue (NZ)	Illegal	Illegal
Pitcairn Islands (UK)	Unknown	Unknown
Samoa	Illegal	Illegal
Tokelau (NZ)	Unknown	Unknown
Tonga	Illegal	Illegal
Tuvalu	Illegal	Illegal
Wallis and Futuna (France)	Legal	Illegal

*Legal refers to those countries or territories where it is possible to acquire cannabis through a special permit or licence.
 Source: Prohibition Partners

Despite progress on legislation within the region, Lipsky of MGC Pharmaceuticals highlights that global legislation will still be one of the biggest obstacles facing the industry today, particularly in respect of distribution of cannabis. He uses the example that it might be legal to grow it in some countries, but being able to distribute it to the right markets might not always be straight forward.

“We are still in a grey zone of understanding and creation of laws which will facilitate this. Therefore, a product created in one place, ideal though it may be, might never reach the market it could best serve...these kind of loopholes and issues are hindering our ability to do true global commerce with our products.”

-Ron Lipsky, MGC Pharmaceuticals

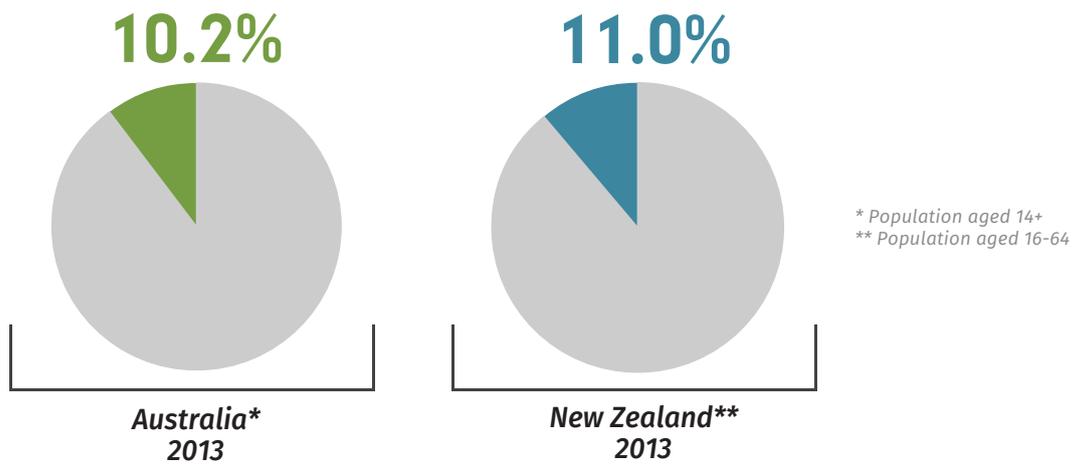


+ Consumption

Boosted by use in Australia and New Zealand, the region's annual prevalence of cannabis use is relatively high compared to other regions in the world. However, little is known about drug use in the PICT due to a lack of reliable data. The UNODC provides data on the annual

prevalence of cannabis use for Australia, Fiji and New Zealand, although much of the data is dated (at least five years old). In Fiji, the most recently available data is almost 15 years out of date.

Annual prevalence of cannabis use as % of population



A 2017 report, published by the International Narcotics Control Board, highlighted the Board's concerns about the lack of data on drug use, abuse, treatment, trafficking, cultivation and production in most countries

in Oceania. The Board encouraged Governments to prioritise the collection of such data and made a number of recommendations on measures to be taken in the region to improve data collection.





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Key Countries

In this report, we have profiled the key markets of interest in the Oceania cannabis industry, examining the regulatory framework, current legislation, commercial opportunities and healthcare models across Australia, New Zealand and surrounding regions.

Understanding the political and economic environments, as well as significant cultural nuances, will be absolutely essential for companies looking to enter Oceania's nascent cannabis industry.



Australia

+ Market Overview

Population (m)	24.6
GDP (US\$t)	1.3
Ruling Government Party	The Liberal National Party
Party Stance on Cannabis	In favour of medical cannabis
Total Healthcare Expenditure (US\$b)	133.4 (est)
Alcohol Consumption (Litres Per Capita Per Year)	10.6
Prevalence of Tobacco Users (%)	14.7
Prevalence of Cannabis Users (%)	10.2
Average Cost Per Gram of Cannabis (US\$)	24.2



Australia legalised medical cannabis on October 30, 2016. The amendments to the Narcotics Drugs Act 1967 permit legally-grown cannabis for the manufacture of medical cannabis products in Australia. The changes received bi-partisan support.

“This is an important day for Australia and the many advocates who have fought long and hard to challenge the stigma around medicinal cannabis products so genuine patients are no longer treated as criminals [...] this is the missing piece in a patient’s treatment journey and will now see seamless access to locally-produced medicinal cannabis products from farm to pharmacy.”

Then-minister for health, Sussan Ley



However, the use of medical cannabis remains very highly regulated in Australia thus limiting the growth of the market. Australia's Therapeutic Goods Administration (TGA) regulates the supply, leaving GPs to apply to the TGA in order to supply the products to certain patients through the Authorised Prescriber Scheme and the Special Access Scheme. Patients cannot apply to the TGA themselves, it must be done through the GP. To be an Authorised Prescriber, GPs must:

- + have the training and expertise appropriate for the condition being treated and the proposed use of the product.
- + be able to best determine the needs of the patient.
- + be able to monitor the outcome of therapy

GPs must report to the TGA the number of patients treated every six months. They must seek endorsement for their application from an ethics committee who will

assess not only the safety of the cannabis product for the condition, but also the suitability of the medical practitioner. However, laws differ from state to state and GP's must comply with state regulation - often affecting a patient's access to medical cannabis.

"There's good clinical evidence for about six chronic illness conditions which the Australian government has been approving prescriptions for, that are helping suffering patients [...] chronic pain is the biggest one, about 70 percent of patients accessing medical cannabis are using it for their chronic pain which works above other drug treatments. Some of these patients have tried 10 or so other different types of drugs with no relief."

Sharlene Mavor, medical scientist and director of Medical Cannabis Research Australia

Recreational cannabis cultivation and use remains illegal with state-based criminal laws still in place.

+ Regulatory Environment



	Medical Cannabis	Recreational Cannabis	Industrial Hemp
Queensland	Legal	Illegal	Legal
New South Wales	Legal	Illegal	Legal
Victoria	Legal	Illegal	Legal
Tasmania	Legal	Illegal	Legal
South Australia	Legal	Illegal	Legal
Western Australia	Legal	Illegal	Legal

Source: Prohibition Partners

+ Medical +

Medical cannabis was legalised in Australia on October 30, 2016, and the market is tightly regulated by the Federal Government Office of Drug Control. In 2017, the Therapeutic Goods Administration (TGA) of Australia rescheduled some medicinal cannabis products to schedule 8 of the Poisons Standard, making the prescription

of medicinal cannabis legal in Australia.

There are a number of authorised uses of medical cannabis (listed below) and doctors may prescribe cannabis for other conditions not included below, based on evidence.



The Australian government has approved companies to import, store and sell the drug to meet demand, which provides another validation for its use and sets the tone for the future. Both New South Wales (Aug 2016) and Queensland (March 2017) have passed legislation for GPs to be able to supply medical cannabis.

"Our goal is very clear, to give Australian farmers and manufacturers the best shot at being the world's number one exporter of medical cannabis"

Health Minister Greg Hunt, January 2017

+ Federal Vs State Legislation for Patient Access to Medical Cannabis

New South Wales

From July 2016, the Poisons and Therapeutic Goods Amendment Regulation 2016 made the use of cannabis legal for adults with end-of-life illnesses in the state of New South Wales (NSW).

South Australia

Cannabis has been legal by prescription from doctors under certain conditions in the state of South Australia (SA) since November 2016.

Victoria

Under the Access to Medicinal Cannabis Act 2016, cannabis became legal for use in the state of Victoria, in 2017, providing it was for children with severe, treatment-resistant epilepsy.

Queensland

In March 2017 patients in the state of Queensland benefited from the Public Health (Medical Cannabis) Act 2016. Prescriptions from specialists were permitted for cannabis to be used therapeutically by patients with a range of conditions including MS, epilepsy, cancer, and HIV/AIDS.

Australian Capital Territory

In the Australian Capital Territory (ACT), medical cannabis is permitted (since November 2016) for the treatment of patients who present certain indications:

+ Spasticity in multiple sclerosis.

+ Nausea and vomiting related to cancer chemotherapy.

+ Pain and/or anxiety in patients with active malignancy of a life limiting disease where (in either case) the prognosis might reasonably be expected to be 12 months or less.

+ Refractory paediatric epilepsy.

In the ACT, prescribers may also apply through the health authority for an *Approval by Drug* to prescribe medical cannabis for other indications. These applications are assessed on a case by case basis and are subject to referral to the *Medicinal Cannabis Medical Advisory Panel*. Under the *Controlled Medicines Prescribing Standards*, prescribers can either seek approval to prescribe a therapeutic class of controlled medicine(s) for a patient through a category approval system (*Category Approval*) or seek approval to prescribe by drug, form and strength (*Approval by Drug*).

Tasmania

No legislative changes were required in Tasmania. *The state's Controlled Access Scheme (CAS)* began in September 2017 to allow patients to access unregistered medical cannabis products. However, the system was blighted by confusion; it received just three applications from medical specialists and no approvals in its first month of operation. Per July 2018, there are concerns about the tight control that surrounds the system and the large amount of paperwork needed in order to apply for medical cannabis. Some patients also stated that the medicine was five times more expensive than buying it on the black market which put them off purchasing through the official route.

Western Australia

In Western Australia (WA), cannabis has been legal by prescription from doctors under certain conditions, since November 2016. The Western Australian Hemp Growers' Co-operative was founded in 2018, whose tasks include sourcing seeds and encouraging industry collaboration.

Northern Territories

In the Northern Territories, the Australian Government Department of Health regulates therapeutic medicines containing cannabinoids through the Therapeutic Goods Administration (TGA). Access is restricted to patients with certain medical conditions such as chemotherapy-induced nausea and vomiting, epilepsy, multiple sclerosis, chronic non-cancer pain and palliative care.



+ Recreational

Recreational cannabis is illegal across Australia, but regulations vary by state and territory.

Cannabis-cautioning programs operate in Victoria, Australian Capital Territory, New South Wales, Western Australia and Tasmania as part of the Illicit Drug Diversion Initiative. These programmes are policy-based (rather than legislation-based) approaches; meaning the country largely avoids punitive drug policies and instead focuses on strategies and a treatment framework embedded in law-enforcement.

In New South Wales, possession of up to 25 grams of cannabis within the borders of NSW commands either a A\$100 (US\$72) fine or attendance on an Alcohol and Drug Program.

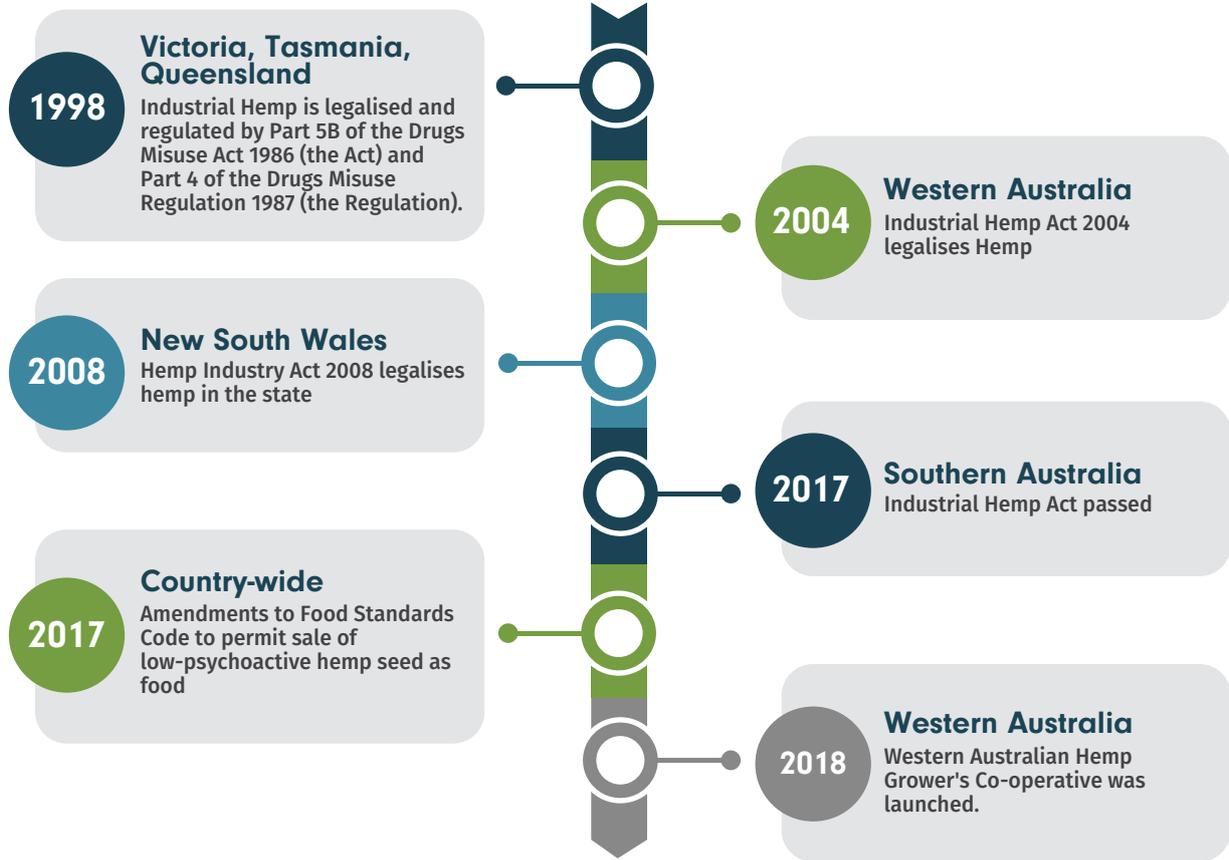
There are no criminal charges for possessing small amounts of cannabis in South Australia but being caught with up to 25 grams will typically lead to a A\$125 (US\$90) fine. Possession of between 25 and 100 grams of cannabis will incur a U\$300 (US\$218) fine. However, there are proposals to elevate cannabis to the status of “other controlled drugs” and this could result in fines of up to A\$2,000 (US\$1,433) or up to two years in prison.

In Western Australia, possession of 10 grams or less will lead to a compulsory one-on-one cannabis intervention counselling session. Larger quantities will be charged with a more serious offence and result in a A\$2000 fine and/or two years imprisonment.

Possession and use of cannabis is still an offence in Australia, however, enforcement varies. There is police discretion of up to two incidents of cannabis possession (15 grams or less) of cannabis in New South Wales. In Tasmania, the possession limit is 50 grams of cannabis and up to three cautions are allowed. In all these territories, the focus is on education and treatment instead of punishment of offenders.



+ Industrial



Industrial hemp is legal in Australia. The states of Victoria and Tasmania legalised industrial hemp in 1998. Likewise, in Queensland, industrial hemp has been legal since 1998 and is regulated by Part 5B of the Drugs Misuse Act 1986 (the Act) and Part 4 of the Drugs Misuse Regulation 1987 (the Regulation).

New South Wales legalised the hemp industry in 2008 through its Hemp Industry Act 2008.

Western Australia legalised hemp through its Industrial Hemp Act 2004 which enables licensees to cultivate, harvest and process industrial hemp on a commercial scale. However, under Australian law, growers cannot harvest hemp fibre unless they are licensed by the Federal Office for Drug Control under strict security conditions.

In Southern Australia (SA), MPs passed the Industrial Hemp Act in April 2017. The proposed regulations enable the cultivation of industrial hemp crops and the establishment of a hemp processing industry in SA. The regulations are being developed by the Primary Industries and Regions SA (PIRSA) and State

Development departments, SA Health and SA Police. In November 2017, changes were made to the Food Standards Code to permit the sale of low-psychoactive hemp seed as food in Australia.

In 2018, The Western Australian Hemp Growers' Co-operative was launched. The co-operative's objectives include sourcing and importing certified seed stock from overseas and strengthening industry collaboration and funding.

President of the Australian Industrial Hemp Alliance, James Vosper, advocates for and collaborates with the industrial hemp industry at a national level.

+ "Co-ops are vital to the future success of the burgeoning hemp industry for the sharing of knowledge and the sharing of resources."

James Vosper, President of the Australia Industrial Hemp Alliance.



+ Licences and Availability

A medical cannabis or cannabis research licence (an ODC licence) is required to obtain the right to lawfully cultivate cannabis for medicinal purposes. Once this licence has been obtained, a medical cannabis or cannabis research permit (an ODC permit) is needed prior to cultivating a crop. The permit sets out the specifics of that crop, such as how much and what type can be grown.

There are caveats attached to all licences stating that any cannabis cultivated or produced is done in accordance with a permit. Once the licence has been granted, a permit can be applied by the authorities, which then outlines quantities and types of cannabis that can be cultivated or produced. A licence combined with a permit allows cannabis material (such as equipment, seeds and nursery stock) to be obtained and covers associated cultivation and production.

There is no federal limit to the number of licences that can be granted as the number of cultivators required is demand driven. Australia is a signatory to the Single Convention on Narcotic Drugs of 1961 and has an obligation to avoid the accumulation of cannabis in excess of domestic requirements.

Some Australian states have created their own licenses

that are required in addition to an ODC licence:

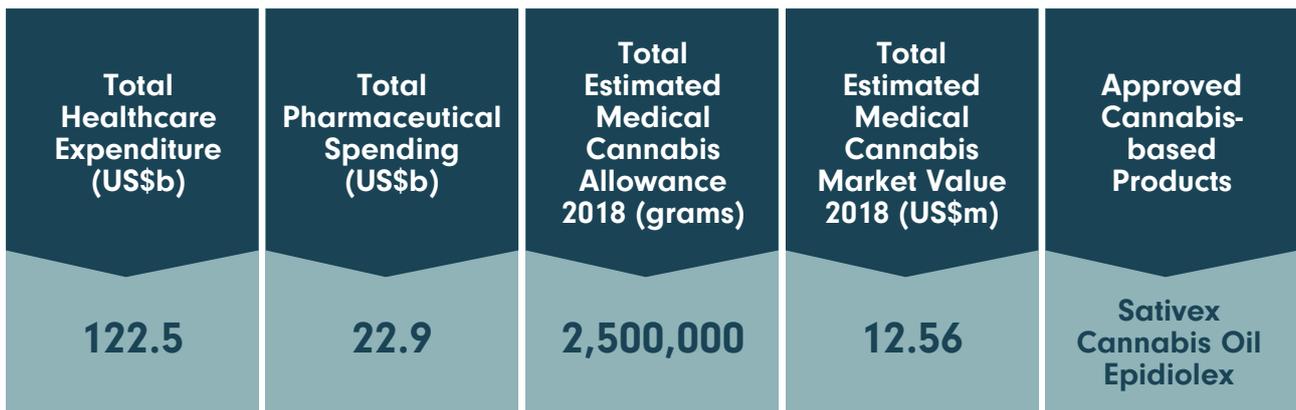
New South Wales

In New South Wales, a licence is required under the NSW Poisons and Therapeutic Goods Act for the manufacture of each cannabis product. The NSW licence must be obtained first by applying for an annual Licence to Manufacture and Supply by Wholesale, Drugs of Addiction. The licence is for the manufacture or supply of addictive drugs classified as Schedule 8 substances in the Poisons List.

Victoria

Victoria enacted the Access to Medicinal Cannabis Act 2016 in April 2016, which amended the Drugs, Poisons and Controlled Substances Act 1981. Under the new act, an entity with a Commonwealth manufacture licence can apply to Health and Human Services (HHS) for a Victorian manufacturing licence. A holder of a manufacturing licence can only sell to HHS, who will then distribute via licensed pharmacists and doctors. However, this changed in 2018 and Victorian manufacturers are no longer required to sell only to the Secretary of the Department of Health and Human Services. Manufacturers are able to export or distribute within Victoria, interstate, or overseas, provided appropriate licences are in place.

+ Healthcare Analysis



Source: Scimex/ WHO/ INCB / Prohibition Partners

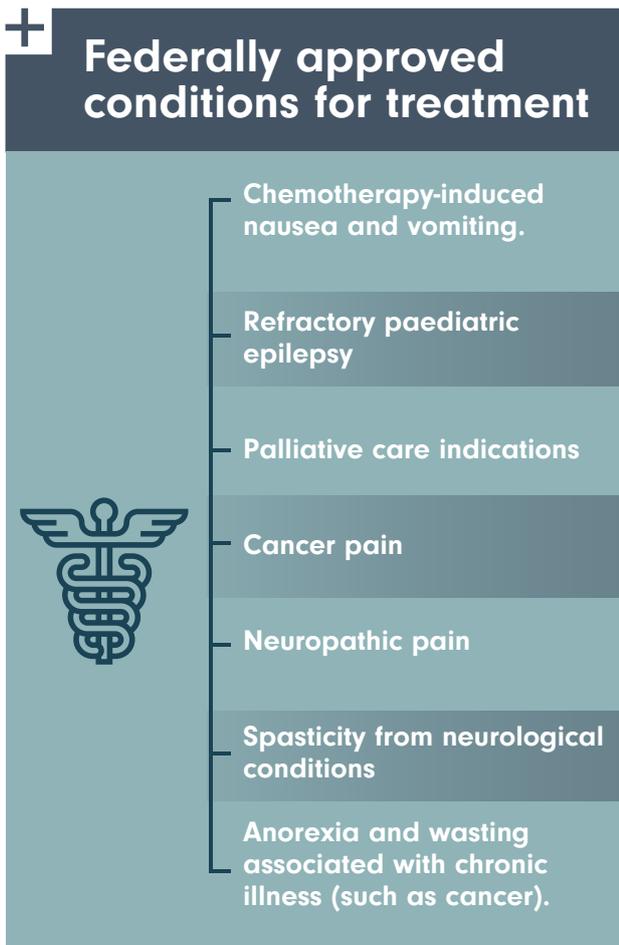
The Australian healthcare system is a combination of universal health care (public) and private providers (insurance). The majority is provided publicly (hospitals and primary healthcare, such as GPs) with the remaining provided by the private sector (private hospitals, allied health care such as physiotherapy and dental).

Medicare is Australia's universal health care system, which is the primary health scheme that subsidises most

medical costs for all the citizens and permanent residents. There are also other schemes which cover the medical costs in specific circumstances, including for veterans or indigenous Australians, car insurance, and workers' compensation schemes. The current Medicare levy is 2% and paid by Australians who earn over a certain income threshold. Those who earn more are expected to pay an additional surcharge if they do not have private health insurance (Medicare Levy Surcharge).



Patients suffering ailments including chronic pain, epilepsy and cancer, may qualify for medical cannabis in Australia and covered by their medical insurance. The Federal Government has approved the sale of medical cannabis and patients are able to obtain this through their registered GPs. To date, the Therapeutic Goods Administration (TGA) has approved Special Access Scheme (SAS) applications including, but not limited to, the following indications:



In Australia, Nabiximols (Sativex Oromucosal spray), is available on the Australian Register of Therapeutic Goods (ARTG) owing to its clinical benefits of muscle relaxation for spasticity associated with multiple sclerosis, if intolerant or not responding to anti-spasmodic medication.

Data from the Ministry for Health indicate that since cannabis was legalised in 2016, 1,059 patients in Australia have so far been prescribed medical cannabis. However, doctors remain wary of its benefits and this reluctance has curtailed the growth of the national cannabis market with numerous anecdotal evidence to support the difficulties of obtaining medical cannabis.

A survey published in July 2018 by the Lambert Initiative for Cannabinoid Therapeutics at the University of Sydney found that of the 640 Australian GPs surveyed, more than

half supported medical cannabis and over two thirds of their patients asked about it. However, researchers revealed that doctors felt their knowledge of the drug was inadequate and they were uncomfortable discussing it with patients. A 2018 trial at Sydney Children's Hospital showed all but one of a trial group of 40 patients saw positive results from using medical cannabis to treat their epilepsy.

According to Australian law, the companies (including Medifarm and GD Pharma) that are licensed to grow medical cannabis are only allowed to produce the exact amount needed to meet domestic demand. In October 2018, MedCan, was granted licences for manufacturing, cultivation, importing and exporting, and a Queensland permit to hold Schedule 9 substances. However, the company must still hold a federal permit before it can start growing medical cannabis, as this sets out the quantities that can be grown.

Gaining access to medical cannabis in Australia is proving a more complicated process than with most other medicines. A GP must either be an Authorised Prescriber or be prepared to make an application on behalf of their patient through the Therapeutic Goods Administration Special Access Scheme. The TGA are the Australian government body that act as gatekeepers in regulating access to medical cannabis, and indeed all medicines. Most medical cannabis products are classified as unregistered products and therefore do not appear on the Australian Register of Therapeutic Goods (ARTG). This means that patients cannot simply see a GP, obtain a prescription, and complete it at a pharmacy the way they can with conventional registered medicines.

Despite the federal complexity of the process, there has been some progression at state level. On 2 March 2018, the New South Wales government announced a change in the prescription process in NSW to improve individual patient access to unregistered cannabis medicines through the introduction of a single application process.

“The states still rely on federal patient approval, and there are too few doctors willing to prescribe. The numbers of patients approved for medicinal cannabis in Victoria is very low, and this isn't from lack of demand.”

Fiona Patten, member of the Legislative Council for the state of Victoria

Patten went on to explain that GPs need more education and training in medical cannabis to feel “comfortable talking about this option to patients.” The Royal Australian College of General Practitioners (RACGP) has an informative and supportive statement for GPs on its website and also provides training.

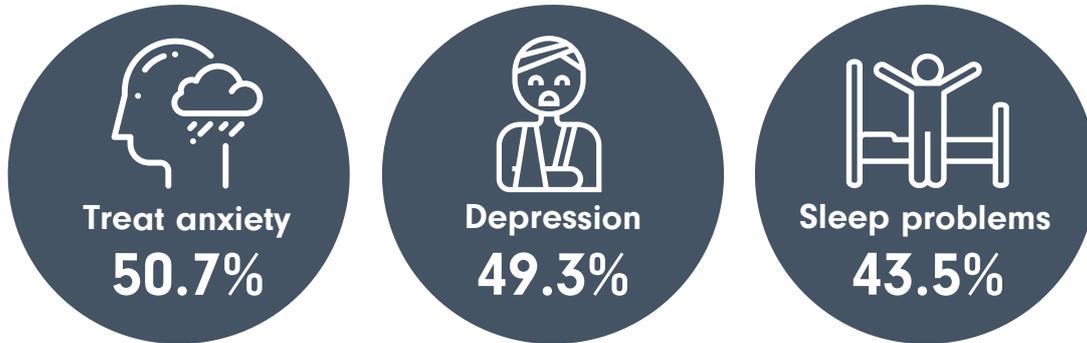
Due to the overall difficulty in accessing medical cannabis through the official channels, many patients



are believed to be using it illegally. Iain McGregor, a psychopharmacologist at the Lambert Initiative For Cannabinoid Therapeutics at Sydney University, estimates that as many as 100,000 Australians may be using illegal cannabis for medical problems.

Researchers from the University of Sydney did an online survey of 1,748 Australians between April and October 2016 – just before the 2016 legislation for frameworks for medical cannabis use was passed.

Most Frequent Reasons for Medical Cannabis Use



At present the only cannabis product registered as a medicine and marketed in Australia is nabiximols oromucosal spray (Sativex). However, a well-established Authorised Prescriber Network in NSW uses Epidiolex to treat intractable refractory childhood epilepsy. In addition, some of these authorised prescribers also use the Special Access Scheme (category B) to prescribe more broad spectrum cannabis oils where they feel it is clinically justified.

After a long process, MGC Pharmaceuticals recently secured approval from the Human Research Ethics Committee to conduct a clinical trial of its CogniCann product on patients with dementia and Alzheimer’s disease. Ron Lipsky, Vice President, Business Development

& International Relations at the company explained the importance of education of all concerned, including ethics committees so that ‘phytocannabinoid formulations can stand shoulder to shoulder with standard medications’. Lipsky told Prohibition Partners

“Under the company’s umbrella agreement with RMIT, MGC Pharmaceuticals has created the International Library of Phytocannabinoids. This marks a major effort to centralize this data and create an open source resource for researchers and patients to understand the difference between phytocann binoids and how they may be applied and understood.”

-Ron Lipsky, Vice President, Business Development & International Relations, MGC Pharmaceuticals Ltd.

+ Commercial Opportunities

Forecast value of Australian cannabis market, by sector, 2028

	Forecast Medical Cannabis Market Value 2028 (US\$m)	Forecast Recreational Cannabis Market Value 2028 (US\$m)	Forecast Industrial Hemp Market Value 2028 (US\$m)	Total 2028 (US\$m)
Primary Market	1,344.7	3,484.7	10.5	4,839.9
Secondary Market	789.8	2,046.6	6.1	2,842.5
Total	2,134.5	5,531.3	16.6	7,682.4

Source: Prohibition Partners



+ Federal

In January 2018, the Australian government claimed that they planned to become the fourth country in the world to legalise medicinal marijuana exports. In August, the first export was completed.

“Our goal is very clear: to give farmers and producers the best shot at being the world’s number one exporter of medicinal cannabis,”

Health Minister Greg Hunt.



There are more than 20 Australian cannabis producer listed on the ASX and shares soared following the announcement by the Australian government.



Cannabis Jobs
Australia estimates there will be 50,000 cannabis jobs in Australia by 2028.

Jobs will be created in areas of greenhouse operations, processing and distribution, facility operations, and sales and marketing. Over time the creation for new jobs could expand further, especially in areas of production, marketing and sales. The total job creation will be greater than the ‘plant touching’ roles directly created.

+ Regional

In 2015, the government of Australian territory Norfolk Island struck a groundbreaking deal to allow Australian firm, AusCann Group Holdings to grow a high-grade medicinal strain of cannabis. At the time the deal was struck, it exploited a legal loophole owing to the fact that Norfolk Island’s self-governing administration could grant a licence to legally export the drug despite it being illegal in Australia at that time (Norfolk Island is now governed by New South Wales, Australia). The enterprise facilitated the export of sativa and sativa-dominant strains to Canada where they are less-suited for growing in Canada’s indoor facilities.

In September 2018, MGC Pharmaceuticals signed a key agreement that will fast track the distribution of its medical cannabis based pharmaceutical products across Europe.

A Queensland-based company, Medifarm, was awarded the state’s first licence to legally cultivate and produce medical cannabis in April 2018.

In 2017, some 22 cannabis companies were listed on the Australian Stock Exchange (ASX), of which 11 were cannabis-specialists including Zelda Therapeutics, Bod Australia and Auscann Group who are focused solely on cannabis, and Stemcell Holding and Queensland Bauxite whose interests include but is not limited to cannabis. Though all the companies are based around cannabis, their product offerings and target markets differ. A few companies target nutraceuticals through the development of products based on the therapeutic benefits of cannabis. Others are leveraging the medicinal applicability of cannabis to develop a range of medicines based on the drug. Companies such as Zelda Therapeutics (ZLD), The Hydroponics Company (THC) and MGC Pharmaceuticals (MXC) target multiple diseases for which cannabis would be effective. These diseases include cancer, epilepsy and chronic pain.



Licences granted (as of July 2018)

Medical	Manufacture	Research
<p>Medicinal Cannabis Licence (cultivation and production): 18</p>	<p>Manufacture Licence: 13</p>	<p>Cannabis Research Licence (cultivation and production): 10</p>
<p>By August 2018, some 322 patient applications for medical cannabis had received approval from the state, making it easier for GPs to prescribe medical cannabis, according to the New South Wales health regulator. This has boosted the overall number of patients nationwide to more than 1,000 for the first time since it was first legalised.</p> <ul style="list-style-type: none"> • Allows the holder to cultivate, produce, package, store and transport cannabis plants and/or resin for medical purposes. • Individuals applying for a cultivation licence will have to demonstrate that they will be supplying to a licensed producer or manufacturer, as appropriate, and must also adhere to regulations and guidelines currently being developed by the Office of Drug Control. • A cultivation licence and associated permits will allow for propagation as part of the cultivation process. 	<ul style="list-style-type: none"> • Allows the holder to turn cannabis and/or resin into drugs for research and/or medical use. • The definition of 'manufacture' under the Single Convention refers to the carrying out of any process by which a drug may be obtained and includes refining as well as the transformation of one drug into another drug. • Extraction is the removal of the cannabinoids from the plant. • Manufacturers will be permitted to import raw cannabis for manufacture. Imports, exports and domestic production are limited internationally through 'consumption estimates' that are controlled by the United Nations' International Narcotic Control Board. • A manufacturer will be able to hold both a manufacturing licence and a medicinal cannabis licence and develop a vertically integrated supply chain. • A licence does not allow for the cultivation or production of cannabis unless accompanied by an associated permit, which will outline: <ul style="list-style-type: none"> • The types of cannabis plants that can be cultivated The quantities that can be produced • The time frames in which authorised activities can occur • The next party in the supply chain (specific manufacturer or researcher). 	<ul style="list-style-type: none"> • Allows the holder to cultivate, produce, package, store and transport cannabis plants and/or resin for research purposes. • Any applicant for a research licence will need to be able to demonstrate that it is either for research relating to medical cannabis or research relating to medicinal cannabis products. • New strain development would need a research licence.

Source: ODC /NSW/ Prohibition Partners



+ Local Expert Analysis

Peter Comerford, CEO, Anspec

What developments are expected for legislation in the next 12 months?

Australia is, in many ways, a very conservative first world country. The end of the prohibition of medicinal cannabis that is spreading across the first world has gradually made its way to Australia. Germany, Israel, Canada, some US states and a handful of smaller countries have led the way and, have once again embraced cannabis as a medicine after 100 years of prohibition. However, Australia is still the leader in the southern hemisphere and is still ahead of Britain, Portugal, Ireland and many other European countries.

Currently, the focus for the Health Minister is to spread the simplification of access, started by NSW, ACT and Victoria, followed by Queensland and Tasmania, across the remaining states and territories. We can expect to see each state and territory formalise the simplification of access over the next 6-months.

Workplace health and safety and driver testing laws are being examined so that they do not remain as an obstacle for patients using medicinal cannabis under the supervision of a doctor.

The most interesting, but quasi-political element, will be how the issue of proper and compassionate access to medicinal cannabis is handled as an election platform. Looking back to the successful campaign of current Canadian Premier Justin Trudeau where access to medicinal cannabis for patients was a key campaign pillar there is certainly advantage to be gained in a country where it is estimated that 35% of the population uses low quality street cannabis and that 750,000 Australians use low quality street cannabis every week.

What are the barriers and stimuli to any legislative change?

The principle barrier to change is the dearth of research over the last hundred years caused by the extended prohibition of cannabis medicines versus, for instance, opiate medicines. Now that prohibition is at an end for cannabis the opportunity exists for the scientific community to catch-up on lost time. This change is probably being led by the Israelis however, in our experience, every country that legalises immediately emphasises to its medical and scientific community the

importance of catching-up with important and necessary research.

The advantage cannabis has is its comparatively low toxicity, low addictiveness and low instance of serious side-effects compared to say opiate medicines. Also, the Australian regulators are open to recognising the extensive data already available in other countries as sufficient Phase 1 trial data to allow some Phase 2 trials to kick-off.

What is your five-year view for the industry in Australia and why?

As cannabis medicines are reduced from Schedule 8 (the most tightly regulated pharmaceutical products under the Drugs and Poisons Controlled Substances Act) to Schedule 4D and Schedule 4 in some cases, then access to differing strengths of cannabis-based medicines will automatically mean that access will become easier.

As Coca-Cola, Coors, Corona and other major beverage companies continue the recent trend to buy into and buy-over, cannabis companies world-wide with the

objective of adding cannabis to new brands of beer and soft-drinks, then the social stigma around cannabis will disappear.

At the other end of the scale, low concentration food grade cannabis products are already easily available (via some high street retailers such as health food stores) around the developed world.



The ultimate convergence of these global trends means that a global commodity and industry will come into existence that grades grown cannabis across a spectrum from medicinal to food grade and a manufacturing industry will grow up around the clean extraction of pharmaceutical, sub-pharmaceutical, nutraceutical and food ingredients.

Over the next 5-years, with the appropriate will (political and industrial), and with great application of science in both growing and manufacturing, Australia is well placed in the southern hemisphere to capitalise on whichever aspects of this new industry that it chooses.

What are the biggest obstacles facing the industry today and how do you think they can be overcome?

One hundred years of prohibition which has caused doctors and scientists to necessarily ignore cannabis as a medicine to be researched is the biggest obstacle. This has in turn caused fear in the medical community and the regulatory bodies about how to handle this explosive new (legal) industry.

The continued flourishing existence of a low-cost, low quality, illegal market also adds to a social stigma for certain generations in society.

By lifting our eyes and seeing the opportunity for Australia

that is being exemplified by Canada, mainland Europe, Israel and many of the United States, the obstacles can be overcome.

That is possibly the next 5-years, but right now, this is a medicine for patients that is prescribed by their doctors and it needs to be prescribed and monitored carefully. It needs to be regulated carefully by smart people in order to build a good clean and legal industry to replace the black market caused, as always, by prohibition.

What is the biggest trend you are expecting to see in the industry in the next 12 months?

Globally, cannabis as a crop will become a commodity. Mercantile exchanges have already started all around the world and the race is on to produce high quality cannabis (without heavy metals, pesticides or other contaminants), at a high yield of active cannabinoids, in large volumes, and economically (lowest cost).

This is required by the markets that have turned their gaze towards cannabis, those markets being the patients who want access to a medicine that they believe can help them and, an enormous consumer industry that wants to produce drinks that their customers want, with less or no alcohol.





New Zealand

+ Market Overview

Population (m)	4.79
GDP (US\$b)	205.85
Ruling Government Party	Labour Party, New Zealand First, Green Party
Party Stance on Cannabis	In favour of medical cannabis
Total Healthcare Expenditure (US\$b)	19.5
Alcohol Consumption (Litres Per Capita Per Year)	10.7
Prevalence of Tobacco Users (%)	16
Prevalence of Cannabis Users (%)	11
Average Cost Per Gram of Cannabis (US\$)	13.8



New Zealand’s current medical cannabis laws are strict. Under the Misuse of Drugs Act 1975, possessing any amount of medical cannabis is illegal. However, in recent years, Sativex and CBD products have been approved, but remain costly and hard to obtain.

In November 2018, the New Zealand parliament is expected to approve a bill that will lay the groundwork for regulating the country’s future medical cannabis industry. This bill is an amendment to the Misuse of Drugs Act 1975 and is scheduled for a second reading in the coming weeks. However, although medical cannabis is expected to become legalised in 2018, this legislation is in its early stages and an effective program will not be implemented until 2019 at the earliest.

Furthermore, there are plans for New Zealand to hold a referendum on legalising recreational cannabis use by 2020. Recent polls show a majority of citizens support legalisation, but this has been a rapid change and decriminalisation has previously been halted by government officials objecting to revised legislation, even for medicinal use.

*Adults aged 15+ who have used cannabis in the past year
Source: World Bank/ WHO/ BMJ/ Prohibition Partners



New Zealand’s cannabis industry is in a state of real flux, according to Tadhg Stopford, founder of the Hemp Foundation, but the referendum could bring about

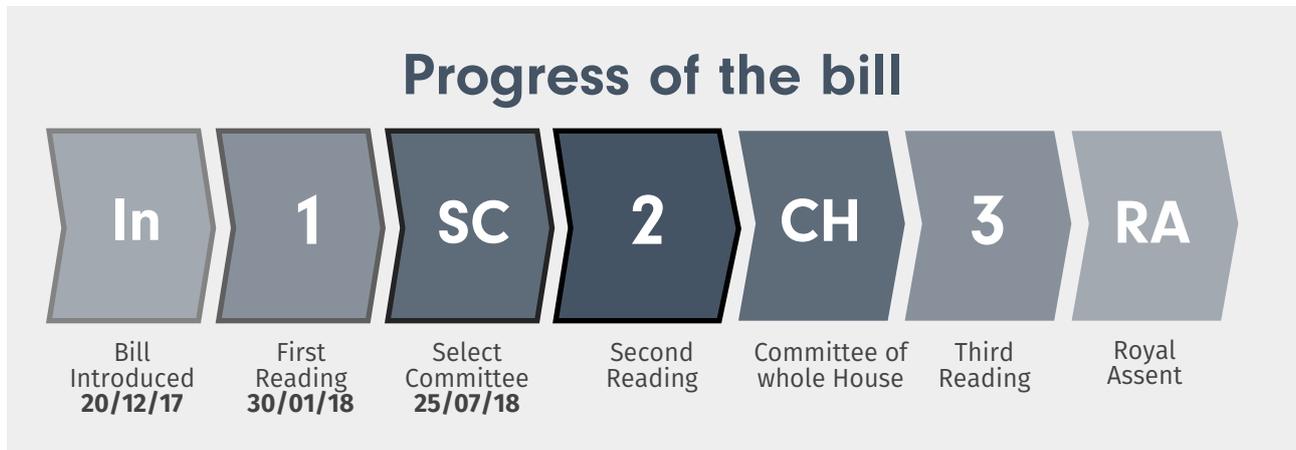
radical change. Stopford goes on to say that pending the results of the referendum.

+ Regulatory Environment



*Legal refers the ability to acquire cannabis through a special permit or licence

+ Medical +



The Misuse of Drugs (Medicinal Cannabis) Amendment Bill is expected to be approved by the New Zealand Parliament in November 2018, following a second reading in October. At the time of writing, the second reading had not happened.

The Misuse of Drugs (Medicinal Cannabis) Amendment Bill amends the Misuse of Drugs Act 1975. The Bill will introduce an exception and a statutory defence for terminally ill people to possess and use illicit cannabis and to possess a cannabis utensil; provide a regulation-making power to enable the setting of standards that products manufactured, imported, and supplied under licence must meet; and amend Schedule 2 of the Act so that cannabidiol (CBD) and CBD products are no longer classed as controlled drugs.

The Misuse of Drugs Act of 1975 classes cannabis as a B and a C on New Zealand's list of controlled substances. In practice, New Zealand's approach to cannabis has mainly focused on reducing supply and demand and implementing so-called damage limitation strategies. The aforementioned amendment to this bill will effectively legalise medical cannabis.

The Bill has three distinct elements:

- + **The removal of criminal liability of medical cannabis for the terminally ill, even without a GP prescription. It is already legal for patients to possess medical cannabis obtained through a prescription from a GP who has Ministry of Health approval (if a suitable imported product is available).**
- + **The removal of CBD from the list of controlled drugs. GPs are already able to prescribe it, but its status as a controlled drug puts a significant burden on those who handle it in the supply chain to store it safely.**
- + **A new regulation-making power that will set quality standards for medical cannabis products that are manufactured in or imported into New Zealand.**

Since September 2017, The Misuse of Drugs Amendment Regulations 2017 have:

- + **Exempted CBD products from the requirement for Ministerial approval to prescribe**
- + **Exempted pharmacies, medical practitioners, and wholesalers from the requirement to have an import licence for CBD product**
- + **Exempted CBD products from the controlled drug records and stock keeping requirements.**
- + **Extended the allowable period of supply for CBD products from one month to three**
- + **Exempted CBD products from the requirement to be prescribed on a triplicate form, and**
- + **Exempted specific controlled drugs that require refrigeration from the requirement to be stored in a safe in a pharmacy.**

The New Zealand government has agreed to the establishment of a medical cannabis industry to improve patient access to medicinal cannabis products. The New Zealand Medical Cannabis Council (NZMCC) is a trade body for the sector to coordinate and represent organisations involved in all aspects of the new industry. The Council is building an inclusive platform that identifies and communicates common priorities for the medicinal cannabis industry in New Zealand, ensuring the sector is developed to deliver the highest quality and

most accessible medicinal cannabis products to New Zealanders. Full membership of the NZMCC is open to any company, organisation or individual that:

- + **Has at least three years experience in the commercial aspects of the legal cannabis industry in New Zealand (including Industrial Hemp); or**
- + **A Licence to Cultivate a Prohibited Plant (Medicinal Cannabis), or**
- + **A Licence to Deal in Controlled Drugs; and/or**
- + **A Licence to Manufacture Medicines; and**
- + **Provides a direct benefit to New Zealand communities.**

The NZMCC's objectives are to:

- + **Provide a vehicle for the medicinal cannabis sector to organise itself and communicate key priorities**
- + **Contribute to the establishment of a successful, professional and respected medicinal cannabis industry based on world-leading regulations**
- + **Ensure the integrity of the New Zealand industry provides the best opportunities for patients to access safe and effective products**
- + **Promote collaboration and cooperation within the sector to enhance the reputation of medical cannabis products and services developed in New Zealand**

The following requirements must be met before undertaking clinical trials for medical cannabis products:

- + **A licence to deal in controlled drugs (if the clinical trial is not under the direct control of a medical practitioner)**
- + **Documentation demonstrating that the product was manufactured under a licence to manufacture medicines or a Good Manufacturing Practice certificate**
- + **Ethics approval for your proposed clinical trial**
- + **Clinical trial approval from Medsafe (New Zealand's Medicines and Medical Devices Safety Authority).**

Hikurangi Cannabis has protocols for clinical trials prepared and expects to commence phase one trials for two products, an oil via oral syringe and a topical balm, by the end of 2019. The company is also working on a novel delivery device that will have in vitro and in vivo studies in 2019.



In June 2018, Auckland University of Technology (AUT) and PharmaCann New Zealand Ltd signed an agreement of collaboration. The parties aim to have therapeutic formulations developed and enacted in clinical trials by the time new government regulations for medical cannabis come into force.

"Our vision is to develop and manufacture in New Zealand natural cannabis-based products that are as good as anything available overseas, at more affordable prices for patients,"

PharmaCann CEO, Chris Fowlie

Recreational

Any amount of recreational cannabis is currently deemed illegal. However, in October 2017, following the ascension of a Labour/Green/New Zealand First coalition to government, the Green party announced a nationwide referendum of the legality of cannabis for both medical and personal use, set to be held by 2020. Former Prime Minister Helen Clark voiced her support of a binding referendum on cannabis law reform saying that there "should be a simple binding referendum in 2020 on cannabis laws" as the "current policies aren't working".

First-time offenders or cannabis patients caught in possession of cannabis often just receive verbal warnings, but those caught with cannabis could be punished with:



Up to three months in prison



A fine of up to US \$500

Industrial

Growing hemp for therapeutic use can only be cultivated and produced for scientific research or clinical trials under a medicinal cannabis cultivation licence. Under the Misuse of Drugs Act, all stages of cultivation and production require a licence:

- + a licence to cultivate a prohibited plant
- + information/licence number for the person or business being supplied. The recipient must be licensed and producers can only supply to licensees specified on their licence.

Hemp foods regulations changed in 2017 and according to the Ministry for Primary Industries, are expected to be implemented in December 2018. This will allow food products derived from hemp seeds to be sold domestically and exported. Around 1,600 hectares of Industrial Hemp are currently under cultivation.

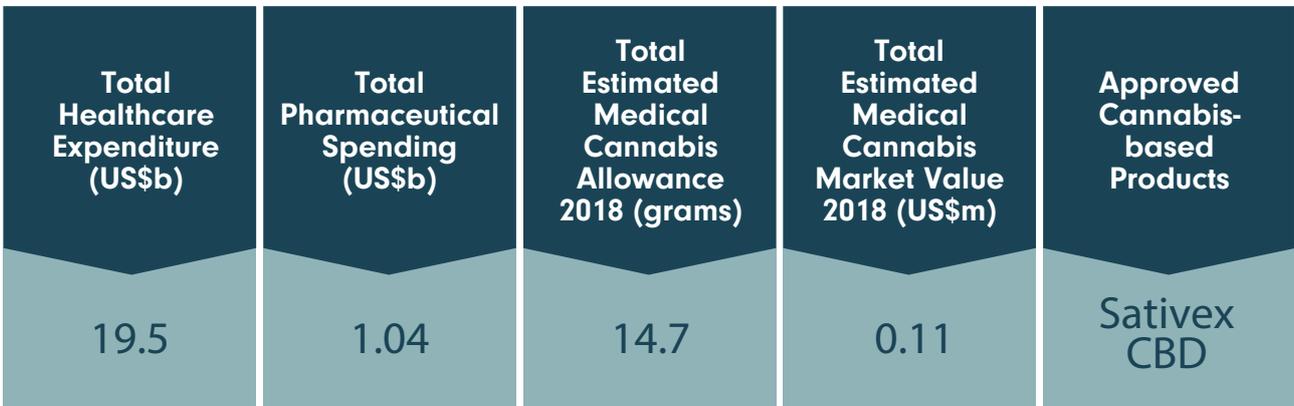
Tadhg Stopford, founder of New Zealand's Hemp foundation expressed concerns that the forthcoming referendum will do little to improve the fortunes of industrial hemp as both major parties have a long history of suppressing industrial hemp:

"Although the cannabis bills from both major parties focus on improving patient access to CBD products, industrial hemp will still be prohibited."

Hemp Foundation founder, Tadhg Stopford



Healthcare Analysis



Source: WHO/ BMJ/ NZMCC/ Prohibition Partners

In the 20th century, New Zealand’s healthcare system was entirely public, however, reforms in the last 30 years introduced market and health insurance elements which have created a mixed public-private system for delivering healthcare services. Primary care and medicine on the list of the New Zealand government agency PHARMAC (The Pharmaceutical Management Agency) require co-payments, but are subsidised, especially for patients with community health services cards or high-user health cards. Hospital and specialist care in the country is fully covered by the government if the patient is referred by a GP, and this is funded from government expenditure.

Since 2016, GPs have been able to prescribe medical cannabis for their patients, who must meet strict criteria. But, as the medicine can only be sourced from abroad and is not eligible for PHARMAC funding, it is prohibitively expensive for most citizens.

Currently, solely Sativex is approved for use in New Zealand. Unapproved cannabis-based pharmaceuticals such as Cesamet and Marinol, and non-pharmaceutical cannabis products (drops and spray) can be approved on a case-by-case basis by the Minister of Health. To date, only two such cases have been approved:

9 June 2015

Associate Health Minister Peter Dunne approved the one-off use of Elixinol for a coma patient

4 April 2016

One-off use of Aceso Calm Spray approved for a patient with a severe case of Tourette's Syndrome.

1

2

CBD products with 98% CBD of total cannabinoids are currently permitted to be prescribed directly by a doctor. A number of products have been imported by doctors and patient advocacy groups to assist with direct access.

Medical cannabis is expected to be legalised in the country in 2018, and one of the first things this will accomplish is to decriminalise the use of medical cannabis for terminally ill patients with a prognosis of less than two years to live. Specialists can apply to the ministry for special permission for patients to use other cannabis medicines, but so far, all other applications have been rejected.

The current system of obtaining medical cannabis is proving very difficult for patients, resulting in large numbers instead turning to black market sources for their cannabis. The new amendment will offer an expansion of the program, allowing more patients to participate and gain easier access to safe medicines. The new program will, however, have certain limitations:

- + The new system will not be implemented until 2019 at the earliest**
- + The Medicinal Cannabis Advisory Committee may not include all the debilitating conditions that have proven to be treatable with cannabis medications**
- + Patients may still have to obtain special permission from the Ministry of Health to receive cannabis prescriptions, in accordance with regulation 22 of the Misuse of Drugs Regulations 1977.**

As the Misuse of Drugs Amendment Bill (which focuses on medical cannabis) makes its way through the New Zealand Parliament, a Medicinal Cannabis Advisory Committee will be appointed to establish the process that GPs and patients must adhere to in order to issue and receive medical cannabis prescriptions.



The committee will consider the current protocol for prescribing and accessing cannabis and ensure patients who are terminally ill, or suffering from chronic conditions, can obtain safe and affordable medical cannabis.

The first crop from Hikurangi’s 30,000 square-foot indoor growing and processing facility is expected to be ready by mid-2019.



“We are excited to be able to base this new industry in our community, a rural region that desperately needs new economic development opportunities. Without the strong local support believing in this goal, it would not have been possible”

Co-founder of Hikurangi, Manu Caddie

+ Commercial Opportunities

Forecast value of New Zealand’s cannabis market, by sector, 2028

	Forecast Medical Cannabis Market Value 2028 (US\$m)	Forecast Recreational Cannabis Market Value 2028 (US\$m)	Forecast Industrial Hemp 2028 (US\$m)	Total 2028 (US\$m)
Primary Market	149.4	399.5	1.2	550.1
Secondary Market	87.8	234.6	0.7	323.1
Total	237.2	634.1	1.9	873.2

Source: Prohibition Partners

In May 2018, the unemployment rate in New Zealand fell from 4.5 percent to 4.4 percent, the lowest it has been for nine years. Employment levels rose by 0.6 percent in the same period. But, with inflation languishing near the bottom of the 1%-3% target range, the Reserve Bank has signaled it is unlikely to raise interest rates until mid-2019.



“The tight labour market currently looks to be in little need of policy stimulus to meet employment objectives in the RBNZ’s new remit”

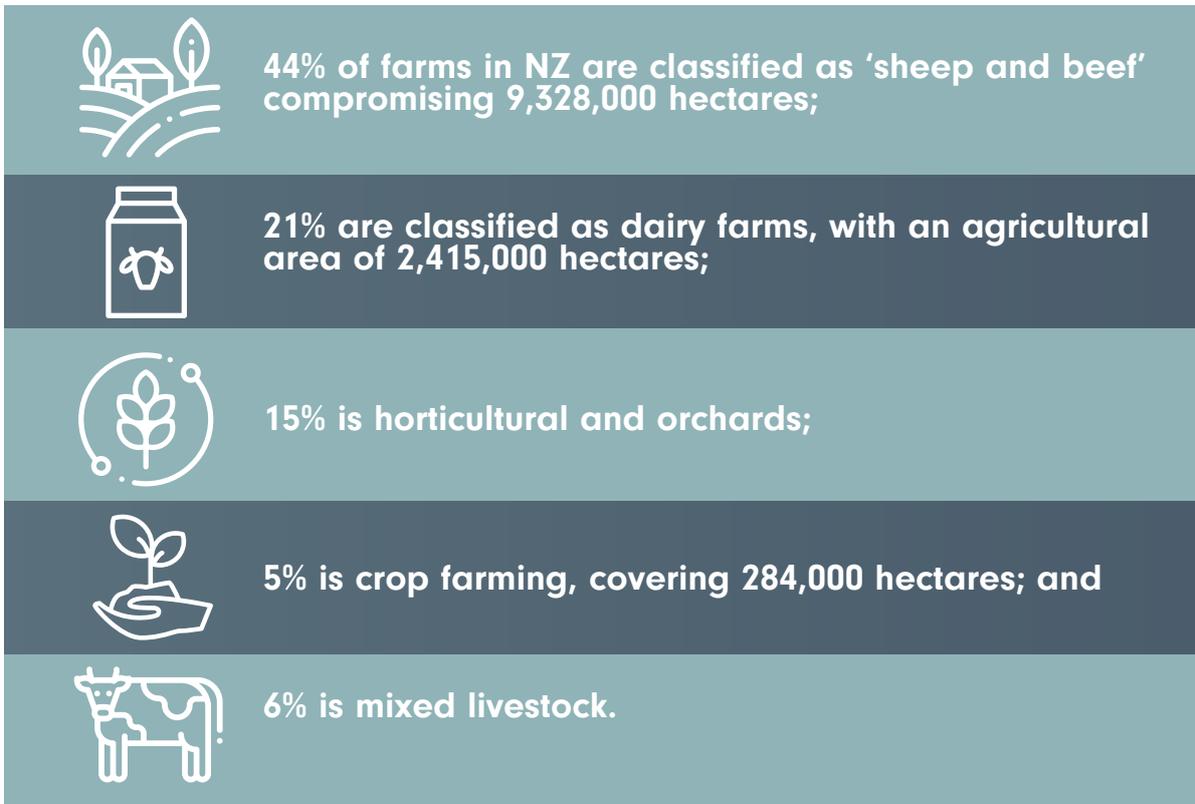
Nick Tuffley, Chief Economist at ASB Bank.

New Zealand’s Gross domestic product (GDP) rose by 1% percent in the June 2018 quarter, up from 0.5 percent last quarter, according to Stats NZ. This is the largest quarterly rise in two years. In total, 15 out of 16 industries recording higher production, with mining the only declining industry. Agriculture contributed the largest growth, up by 4.2%. “Once again service industries led growth. Goods-producing and primary industries also saw rises this quarter” commented Susan Hollows, National Accounts Senior Manager at Statistics New Zealand.

Agriculture forms a major part of New Zealand’s income - it makes up 5% of its GNP.



The latest national census in 2012 classifies the farms as:



New Zealand is enjoying a growing business relationship with the South East Asia region. According to country's Foreign Affairs & Trade Department, goods trade with South East Asia accounts for 10% of New Zealand's exports and 14% of its imports - a combined value of US\$7.5 billion (NZ\$11.43 billion) in the year to March 2017. There is also a flourishing services market, in particular education and tourism.

Despite the country's obvious agricultural traditions and the fact that cannabis is the most widely available drug in New Zealand, few cannabis licences have been issued. As of August 2018, New Zealand's Ministry of Health has issued only two licences to grow medical cannabis to Ruatoria-based company Hikurangi Cannabis and to Cannasouth, which has ties to the University of Waikato.

+ Local Expert Analysis

Manu Caddie, CEO, Hikurangi Cannabis Company

What barriers did you experience in becoming the first company to be awarded a licence to cultivate medicinal cannabis? Do you think other companies will experience the same barriers, or how could regulation/ legislation make the process smoother?

We experienced some early challenges with the transition from growing hemp to growing medicinal cannabis. We came up against the government regulator's interpretation of the industrial hemp regulations and their view that it does not permit iHemp cannabis plants to be grown for medicines. We commissioned a 30 page legal opinion and considered taking the government to court but in the end we decided to comply with the Ministry of

Health view of the legislation and worked towards gaining a Medicinal Cannabis license.

We are still supporting regulatory changes that will allow CBD products to be available as an over-the-counter or pharmacy-only product rather than a prescription medicine. Hemp growers are keen for this change and we think it would be good for us and the public.



What developments do you expect to see in legislation in the next 12 months/ 5 years? What impact do you see this having on the market?

Legislation to enable the establishment of a domestic medicinal cannabis industry and to remove CBD from the Schedule of Controlled Drugs is due to be passed before the end of this year. We expect the regulations to be agreed and operational by the end of 2019.

The current Government has agreed to hold a binding referendum on the full decriminalisation of cannabis in New Zealand by 2020. There is wide public support for these changes and we anticipate a regulated adult market could be in place by 2021.

What is your five year view for the industry in New Zealand and why?

We expect 3-4 serious medicinal cannabis companies to be established and licensed in New Zealand over the next two years. We also expect some of the Canadian companies to partner with New Zealand companies as

we're already seeing Canadian companies using New Zealand branding in Europe when they have nothing to do with New Zealand.

In your opinion, what are the biggest obstacles facing the industry today and how do you think they can be overcome?

Lack of in-country expertise is definitely a significant barrier – both in terms of industrial scale cannabis production but also global routes to legal markets. We are overcoming this by partnering with experienced operators from North America and by developing global partnerships for breeding, cultivation, processing and clinical research.

Routes to market are a challenge for producers in our part of the world, we are working on establishing an online global cannabis trading platform and plan to launch it in

Australasia and Europe next year. Initially it will be within one jurisdiction at a time, but it should quickly be able to develop the protocols for trading between regions and countries.

Getting to scale quickly is also a potential obstacle for producers countries like New Zealand that are coming into the industry later than others, but the good thing is we can learn from others mistakes and hopefully leapfrog some markets that have been bogged down by ineffectual regulation.

What is the biggest trend you are expecting to see in the industry in the next 12 months?

I think we'll see a lot of JVs being developed between small Kiwi start-ups and larger overseas players who want to leverage the clean, green, trusted brand that products from New Zealand carry. Successful brands will need to have integrity both in terms of the traceability and benefits

to New Zealand, but also the safety and scientific evidence connected to the product. The provenance story provides authenticity to a degree but the clinical data will be critical.





Rest of Oceania

This chapter of the report provides a top level overview of the other countries and territories (beyond Australia and New Zealand) in the Oceania region.

+ Commercial Opportunities

Forecast value of cannabis market, in the rest of Oceania, by sector, 2028*

	Forecast Medical Cannabis Market Value 2028 (US\$m)	Forecast Recreational Cannabis Market Value 2028 (US\$m)	Forecast Industrial Hemp Market Value 2028 (US\$m)	Total 2028 (US\$m)
Primary Market	92.6	20.3	0.06	112.96
Secondary Market	54.4	11.9	0.04	66.3
Total	147	32.2	0.09	179.3

NB figures may not sum due to rounding

*due to a lack of data, not all countries and territories are included in each sector. (please see methodology for full breakdown)
Prohibition Partners takes the view that the recreational cannabis market and the industrial hemp markets could be significantly higher than stated.

Source: Prohibition Partners

+ Recreational

Recreational cannabis remains illegal across the region, although a bill to fully legalise cannabis was proposed in the Federated States of Micronesia in 2017. With few

lobby groups in the region, law reform is set to trail the progress seen across Europe and the Americas.

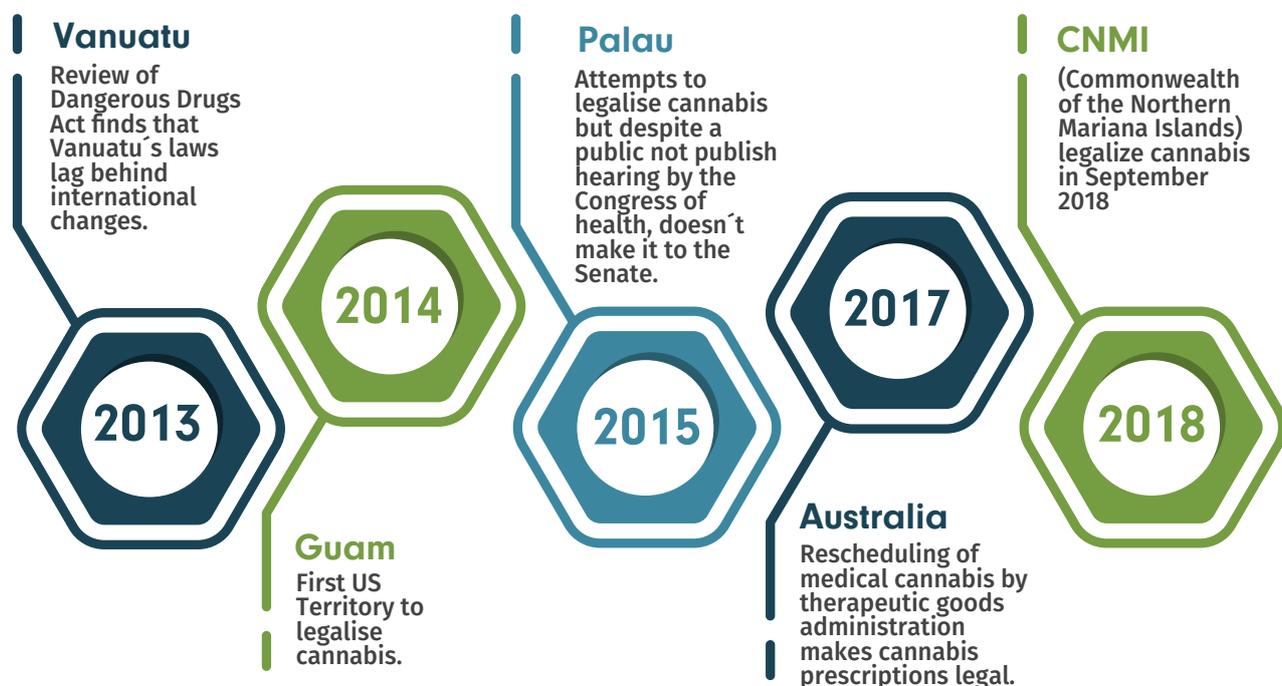


Medical

In 2014, Guam became the first US territory to legalise medical cannabis, but the country currently only accepts applications from laboratories. Based on public interest, it is estimated that Guam will license three dispensaries with four staff each and 10 cultivation sites each with four staff. Since February 2018, non-residents were permitted to access medical cannabis while visiting Guam, and this could significantly increase these estimates. Guam’s licence types include multiple cannabis cultivation licences based on square footage of canopy (canopy

space is the amount of square footage within the facility devoted to the vegetation and flowering of cannabis plants, it does not include supporting rooms such as processing, administration and shipping/receiving etc.) as well as medical cannabis manufacturing, medical cannabis dispensaries, and medical cannabis laboratory licences.

The production, sale and possession of any form of medicinal cannabis products is illegal in Fiji.



A March 2013, a review of the Dangerous Drugs Act was undertaken by *the Vanuatu Law Commission*. It found that Vanuatu’s laws lagged behind the international changes in access to cannabis since the 1960s. This contrasts with Australia, New Zealand, the Northern Mariana Islands, and the Federated States of Micronesia where medical cannabis is now legal. Despite other Oceania nations such as Fiji, Niue and Tonga repealing old drug laws and replacing them with more modern updated laws, and Kiribati amending their old laws, medical and recreational cannabis remain illegal in these nations. The same report found that drug offences accounted for one in ten cases brought to court in Vanuatu with almost all of these charges for possession, cultivation or supply of cannabis, cannabis resin or related substances.

permit the cultivation and use of cannabis for medicinal and research purposes. The related legislation is expected to be presented in the country’s parliament later this year, and licenses are expected to be granted before the end of December.

Cannabis was legalised in Guam in 2014, making Guam the first US territory to legalise the drug. In 2015, lawmakers in Palau sought to legalise cannabis for medical use but despite a public hearing conducted by Palau Congress of Health, it didn’t make it to the senate. Another US territory in the region, American Samoa operates a zero tolerance to the possession or use of cannabis, even if it has been legally prescribed in another state.

On September 20th 2018, the Vanuatu Council of Ministers passed a policy paper to change the laws of Vanuatu to

In 2017, the CNMI Cannabis Act of 2018 (Commonwealth of the Northern Mariana Islands) was introduced in the



Northern Mariana Islands Commonwealth Legislature as Senate Bill (SB) 20-62. It set about legalising cannabis possession and consumption by adults and creating a Cannabis Commission to regulate sales in the Commonwealth. In May 2018, SB 20-62 was passed (without opposition) in the Commonwealth's Senate. It also passed the House Committee on Judiciary and Governmental Operations unanimously, however procedural issues stymied the bill's progress and in August 2018, the House filed its own bill, which, if approved, would establish medical cannabis, industrial hemp and a retail market.

This act makes CNMI unique among the US regions that have legalised recreational cannabis and made legal history when the bill became law in September 2018. Whereas each US state established a medical cannabis programme before legalising recreational cannabis, CNMI became the first US jurisdiction to go from total prohibition to full legalisation.

In French territory Wallis and Futuna, the cannabis laws of France (which have been unchanged since the 1970s) apply. Possession and use of cannabis is illegal and punishable by up to one year in jail and a fine of up to €1,680. Nonetheless, the courts do consider the circumstances of the possession and use. Growing cannabis and possession of large quantities is punishable by up to 10 years in prison. The current French president, Emmanuel Macron, has expressed an open mind to cannabis reform in the territory, namely with a view to eliminating mandatory prison sentences for minor cannabis offences.





Contributors

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With special thanks to:

- Ron Lipsky
- Tadhg Stopford
- Manu Caddie
- Peter Comerford



Appendix

Glossary



ABS	.....	Australian Bureau of Statistics
ACT	.....	Australian Capital Territory
ANTG	.....	Australian Natural Therapeutics Group
APS	.....	Authorised Prescriber Scheme
ARTG	.....	Australian Register of Therapeutic Goods
ASX	.....	Australian Stock Exchange
AUT	.....	Auckland University of Technology
CAS	.....	Controlled Access Scheme
CBD	.....	Cannabidiol
CINV	.....	Chemotherapy-induced nausea and vomiting
CNMI	.....	Commonwealth of Northern Mariana Islands
GDP	.....	Gross Domestic Product
GMP	.....	Good Manufacturing Practice
iHemp	.....	Industrial Hemp
INCB	.....	International Narcotics Control Board
JV	.....	Joint Venture
MS	.....	Multiple sclerosis



NSW	.....	New South Wales
NZMCC	.....	New Zealand Medical Cannabis Council
ODC	.....	Office of Drug Control
OECD	.....	Organisation for Economic Co-operation and Development
PHARMAC	.....	The Pharmaceutical Management Agency
PICT	.....	Pacific Island Countries and Territories
RACGP	.....	The Royal Australian College of General Practitioners
RBNZ	.....	Reserve Bank of New Zealand
SA	.....	South Australia
SAS	.....	Special Access Scheme
SASB	.....	Special Access Scheme (category B)
SB	.....	Senate Bill
TGA	.....	Therapeutic Goods Administration
THC	.....	Tetrahydrocannabinol
UNODC	.....	United Nations Office for Drug Control
WA	.....	Western Australia
WHO	.....	World Health Organisation





Definitions



Industrial hemp

Industrial hemp has a wide range of uses as an ingredient in consumer goods including paper, textiles, biodegradable plastics, building materials, health food, and fuel. Industrial hemp can also be used to produce CBD products such as oils, tinctures and food. For the purposes of this report, industrial hemp includes hemp-derived CBD.



Medical cannabis

Medical cannabis refers to cannabis prescribed by a medical practitioner for the treatment of a specific conditions or diseases (eg, epilepsy, pain, MS). Medical cannabis uses the whole unprocessed plant or the chemicals contained within it. Medical cannabis is consumed in measured doses, usually in capsule or spray format. For the purposes of this report, medical cannabis can include pharmaceutical derivatives of cannabis.



Recreational cannabis

Will be key to influencing the narrative in the region and maximising market potential. At present, a lack of public, and medical knowledge as well as obstacles from within government will put the brakes on Oceania's role within the global cannabis industry, particularly for hemp production and use.



Primary market

References retail prices for end products. It is calculated by understanding volume consumption and multiplying it by average price per gram.



Secondary market

Refers to services rather than end product and includes, producers, manufacturers, laboratories, compliance as well as insurance and security.



Methodology

The market sizing contained within this report assumes that, by 2023, all countries profiled have legalised medical cannabis and regulated recreational use. "Market sizes are subject to change as more information becomes available".

Market size and segmentation have been calculated following extensive analysis of the dynamics and performance of fully regulated cannabis markets outside of the region, including Uruguay, Canada and some states in the United States of America.

Data has been drawn from a wide range of reputable sources including the United Nations Office for Drug Control (UNODC), the World Bank, the Organisation for Economic Co-operation and Development (OECD) and the International Narcotics Control Board (INCB). The Commercial Opportunities section of each country profiled represents our best estimate of market size, segmentation and future performance. Please note that market size, segmentation and performance, as well as cannabis prevalence and consumption frequency may change as more data becomes available.

Please note that the following countries and territories have been excluded from the market size estimates contained within this report: Ashmore and Cartier Islands (AUS), Commonwealth of Northern Mariana Islands (US), Cook Islands (NZ), Coral Sea Islands (AUS), Easter Island (Chile), French Polynesia (France), Niue (NZ), Norfolk Island (AUS), Tokelau (NZ), Papua, Pitcairn Islands (UK), Solomon Islands, Wake Island (US), Wallis and Futuna (France), West Papua.



