



ABOUT PROHIBITION PARTNERS

Advancing the global cannabis industry

Data, analytics and business intelligence on the international cannabis industry

About Us

Prohibition Partners was founded in 2017 with a mission to open up the international cannabis industry through reliable data and intelligence.

Within two years, we have become the world's leading provider of market insights and strategic consultancy for this emerging frontier. We firmly believe that data, insights and education will unlock the societal and commercial potential of cannabis.

Our research and content teams routinely share the latest legislative developments and key trends in the industry information that is regularly cited by political leaders, investment banks and Fortune 500 companies.

Our consultancy team works with investors, operators and regulators to identify and execute opportunities across multiple jurisdictions. We advise our private clients on licensing, regulatory and business opportunities.

Services

Data

Bespoke Research, Polling, Consumer Insight, Pricing, Market Forecasting.

Intelligence

Policy & Compliance, Market Analysis, Supply / Demand.

Strategy

Market Entry / Expansion, Regulatory Guidance, Licensing, Partnerships, Business Development.



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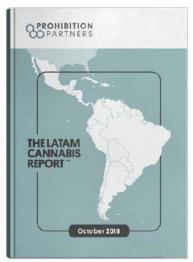


SPONSORSHIP OPPORTUNITIES

Prohibition Partners is the number one source for data and information into established and burgeoning cannabis markets. Read by over 150,000 global cannabis investors and entrepreneurs, and creating more than 6 million social impressions annually, Prohibition Partners is the number one source for data in the global cannabis industry.

Prohibition Partners produces thought-leading industry reports and we are seeking partners to support the content, promotion and distribution of the report. This is a unique opportunity to promote your business to key players in the cannabis industry. As companies and investors scramble to get a foothold in the market, this is an invaluable opportunity to put your brand front and centre in one of the industry's most influential reports.













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INTRODUCTION

Although widely grown across the continent, indeed Africa is estimated to produce at least 38,000 tonnes of cannabis per year, cannabis is illegal in most African countries. High unemployment rates and a global decline in demand for tobacco crops has hit these economies hard. However, the region has a wealth of experience in cannabis cultivation; despite its illegality, many agricultural workers have turned to cannabis farming as the only way to earn enough money to provide for the basic needs of their families.

With affordable land, low-cost labour and an experienced agricultural workforce, Africa offers enormous opportunity to local start-ups and foreign companies looking to expand. However, an inadequate healthcare system means that even if medicinal cannabis were to be legalised across the

continent, access to products could be significantly thwarted without the support of the NGOs, charities and other donors who provide a significant proportion of the region's healthcare supplies.

Any path towards the inauguration of a legalised and regulated cannabis industry will present challenges similar to those seen in more mature markets like North America. The laws governing cannabis use in Africa are both opaque and open to interpretation. However, one guarantee of success in Africa will be found in ensuring the safe and formal accessibility of cannabis-medications for those patients in need.

Daragh Anglim **Managing Director Prohibition Partners**

EXECUTIVE SUMMARY

Cannabis, although illegal across most of Africa, is very much part of both the healthcare and the folklore of the continent, owing to the plant's medicinal properties and its exalted state in local folklore. It is thought that smoking pipes were first invented in sub-Saharan Africa as early as 600BC and traces of cannabis have been found in Egyptian mummies used by ancient Egyptians to ward off depression and other psychological illnesses.

Today, cannabis is grown illegally in significant quantities on the African continent (the United Nations estimates that over 38,000 tonnes of cannabis are produced across Africa each year). It has proven to be considerably more lucrative than other crops such as maize and sugarcane. Countries such as Zimbabwe and Malawi, both adversely affected by local corruption, have been impacted by falling demand for tobacco crops and are looking for new ways to diversify their economies and generate foreign exchange earnings.

Africa remains a central hub for cannabis trafficking with Ghana, Nigeria, eSwatini (formerly known as Swaziland) being the most notable points of distribution. South Africa is a key market for cannabis. The cannabis produced in Africa is often not intended for a domestic market (according to the Narcotics Control Board, half of all cannabis produced in Ghana has been destined for export since the late 1980s). In Lesotho, all cannabis supplies will remain slated for export until new local laws legalise medicinal or recreational use of the drug.

However, Lesotho is the first country in the region to begin legal cultivation and the country has an advantageous climate for growing cannabis. The high-altitude mountainous region has an abundant water source (especially for those who can drill) as well as rich, fertile soil making it an ideal region for cultivation. As an extremely poor region poised for growth within the cannabis market, Lesotho is already seeing an influx of foreign investment.

From a financial standpoint, the 50+ states and territories which comprise Africa could reap significant rewards through the legalisation of cannabis with international demand offering a strong opportunity to unlock the potential value of Africa's legally produced cannabis. But this will only be possible if cannabis from Africa can meet international standards. Africa is expected to be an

attractive proposition for international companies seeking to expand their footprint in a region where land and labour is low-cost, but setting up commercial cannabis operations could be expensive given the paucity of irrigation infrastructure.

Furthermore, because of the poor economic conditions faced by many African countries, any legalisation of cannabis in the region will have a duty to safeguard local interests. In this respect Zimbabwe could become a regional blueprint as licence applications can only come from those who can prove citizenship or residency however, the Health Minister retains the rights to permit exemptions.

Annual prevalence rates of cannabis use (13.2%) in Africa cements the region as having one of the highest consumption rates around the world. Local experts also report a rise in cannabis use across the continent, although this has not been substantiated through pan-regional surveys. With more than 33% of Africans living below the poverty line, the recreational market is unlikely to achieve the per capita value sales potential of more affluent regions like Europe and North America. Nonetheless, this is a region in which volume consumption rates are likely to be higher per capita.

The challenging economic circumstances of many African nations, coupled with a long history of cannabis use and a favourable climate means that many farmers rely on cannabis as the only way to secure an income and meet basic needs such as education and food. This agricultural expertise in cannabis farming could position Africa as a leading producer of cannabis, but the reality is that unless innovative irrigation technologies are introduced, there is likely to be insufficient water to support mass scale operations in the region, particularly in newer cultivation methods such as hydroponics. As a result, Africa might be able to help supply demand, but is unlikely to be able to produce the quality cannabis that the maturing market will inevitably call for.

Companies and entrepreneurs seeking to invest in the cannabis industry in Africa also face other structural hurdles. The region has an extremely high rate of HIV/AIDS (more than one fifth of all adults are estimated to suffer from the immune deficiency condition). Although there is evidence to suggest medical cannabis can support in the treatment of the virus, cannabis may not present itself as a priority treatment.



In addition, the Institute of Advanced Studies has reported a rise in the number of chronic health conditions in the region. Yet, despite a solid prospective patient base, which is likely to be higher than in other geographical areas (notwithstanding the use of cannabis for mental health conditions), the inadequate accessibility to healthcare for many Africans means that the formal channels to market for medicinal cannabis would be largely reliant on NGOs and health charities. Many of these groups could be slow to add cannabis to their inventories.

Africa is also heavily reliant on imported pharmaceutical goods and donations - UNICEF reports that Malawi's health sector is one of the world's most heavily donor-supported, accounting for 80% of development expenditure. Some of the health supplies charities may be against the legalisation and distribution of cannabis, particularly if they have strong religious affiliations. That said, both real life and anecdotal stories of the potential benefits of cannabis on health could boost demand.

Assuming there is wholesale legalisation and regulation of the cannabis industry, Prohibition Partners calculates that South Africa and Nigeria potentially represent the region's two largest value markets going forward to 2023 and beyond.





METHODOLOGY

The market sizing contained within this report assumes that, by 2023, all the countries profiled in this report will have legalised medical cannabis and regulated its recreational use. It is our view that Moore's law is currently at play within the global industry; consumer and business momentum is building pace and is hitting a critical mass. At Prohibition Partners, we anticipate that medical cannabis consumption (as a percentage of the population) will increase faster than seen in other early adopter nations and states.

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

Quantitative analysis of socio-economic data, consumption trends, cannabis requirements, and pricing has been informed by a wide range of reputable datasets including, but not limited to the World Health Organisation (WHO), 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).

Qualitative intelligence is gathered through published reports and papers from the world of academia, business and medicine, and also draws on a range of research techniques including digital tracking, discourse analysis and in-depth interviews and verification with our international network of industry

The Commercial Opportunities section of each country profiled, represents our best estimate of market size, segmentation and future performance. However, market size, segmentation and performance, as well as cannabis prevalence and consumption volume may change as more data becomes available.



MEDICINAL

The medicinal market size estimates and forecasts contained within this report represent a calculation of average price per gram of cannabis multiplied by the expected usage, multiplied by the estimated potential

patient population. Price per gram of medicinal cannabis differs to street value prices and the price per gram has been modelled based on post-legalisation pricing trends from a number of other markets. This has been factored into the market size calculations with price modelling incorporated into the year-on-year forecasts.

Patient numbers have been modelled on existing markets where medicinal cannabis has already been legalised and regulated. It is not calculated as the sum of patients who suffer from qualifying conditions, primarily because patients may suffer from multiple qualifying conditions for which cannabis can be prescribed.

Value forecasts can include pharmaceutical and CBD (Cannabidiol) medical products. For this regional report, the patient numbers upon which market size estimates are based take into consideration accessibility to physicians. They do not include cannabis that might be prescribed by a local herbal practitioner. We have assumed that the number of physicians per 1,000 population will remain constant over the forecast period.



RECREATIONAL

Our study of the recreational cannabis market sizes in Africa also take into account the black market. Taking the UNODC prevalence figures as a starting point, this has been multiplied by average annual consumption and average prices for cannabis. The growth rate has been modelled on trends seen around the world and pricing trends have been informed by research published in more mature markets. We have also taken into account the impact of legalisation and regulation on the average cost per gram on the black market.

We have assumed that the price per gram of cannabis will either be the same or lower than the most recently available pricing data. The number of recreational users is based on those who are economically better placed to afford to purchase cannabis, and therefore excludes those living below the poverty line.

For the purposes of our forecasting, we have assumed that the proportion of the population living below the poverty line will remain constant over the forecast period.



MARKET VALUE

For the purposes of this report, medicinal market sizes include pharmaceutical cannabis and medical cannabis as sold as flowers, oils, topicals etc

LEGALITY

Industry tracking has proven to us that a simple legal vs illegal classification of cannabis is inadequate and at times misleading. For this reason, we have introduced a scale of legality for each country profiled which is defined as follows:

llegal

- Illegal
- Illegal, but decriminalised
- Illegal to consume, but legal to cultivate (with licence)

Legal

- Technically legal, but not legally available
- Legal, but no formal access programme
- Legal with an established formal access programme







Docteurs, Il faut parfois désapprendre pour apprendre.





DEFINITIONS



Medical cannabis

Medical cannabis refers to plant-based or plant-derived cannabis products 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, the processed plant or the chemicals contained within it. It can include high CBD and low THC (Tetrahydrocannabinol) products though CBD products may also appear as consumer goods. Medical cannabis products are currently prepared as plant materials, oils, tinctures, edibles or capsules.



Pharmaceutical cannabis

For the purposes of this report, pharmaceutical cannabis refers to products formulated using pure cannabinoids (either plant extracted or synthetic) that have been through full clinical trials and licensed as a medicine. Examples of such products include Sativex, Epidiolex, Cesamet, Marinol and Syndros.



Recreational cannabis

Recreational cannabis refers to any cannabis used for non-medical purposes and includes products available on the black market. It ordinarily has a higher concentration of THC, the psychoactive properties of the cannabis plant. It is illegal in many countries and states. People tend to smoke (or consume via edibles) recreational cannabis or use oils and vaporised products. For the purposes of this report, recreational cannabis users assumed to be over the age of 15.



CBD

Throughout this report, reference is made to CBD. Whilst there is an emergent market for CBD-infused consumer goods, capsules and oils, these have been excluded from the market size calculations due to a lack of sales data.

Although these products may be used for wellness purposes such as aiding sleep, or for pain or anxiety management, they do not require a prescription and have therefore been excluded from the medicinal market sizing.





AFRICAN INSIGHTS



Opportunities to formalise legalisation and regulation



No other region has such a contradictory cannabis industry in terms of production vs legality. Some of the region's countries such as Zambia and Uganda are great examples of where the industry survives in something of a grey area, where legislation lacks clarity or permits cultivation without actually granting any licences etc.

2

Poverty could be the driving force of cannabis legalisation in the region



A decline in demand for key cash crops, such as tobacco, is pushing the region's governments to look for alternative income streams. Given that cannabis is grown illegally in large quantities across the African continent, full legislation and regulation could unlock the income potential for many African countries, particularly the leading tobacco growers Zimbabwe and Malawi.

3

Impact of healthcare system on distribution of medicinal cannabis



The region's healthcare system is inadequate and inaccessible for many citizens (mainly due to the high proportion of the population who live in rural areas). This means that the 'channels to market' for medicinal cannabis is at the mercy of NGOs and health charities who may be less open to prescribing cannabis, particularly if those organisations have strong religious affiliations (the Catholic church has maintained its stance that use of cannabis is a sin despite legalisation in several countries such as Canada).

4

Processing power to command a premium



The continent is host to the famed Malawi Gold and Swazi Gold cannabis which are made special by the post-harvest process (wrapped and cured in banana leaves). Owing to a history of prohibition, there are many similarities between the alcoholic drinks industry and the legal cannabis industry. Similarly to the way in which alcohol is aged, the post-harvest processing of cannabis could tell a compelling story to the consumer that helps establish brand identity and command a price premium. In this way, Africa could play a key role in boosting the cost per gram of cannabis in the recreational market amongst cannabis connoisseurs.





Existing infrastructure and facilities are lacking



Implementing new production centres may prove costly and time-consuming. Countries such as Malawi, Lesotho and eSwatini are stricken by poverty and have limited funds to invest in any new facilities for the production and manufacture of cannabis products. As such, corporate social responsibility (such as providing much-needed infrastructure, or supporting local workers) is likely to be of paramount importance for foreign investors and producers looking to set up in the region.

MARKET OVERVIEW

Key Statistics for the African Cannabis Industry

ê Qe	Population, 2018 (m)	1,200
000	Estimated No Patients, 2023 (m)	0.42
	GDP, 2017 (US\$ t)	1.6
4	Total Healthcare Expenditure, 2018 (US\$ b)	140
	Total Pharmaceutical Expenditure, 2015 (US\$ b)	21
8	Estimated cannabis users, 2016 (aged 15-64)	76
M	Total Estimated Cannabis Market Value, 2023 (US\$ b)*	>7.1
\$\f\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Estimated medicinal cannabis market value, 2023 (US\$ b)*	>0.8
\odot	Estimated recreational cannabis market value, 2023 (US\$ b)*	>6.3

^{*}Estimates assume that by 2023, all countries profiled (South Africa, Zimbabwe, Lesotho, Nigeria, Morocco, Malawi, Ghana, eSwatini and Zambia) will have legalised medical cannabis and regulated recreational use.

Values are calculated only on country markets profiled in this report Source: World Bank/ UNODC/ Prohibition partners

Cannabis has been cultivated and used on the African continent for centuries. In some regions, the plant has become part of the fabric of life both in terms of its medical capabilities, financial benefits or as traditional and at times "mythical" properties traditional healers use cannabis). Despite it being illegal in most African nations, it is widely cultivated and consumed.

The UN estimates that more than 38,000 tonnes of cannabis are produced across Africa each year, with a market value of billions of dollars. However, cannabis remains illegal across vast swathes of the continent as African governments have yet to follow the trend of legalisation that is sweeping across Europe, North America and Latin America.

According to the UNODC's 2018 Drug Report, Ghana, Nigeria, eSwatini and Mozambique are the primary

trafficking and origin points of cannabis in Africa today. The rise of indoor cultivation has meant that cannabis is mostly trafficked within the region where it is produced. Whilst most of the cannabis produced in Africa is consumed locally, several countries including Ghana, Nigeria, South Africa and Zambia have identified European markets (primarily in the UK, Netherlands and Italy) as the possible final destinations for cannabis.

Africa's cannabis industry is also set to boost employment in the region. In Morocco where the market is currently illegal (albeit officially tolerated for personal use only), the estimated US\$10b cannabis industry employs 800,000 people, according to the Morocco Network for Industrial and Medicinal Use of Cannabis.

In Ghana, the acting Executive Director of the Ghana



Standards Authority (GSA), Professor Alex Dodoo is campaigning for the legalisation of cannabis, suggesting that the cultivation of cannabis could generate valuable national income.

Such is the value that cannabis could bring to the African continent that in March 2017 in the Kingdom of eSwatini, the Swazi House Assembly appointed a committee focused on cannabis legalisation research. Swazi legislators have suggested that cannabis could yield the kingdom US\$1.63b per year, but at the time of writing no further details on deadlines or outcomes have been made public.

HISTORY

In the early 1500s, cannabis was introduced to Eastern Africa from Southern Asia. Here it rapidly dispersed across the continent throughout the century. Sub-saharan Africans took to smoking cannabis in pipes, a practice invented locally but now seen worldwide. Different types of cannabis use were adopted by Africa's diverse cultures, such as the Central African versions which were then spread via the slave trade across the Atlantic.

In the 1920s, the cannabis plant was outlawed across the continent mainly due to its psychoactive effects. However, despite being illegal, cannabis continues to be cultivated and consumed across the African continent.

According to historians, smoking pipes were first invented in sub-Saharan Africa as early as 600 BCE. Archaeologists have found pre-Columbian pipes in sites from Lake Chad to Ethiopia, and south to Botswana. Africans invented water pipes which are historically associated with cannabis use, and archaeologists in Ethiopia have found chemical traces of cannabis in pipe bowls dating back to around 1325.



MARKET SIZE

By 2023, the value of Africa's legal cannabis market could be worth over \$US7.1b. The figures in the table are based on the country markets that are profiled in this report (South Africa, Zimbabwe, Lesotho, Nigeria, Morocco, Malawi, Ghana, eSwatini and Zambia). Our research assumes a fully legal and regulated cannabis industry by 2023.

MARKET	2023 (US\$b)
Recreational Cannabis	>6.3
Medicinal Cannabis	>0.8
Total	>7.1

Source: Prohibition Partners



The pharmaceuticals market in Africa is expected to reach a business opportunity of \$45b in 2020, propelled by a convergence of changing economic profiles, rapid urbanisation, increased healthcare spending and investment, and increasing incidence of chronic lifestyle diseases.

According to Nathan Emery, CEO of Precision Cannabis Therapeutics Zimbabwe (PCT - Z), cannabis as a medicine is highly accepted in Southern and Eastern Africa and its medicinal use will spread rapidly if it shows proof of its success for treatment.

The success of other treatments such as African Potato (Hypoxis spp) and Moringa spread quickly despite little real scientific proof of their natural effectiveness (one study published in the Journal of Public Health Africa estimates that more than two-thirds of HIV positive patients in Zimbabwe had used Moringa in the previous six months). Reputation alone was enough to create a massive industry for these and other plant-based medicines. Emery argues that, with enough targeted marketing, cannabis could be hugely successful but only if prices are in line with GDP expenditure on health.

In September 2018, the Institute of Advanced Studies reported that over the last two decades. Africa has seen an increase in chronic health conditions, including hypertension, cardiovascular diseases, stroke, diabetes, cancer, liver and renal diseases, as well as mental health disorders.

The Institute suggested that one explanation behind this increase can be attributed to rising levels of wealth and "lifestyle" choices, in addition to an epidemiological transition. The latter builds on a 1971 model and book,"The Epidemiologic Transition", by author Abdel Omran, who says that the continent is the last to undergo a "transition" to a "modern" epidemiological regime which will unleash the same health health concerns usually seen in Europe or North America.

Currently, cannabis is grown extensively in Lesotho, South Africa, eSwatini and Ghana, but not always legally. From an agricultural perspective, cannabis is easier to grow and more lucrative than other crops such as maize and sugarcane. In Congo for instance, a 100-kilo sack of cannabis can be sold for US\$96-US\$128, far more than the US\$54 that maize can command.

Cannabis farming is an important cash crop in places such as the rural Eastern Cape, for example. In Tanzania, farmers moved into cannabis growing as maize, sugarcane or other food crops on small farms often only yielded US\$25-US\$30 per acre for a season. In comparison, a cannabis harvest could fetch up to US\$200 a year, according to Inter-Press News Agency in 2008. As cannabis cultivation remains illegal in Tanzania, farmers often "hide" their crops in a maize or sugarcane field.

Nigeria could be a key country for medical cannabis due to its heavy reliance on imported pharmaceuticals. According to an UNIDO (United Nations Industrial Development Organisation) survey, the country has about 120 local drug manufacturers and a manufacturing sector capacity severely underutilised at only 40%. Euromonitor reports found that Nigeria was one of the largest personal care and beauty markets in the continent in 2012, valued at \$2b.

In March 2018, Harsheth Kaur Virk (the UN's Project Officer of the Office on Drugs and Crime in Nigeria) urged Nigeria to consider legalising medical cannabis. In September 2018, the Guardian newspaper in Nigeria



reported the findings of a survey of medical oncologists which found that around half would recommend cannabis to their patients despite admitting they felt relatively uninformed about its benefits.

Morocco is described as an "emerging player" in the global pharmaceutical market due to key factors such as its location and political stability. The parliamentary constitutional monarchy boasts both multinational pharmaceutical companies and domestic enterprise operations and manufacturing. The Moroccan government has introduced an ambitious health insurance programme which aims to cover 90% of the population by 2021. Further consolidation of the pharmaceutical and healthcare sector is expected in the near future.



Recreational cannabis is illegal across Africa, apart from in South Africa. Despite this, cannabis is widely cultivated and consumed. In many African countries, such as Egypt, recreational cannabis use dates back to Ancient times. Despite this, recreational cannabis for adult use is illegal. Only South Africa has decriminalised recreational cannabis (as recently as September 2018) but solely for cultivation and consumption at home.

The most comprehensive cannabis survey on Africa was conducted by UNODC and dates back to 2007. It gives an indication of which areas could potentially be the most valuable to businesses and entrepreneurs due to their high rates of cannabis consumption. The survey estimated that there were about 38.2 million cannabis users in 2005, or 7.7% of Africans aged 15-64. The highest consumption rates can be found in West and Central Africa (13%) and in Southern Africa (8.5%). In the 2017 World Drug Report, the region's production of cannabis (herb) was upwards of 38,000 tonnes.



Whilst there are currently a very limited amount of CBD products available in Africa (mainly cannabis oils, capsules and balms in South Africa), the continent boasts a market of ever-increasing potential. South Africa, Lesotho and Zimbabwe are most likely to be the early adopters of CBD consumer products as these nations have introduced licensing programmes for cannabis. These countries have already introduced legislation for medical cannabis products and may present themselves the most obvious markets for further opportunities. For now however, CBD products are still too expensive for the local market as they are not being produced on the continent. In the mid-long term future product glut could trigger a price drop that would see the product filter into the local market.

One of the main reasons CBD consumer goods are set to increase its popularity in Africa is the continent's growing urbanisation. The last thirty years has seen a trend towards increased urbanisation which now means that over 500m Africans live in cities. This represents a positive trend for CBD as urban consumers are wealthier (urban incomes per capita are on average 80% higher than those of countries as a whole, according to Canback Global Income Distribution Database). The spending trend among urbanites is also twice as fast as rural spending and they are more easily reached by brands thanks to their geographical concentration in cities.

However, despite market research showing a rise in wealth, this isn't always the reality in the least developed nations. The supplemental poverty measure (SPM) used by the World Bank would suggest that urban areas actually have higher average poverty. That said, urban populations are easier to market to than those in rural areas, meaning that urban populations are still likely to represent the biggest opportunities for cannabis brands in the mid- to longterm.

The growing sophistication of the alcohol market in Africa could also be seen as an added indication of how CBD products could increase in popularity. In 2016, online news media African Business described one of the most significant changes within the African alcohol industry; the progression from (often illegally) locally brewed drinks to branded wine, spirits and beer products. The article quoted Daniel Mettyear at the International Wine & Spirit Research: "This movement towards safer, better quality, formal alcoholic drinks is being driven by improving disposable incomes and greater involvement and investment in the region." African wine consumption has increased five times faster than the global average, showing total growth of 17.3% from 2008 to 2013, reaching sales of 864m. This figure was forecast to increase by a further 11% by end of 2018.



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LEGISLATION AND REGULATION

For the purposes of this report, we have categorised three tiers of reform as follows.

Tier 1 - Leading the way

Countries that fall into Tier 1 show signs of moving forward with significant changes to the laws and policies on medical and/or recreational cannabis.

It was widely reported that in September 2018, South Africa became the third African country to legalise cannabis after Lesotho (which legalised cannabis cultivation for medical use in June 2017) and Zimbabwe (which legalised the cultivation of cannabis for research or medical use in April 2018). However, while South Africa's legal provisions that previously criminalised the personal and private use of cannabis by adults were overruled, the order has been since been suspended for 24 months until parliament can amend the constitution. This means that there although criminal punishment has been lifted, South Africa's cannabis market is still not regulated.



Tier 2 - Poised to move

Tier 2 countries and regional authorities are those which have active, ongoing reviews of medical and/or recreational cannabis laws and regulations. They are likely to embark on liberalisation within the short term.

Currently, there are active campaigns to change the legal status of cannabis in Malawi, Morocco, Ghana and eSwatini.

Kenya could follow in the paths of Lesotho and South Africa in the near future; there have been several petitions in the Kenyan Parliament requesting that cannabis be legalised.

In Egypt, Deputy Governor of Cairo MP John Talaat proposed a draft law in October 2018, which seeks to decriminalise cannabis, allowing users treatment instead of detainment.

Egypt's Tobacco Merchants 2015, Association "submitted a proposal to the cabinet in order to legalise the trade and use of hash" (a drug made from cannabis,) arguing that the legislation would help "reduce the state budget deficit within a few years through imposing taxes". However, the political reality of present day Egypt makes it unlikely there will be any quick resolution in favour of legalisation.



Tier 3 - Not yet ready for change

Tier 3 countries have historical or unique cultural characteristics that make it unlikely that there will be much, if any, liberalisation of medical and/or recreational cannabis markets in the short term.

For a brief moment in March, 2017, Zambia seemed to be well poised to open for legislation on the use of medical cannabis. The country's Home Affairs Minister, Steven Kampyongo, stated that Zambia's Narcotic Drugs and Psychotropic Substances Act, Cap 96 allows the growing of medical cannabis. However, in May 2017, the country's Minister of Health Dr. Chitalu Chilufya stated he had no intention of issuing any medical cannabis licences. There has not been any change in this stance, and although Zambian law has a provision for medical cannabis, until government ministers reach agreement, all cannabis use is illegal and subject to harsh penalties, often involving imprisonment for up 15 years.







In May 2017 Medi Kingdom formed and registered Medi Kingdom Foundation as a Lesotho non profit to assist orphans and vulnerable children with food, clothes, sports initiatives & medicines.



For more information, including how your can help:

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LEGAL STATUS OF CANNABIS

The following table provides an overview of the legal status of cannabis across Africa.

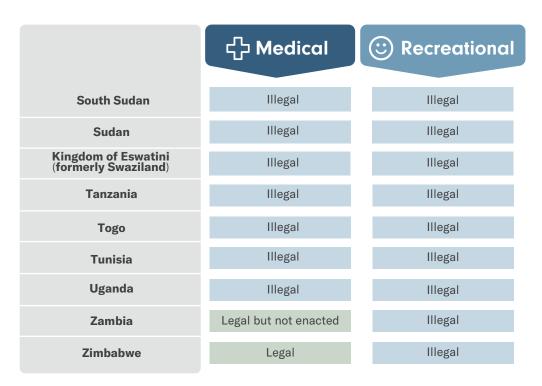
- O A legal market may range from one where it is technically legal but not legally available, legal but with no formal access programme, or it may be fully legal and regulated with a formal access programme.
- An illegal market may refer to illegal, illegal but decriminalised and not regulated, or illegal to consume but legal to cultivate.

Legal status of cannabis across the Africa, 2018

Algeria	Illegal	Illegal
Angola	Illegal	Illegal
Benin	Illegal	Illegal
Botswana	Illegal	Illegal
Burkina Faso	Illegal	Illegal
Burundi	Illegal	Illegal
Cabo Verde	Illegal	Illegal
Cameroon	Illegal	Illegal
Central African Republic	Illegal	Illegal
Chad	Illegal	Illegal
Comoros	Illegal	Illegal
Congo, Dem. Rep.	Illegal	Illegal
Congo, Rep.	Illegal	Illegal
Cote d'Ivoire	Illegal	Illegal
Djibouti	Illegal	Illegal
Equatorial Guinea	Illegal	Illegal
Eritrea	Illegal	Illegal
Ethiopia	Illegal	Illegal
Egypt	Illegal	Illegal but tolerated

	骨 Medical	© Recreational	
Gabon	Illegal	Illegal	
Gambia, The	Illegal	Illegal	
Ghana	Illegal	Illegal	
Guinea	Illegal	Illegal	
Guinea-Bissau	Illegal	Illegal	
Kenya	Illegal	Illegal	
Lesotho	Legal	Illegal	
Liberia	Illegal	Illegal	
Libya	Illegal	Illegal	
Madagascar	Illegal	Illegal	
Malawi	Illegal	Illegal	
Mali	Illegal		
Mauritania	Illegal	Illegal	
Mauritius	Illegal	Illegal	
Morocco	Illegal - but often unenforced	Illegal - but often unenforced	
Mozambique	Illegal	Illegal	
Namibia	Illegal	Illegal	
Niger	Illegal	Illegal	
Nigeria	Illegal	Illegal	
Rwanda	Illegal	Illegal	
Sao Tome and Principe	Illegal	Illegal	
Senegal	Illegal	Illegal	
Seychelles	Illegal	Illegal	
Sierra Leone	Illegal	Illegal	
Somalia	Illegal	Illegal	
South Africa	Legal	Decriminalised for private cultivation and consumption	





^{*} A legal market may range from one where it is technically legal but not legally available, legal but with no formal access programme, or it may be fully legal and regulated with a formal access programme. An illegal market may refer to illegal, illegal but decriminalised and not regulated, or illegal to consume but legal to cultivate. Source: Wikipedia / Prohibition Partners

Cannabis consumption, trade and cultivation is mostly illegal across the African continent, with strict punitive measures:

- Over the last decade, Kenya's anti-narcotics unit has conducted an intense campaign to stop the cultivation and trade of cannabis. Hundreds of hectares of plantations in the Mount Kenya regions of Embu and Meru are bulldozed or set on fire each year. Despite the best efforts of law enforcement, the high demand and lack of alternative sources of income drives farmers to continue to harvest cannabis.
- In Zimbabwe, before the legalisation of medical cannabis, possession, growing, or using cannabis for any reason could result in a 12-year jail sentence.
- In Mauritius, an estimated 75% of prisoners are sentenced for cannabis consumption.
- The penalty for using cannabis in Gabon ranges from six months to two years and a fine.
- It was reported that in Nigeria, SARS or Special Anti-Robbery Squad (a special unit of the police force tasked to bring down drugs) has killed, harassed, and molested those individuals or groups in possession of cannabis.



CBD is illegal in most African countries, but legal if obtained through a licence in Zimbabwe, Lesotho and South Africa only.

In South Africa, cannabis growers may now apply to the local regulatory authority in South Africa (South African Health Products Regulatory Authority or SAHPRA) for a licence, in accordance with the Medicines and Related Substances Act (Medicines Act) which authorises the cultivation, extract and/or testing of cannabis and cannabis resins (ie. CBD) as well as the manufacture, import, export and/or distribution of cannabinoid-containing products.

Both SAPHRA and the Department of Health have considered the benefits and risks cannabinoid-containing products with a view to granting marketing access for medical use.

Lesotho's 2008 Drugs of Abuse Act called for the creation of the Lesotho Narcotics Bureau, which launched in January 2018. In March 2018, it was reported that Lesotho's updated cannabis laws were being put into a draft bill tentatively named the Drugs of Abuse (Cannabis) Regulations.



Once ready, the bill was opened to public comment and then passed to a parliamentary committee. It has now been introduced and approved by parliament. The legislation is similar Zimbabwe, but the laws regarding drugs of abuse and prescription by doctors permit for them to be dispensed (there are no specific references to cannabis).

 In Zimbabwe, a licencing system for the growing of medical cannabis was introduced in April 2018. The new regulation is called the Statutory Instrument 62 of 2018, Dangerous Drugs -Production of Cannabis for Medicinal and Scientific Use Regulations. The regulations permit government to issue five-year licences enabling growers to possess, transport and sell fresh cannabis, cannabis oil, and dried products. At the time of writing, however, there is no regulation in place that enables a resident of Zimbabwe to legally access medical cannabis. Sales are authorized by the new regulations, although all current implementation has focused on the cultivation, processing, and import/export of cannabis and cannabis derivatives for scientific or medical purposes.



THC Regulation

With exception to South Africa, THC products are illegal across Africa. Although TCH is legal for medical and scientific use in Zimbabwe, the regulation is not in place that would enable patients to access it. The legislation regarding any drug of abuse, such as opiates is applied and implied to cannabis. Following the legalisation of CBD in South Africa, Zimbabwe is moving towards legalising THC.

Hemp-growers Endoca say that CBD is legal in South Africa but that consumers are paying premium prices for illegal THC oil on the black market. The price of cannabis oil also varies according to where it is purchased can range from US\$31 per gram up to US\$69+ per gram in South Africa. One gram of cannabis oil is sufficient to medicate 12 to 24 doses.

According to the national government, the legislation of cannabis would make affordable medical cannabis treatments accessible to patients at any state hospital on request. As per the national guidelines, a streamlining of production should make affordable medicine available to those who need it. However, local experts argue that this is dependent on the

prevailing world market and global market access. At the time of writing no licences have been issued for this purpose. However, since 1999, House of Hemp has been growing under special consideration by the government and within a government facility in Durban. It is also reported that the head of the Cannabis Development Council of SA (CDC) has obtained a license, while many others are still pending.

In May 2018, the country's first cannabis oil dispensary, Canna Culture, was launched at a holistic relief wellness and pain management centre in Durban. The dispensary features medical cannabis products sourced from the USA. Prior to obtaining products, patients have to consult a medical professional (a GP, chiropractor or homeopath) at the centre who can then prescribe different strengths of cannabis-infused oils.



The widespread presence of natural cannabis throughout the continent could be a slight hindrance to the entry of synthetic cannabinoids in the (mainly) recreational market. However, due to cannabis remaining illegal in most African countries - the laws pertaining to synthetic cannabinoids are patchy or non-existentthere is a legal loophole for the latter to gain a foothold on the continent.

At the time of writing, very little is available information about the possible presence of synthetic cannabinoids in Africa. The only country where it appears to have gained some popularity, is South Africa where recreational usage has been reported in areas including Pretoria West, Pretoria Gardens, Daspoort and Hercules.

Consumption in this market has been likened to a "craze" and sales of synthetic cannabinoids, which often goes by the name Crazy Coconut" is legal due to the product not falling under the cannabis and cannabis-derivatives law.





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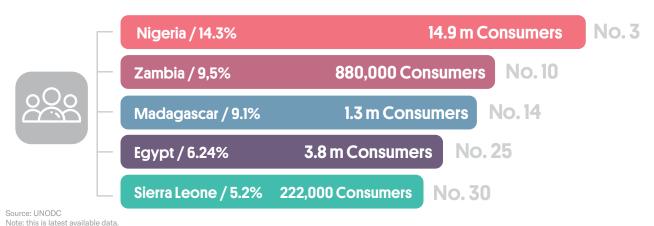


CONSUMER



According to the UNODC data from 2016, Africa is home to five of the world's top thirty countries for cannabis prevalence among adult populations (15-64's):

AFRICAN CANNABIS CONSUMPTION: TOP FIVE COUNTRIES



In South Africa, Jeremy Acton, the leader of the political group Dagga Party of South Africa has argued that cannabis is safer than tobacco and alcohol, and that users should not find themselves discriminated against. Acton has also been reported as saying that 35% of South Africans over the age of 13 have smoked

In Kenya, recreational usage is also high with Patrick ole Ntutu, the Interior Chief Administrative Secretary stating that in 2018, at least 162,863 Kenyan children below the age of 18 years used cannabis in school.

ATTITUDES

Despite cannabis being illegal in the majority of countries, its use is widely tolerated by public. Law enforcement agencies, on the other hand, are bound by national laws and arrests and the burning of cannabis is prevalent.

In South Africa, police confiscated 43 kg of cannabis and arrested the supplier in December 2018. In Malawi, police incinerated five tonnes of hemp in August 2018. Islamic Sharia Law has been implemented across much of the northern and Muslim part of the African continent where its teachings have significant influence over law enforcement. Going forward, Sharia Law is expected to have a continued influence over the eventual legalisation of the market.

However, in most of the African countries, cannabis has been used as both medicine and recreationally for generations.

There are a few religious exceptions where cannabis use is common. In the case of the Rastafarian movement, cannabis consumption is considered a part of life. There are around one million Rastafarians worldwide, but there are no accurate figures of how many live in Africa. About 1,000 Rastafarians live in Ethiopia, but adherents of Rastafarianism can be found in South Africa, the Ivory Coast, Tanzania and Kenya.

According to historians, around three-quarters of Lesotho's inhabitants, the Basotho people, have cultivated cannabis and used it as medicine for over a millennium.

South African traditional healers, or sangomas have used medical cannabis for generations.

CONSUMER GROUPS

The following list provides details of some of the key consumer groups, lobby groups and high profile campaigners in the cannabis industry in Africa. This is by no means an exhaustive list of all groups and campaigners operating in the region.



Country	Group name	Purpose
Kenya	Africa Cannabis Association	Formed in December 2018, The Africa Cannabis Association (ACA) is a lobby group that seeks to put pressure on the Kenyan government through the National Assembly to legalise cannabis owing to the "healthy supplements and environmental conservation" benefits for Kenyans. The association has a membership of 300 youths from Meru, Nyeri and Nairobi. As well as lobbying for the legalisation of cannabis, the protection of farmers from exploitation by buyers upon legalisation, the group is also campaigning to change attitudes towards cannabis in Kenya.
South Africa	Cannabis Development Council of South Africa	The Cannabis Developing Council of South Africa (CDCSA) was formed in 2015, ahead of the imminent legalisation of cannabis in South Africa. The council has been set up to position the Eastern Cape as South Africa's pioneering Cannabis agro-processing hub. It is a self-regulating Cannabis Industry Association which will work in association with the National Hemp Foundation to help regulate and control South Africa's cannabis industry.
South Africa	National Hemp Foundation	The National Hemp Foundation (NHF) was launched in 2001. NHF is composed of publicand private-sector players who work to coordinate the emerging hemp industry. Dr Thandeka Kunene has been the national coordinator of the NHF since 2007 and has overseen all commercial incubation research trials since 2010.
South Africa	The Dagga Couple	A campaign group founded by Julian Stobbs and Myrtle Clarke following their arrests for possession and dealing cannabis in 2010. In 2017, the couple sued the seven sectors of the South African government that maintained and enforced cannabis prohibition resulting in the much publicised "Trial of the Plant".
South Africa	Fields Of Green For All	A pro-legalisation not-for-profit organisation that seeks to drive a constructive conversation around the legalisation of cannabis use. Founded by Julian Stobbs (see the Dagga Couple above).
Zimbabwe	Zimbabwe Industrial Hemp Trust	A lobbying organisation founded in 2015 by Dr Zorodzai Maroveke, ZIHT is involved the in research and development towards the the legal inclusion of industrial hemp in Zimbabwe. It is pushing for domestic research and clinical trials of medical cannabis in a bid to create competitive advantages for Zimbabwe within the global cannabis market.



Country	Group name	Purpose
West Africa	The West Africa Drug Policy Network	A coalition of over 600 civil society organisations in 17 West African countries who share the goal of promoting evidence-based drug policy reform in the region. The organisation works by advocating and building the capacity of local chief strategy officers (CSOs) to address the impact of drug markets on democracy, governance, human security, human rights and public health.
South Africa	Doctors For Life International	Doctors for Life is a non-governmental and registered not-for-profit organisation made up of doctors, specialists, dentists, veterinary surgeons, and professors of medicine spanning a range of medical faculties across South Africa and abroad. The group has lobbied against the legalisation of cannabis in South Africa on the grounds that there is not yet enough evidence to support the health benefits of the plant.
South Africa	The Clear Option	A drug-testing company which launched in 2007 as the Anti-Drug Alliance. In 2017 it changed its name and vision - the company no longer uses terms like "drug abuse" but "substance use disorder". Its website states: "We believe in advocating for better drug laws. We believe in using all sorts of media to educate kids and adults about the realities of drugs and drug use and misuse. Plants like cannabis are medicine, and if it works to help you get off crystal or heroin, we think you should use it. It's not the gateway drug. It's the exit drug."
Nigeria	Omoyele Sowore	Omoyele Sowore is presidential candidate for African Action Congress (AAC) and publisher of the online news outlet Sahara Reporters. Sowore has been quoted in local media promising to "make Nigeria a cannabis exporting hub if elected president".
Ghana	Rastafarian Council of Ghana	The national council of Rastafari organisations in Ghana. The council aims to foster the socio-economic and spiritual development of Rastafari people in Ghana. It is appealing to the Ghana government for the legalisation of cannabis.
Ghana	Dr. Akwasi Osei	Dr. Akwasi Osei, the Chief Executive of the country's Mental Health Authority is against legalising cannabis. Osei argues that if the current ban on the use of cannabis is lifted, Ghana will record alarming cases of mental disorders. He has also appealed to the government to pass the legislative instrument to back Mental Health Act 846 and establish a mental health levy.

Country	Group name	Purpose
Ghana	Professor Alex Dodoo	Dr. Kwesi Aning, Director, Faculty of Academic Affairs & Research at the Kofi Annan International Peace-Keeping Centre (KAIPC) campaigns against legalising cannabis and has stated that cannabis should not be legalised in Ghana: "In almost every single country where there's cannabis production and transformation of its leaves into oil, those countries have had several problems. It's not just about cannabis as a recreational drug, we don't have the resources to deal with those who get hooked onto it. Normally, cannabis is just the beginning before you get onto something else."
Ghana	Nana Kwaku Agyemang	Sports Analyst and former Okwawu United Coach, Nana Kwaku Agyemang has appealed to the Ghanaian government to soften its stance on cannabis and grant him a license to start a plantation. Agyemang has stated in interviews: "I want a licence where I can grow cannabis legitimately and export it to other countries who have a proper research and development department that can turn this into serious medicine to help us all and generate revenue for government through taxes."

Source: Prohibition Partners



Very few studies have previously been undertaken on cannabis in the region - those that exist tend to focus on South Africa and Morocco. This gap in the pool of knowledge may be filled once further African nations work towards legitimising or decriminalising cannabis.

Africa

UNODC's World Drug Report, released in 2015, provides an overview of the highest cannabis prevalence rates among Western Central Africa, North America, and Oceania. The report states that there are large variations in the recorded instances of cannabis use within WHO regions. This could be due to difficulties in collecting comparable data on illicit drug use, the lack of drugs surveys in some countries, and the varying frequency in which such national surveys are conducted. The survey's African country examples include South Africa, Kenya and Morocco.

In 2016, the WHO produced a general report on the health and social effects of non-medical cannabis use. The report provided an overview of the effects of cannabis not classed by country. Topics covered included cannabis substance profiles and its health impact, the neurobiology of cannabis use, the short-term effects of cannabis, the effects of long-term cannabis use and noncommunicable diseases, as well as prevention and treatment.

South Africa

In January 2016, the Alcohol, Tobacco and Other Drug Research Unit (ATODRU) of the South African Medical Research Council (SAMRC) produced a policy brief which aimed to evaluate some results of local research. The report sought to explain results of available evidence to be used in South Africa's ongoing discussions on medical cannabis. The review found "moderate quality" evidence in support of the use of medical cannabis for chronic pain, chemotherapy-induced nausea (CINV), vomiting, and multiple sclerosis.

SAMRC also conducted a workshop in February 2017



on opportunities for conducting local research and clinical trials of medical cannabis to inform local policy-making decisions. Suggestions from this workshop included:

- Conduct a national, multi-site clinical trial of cannabinoids:
- Support exploratory research to quantify the prevalence and qualify the current use of extracts (e.g. oils) in the community to alleviate pain and other symptoms;
- Conduct qualitative evaluation(s) of possible barriers and facilitators to GPs prescribing medical cannabis.

Dr Sean Chetty, Deputy Head of Anesthesiology and Critical Care at the University of Stellenbosch has stated that legalising medical cannabis in South Africa is opening up a raft of research opportunities for the medical sector.

In February 2018, Dr Chetty advocated exploring the possible applications that THC and CBD may have in treating and managing the symptoms of certain conditions and stressed the importance of a change in mindset on the part of the medical community so that in-depth studies can take place.

Dr Chetty's views were echoed by Wouter Lombard (brand manager of Neuropsychiatry at pharmaceutical company Cipla) who agreed that the opportunity to research how medical cannabis can be used in the medical field, should be undertaken as soon as possible.

Morocco

- Studies carried out by the Mediterranean School Survey Project on Alcohol and Other Drugs (conducted in 2009 and 2013) among 15-17 year olds in Morocco, revealed that substance usage began at an early age. Similarly, the 2010 and 2016 Global School Health Surveys highlighted an increasing prevalence of substance use (notably tobacco and cannabis) among adolescents aged 13-15 years.
- Other studies conducted among 11- 23-year-old public middle and high school students (North Central Region of Morocco) reported that 9.3% of students use psychoactive substances with cannabis (8.1%) being the most prevalent, followed by alcohol (4.3%).





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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 and 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



Investment/Development

- Medi Kingdom, Africa's first legal cannabis licence holder, has been at the forefront of the continent's cannabis industry. The company cultivated various medical cannabis strains under their research and development licence and is now seeking capital market funding. The company exported just 825 grams of cannabis in 2018, but expects to produce one tonne of medical cannabis per month by the end of 2019. The product is destined for the export market until medicinal cannabis is legalised in Lesotho, which is anticipated later in 2019.
- In March 2018, Canadian company Supreme invested US\$10m in a 10% stake in Medigrow Lesotho.
- Other Canadian cannabis firms who have invested in Lesotho's cannabis industry include Aphria Inc which has an off-take agreement with Verve Dynamics Inc.

Import/Export

o In February 2018, Canadian firm Tilray began exporting medical cannabis extract to South Africa in partnership with local biotechnology firm BGM Pharmaceuticals. The products will be distributed nationwide to pharmacies to patients who qualify.

Joint Venture/M&A/ Market Entrant

- In May 2018, Canadian company Canopy Growth Corporation announced the acquisition of Daddy Cann Lesotho (trading as "Highlands"). Highlands holds a license to cultivate, manufacture, supply, hold, import, export and transport cannabis and its resin.
- In February 2018, Medi Kingdom, announced that it was seeking international investment for the construction of a 35,000 sq m export facility to meet the growing international medical cannabis export



demand. Medi Kingdom Ltd aims to build the first state of the the art cGMP cultivation medical cannabis export facility in Lesotho.

- In June 2018, Canadian cannabis company Aphria formed a US\$3.13m joint venture with the Verve Group. The new venture, known as CannInvest Africa, will supply medical cannabis extracts to African countries where it is legalised, as well as to Aphria's existing markets worldwide.
- In late 2018, Toronto-based Nuuvera signed an agreement with Verve for three tonnes of purified THC and CBD extracts each year. Nuuvera was since purchased by Aphria in a US\$425m deal.
- In November 2018, it was announced that South African beverage group Distell will distribute and market a cannabis-infused beer backed by RCL Foods CEO Miles Dally and Spar CEO Graham O'Connor. The beer is manufactured by craft company Poison City Brewer. Poison City Brewing's co-founder, Graeme Bird, has stated that demand for the Durban Poison Cannabis Lager "had overwhelmingly exceeded capacity", creating a need to partner up with Distell to increase distribution.

Licensing

- A consortium, NIRCAN ZW Ltd, a subsidiary of the NIRCOM A.S.I.G, applied to the Zimbabwe government in April 2018 for a Medical Cannabis Cultivation and Growing Licence for Export.
- The Malawi government's first authorisation to grow and process industrial hemp was awarded to Invegrow Limited, established in 2013. Invegrow's website states that "trials with the Ministry of Agriculture began in October 2015, with each certified imported industrial hemp variety undergoing three consecutive trials. The trials will be finalised in 2019 with the aim to cultivate industrial hemp commercially that year".
- In March 2019, Precision Cannabis Therapeutics Zimbabwe received licence approval making it the first company in the country to be permitted to commercially product medicinal cannabis. Licence approval is subject to payment of US\$46,000.

Company Activity

The African nations who have legalised cannabis, or are en route to formulating new legislation, seem to focus on cannabis exports. At present, only South Africa seems to offer cannabis-based products to local consumers:

- Cannabis Grow Workshop in Cape Town organised its inaugural cannabis growing workshop in November 2018. Topics covered at the event included the basics of growing cannabis organically, soil culture and how to cultivate the seeds.
- In October 2018, Durban-based craft beer company, Poison City Brewing launched South Africa's first cannabis beer. Billed as a light premium lager, the 4% beer does not contain THC but uses hemp oil as flavouring. The beer will be distributed by South African beverage company Distell to large alcohol outlets and restaurants in Durban and Johannesburg. Operations director Andre Schubert said that the beer is popular: "There are many restaurants serving it, mostly in Johannesburg and Durban."
- Cannabis advocate Connor Davis released a hemp-infused gin called Monks Mary Jane Hemp-infused Gin through his family distillery, Monk's Gin, in June 2018. Available for consumers through the online South African retailer yuppiechef.com for US\$35 (R499).
- In December 2018, Africa's first ever Cannabis Expo took place in Pretoria, South Africa. Further cannabis expos are scheduled in Cape Town (April 2019) and Durban (June 2019).

Medi Kingdom was recently approved by the Australian Office of Drug Control (ODC) to allow the supply of Good Agricultural Practice (GAP) cultivated medical cannabis flowers to service an off take awarded by an Australian Stock Exchange (ASX) listed cannabis pharma. They are currently engaged in talks with several other European clients to supply GAP cultivated cannabis that will meet stringent EU regulations. Medi Kingdom initially expect to announce a joint venture operation with a licensed producer in one EU country. The company also also aims to finalise a potentially large agreement to supply another established and fully licensed pharma manufacturing company based in another EU country.



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SOUTH AFRICA

MARKET OVERVIEW

Population (m)	56.7
GDP (US\$b)	349.4
Ruling Government Party	African National Congress
Party Stance on Cannabis	Decriminalised for private use
Total Healthcare Expenditure (US\$b)	28.7
Total Beauty & Wellbeing Expenditure (US\$b)	\$2.1 (2015)
Alcohol Consumption (Litres Per Capita Per Year)	9.3
Prevalence of Tobacco Users (%)	20.3
Prevalence of Cannabis Users (m)	1.4
Average Cost Per Gram of Cannabis (US\$)	8.5

South Africa boasts one of Africa's largest economies and is also a major producer of cannabis with a UN report estimating production of about 2,500 tonnes a year. The country has been regarded as ideal for large-scale cannabis cultivation. Despite concern expressed by medical authorities on the health risks of cannabis, the South African government has published guidelines for medical cannabis which are expected to result in legal licenses being made businesses and entrepreneurs. available to Nonetheless, public access to medicinal cannabis will be largely dependent on the outcome of clinical trials.

Source: World Bank/ WHO/ UNODC/ Prohibition Partners



It had been expected that South Africa would become the first country on the continent to legalise cannabis when in 2013, IFP MP Mario Oriani-Ambrosini, terminally-ill with stage-four lung cancer tabled a private member's Medical Innovation Bill in the South African Parliament. Oriani-Ambrosini wanted to legalise cannabis for medical uses and commercial gain. He explained that he was using illegal THC oil to cope with pain caused by cancer.

Oriani-Ambrosini stated: "This Bill wants to remove the problems created by the law, creating a space in which doctors can follow the dictates of their professional experience in cases where there is nothing else better to be given. It further aims to legalise treatments that would otherwise not be allowed and will shield doctors from liability." However, Mario Oriani-Ambrosini died in 2014, nearly three years before the ruling on private cannabis use.

In September 2018, the Constitutional Court legalised the growing of cannabis for private purposes and the use of cannabis for adults in private places. The court ruled a previous law which had banned cannabis as unconstitutional. However, the Constitutional Court ruling failed to define 'private use' of cannabis. It was unclear from the court ruling whether privacy referred to the place in which cannabis was consumed, or whether the focus was on personal use for medicinal purposes. A further restriction placed by the court was that the patient must personally cultivate cannabis in order for it to be legal to use or posses.

The quantity of cannabis an individual can grow or use in private has not yet been specified, nor has the definition of 'private'. Permissible quantities are expected to be announced soon.

In his judgement, Deputy Chief Justice Raymond Zondo said:

"It will not be a criminal offence for an adult person to use or be in possession of cannabis in private for his or her personal consumption."

The ruling comes after a provincial court decision made in 2018 in which cannabis for private use was legalised in Western Cape.

The South African Parliament has until September 2020 to redefine certain sections of the law in order to decriminalise private cannabis usage.

Until the law is formally changed, cannabis remains illegal.

The legislation of the cultivation of medical cannabis at home is being developed by the Department of Health and the South African Health Products Regulatory Authority (SAHPRA). Sections 21 and 22A (9) (a) (i) of the Medicines Act, authorised GPs can request access and permission to prescribe unregistered medication from SAHPRA. The courts deemed section 22A(9)(i) unconstitutional and legislation is currently being amended to reflect the decriminalisation of personal cannabis cultivation, possession and use. The Medicines Act also allows SAHPRA to issue licences for the manufacture of either a medicine or a scheduled substance (Active Pharmaceutical Ingredient/API).

In February 2018, the SAHPRA board replaced the Medicines Control Council (MCC) as the latter was said to be beset by delays in the approvals process for new medicines as well as medical trials. SAHPRA plans to speed up proceedings by initially using external experts to evaluate applications, then progressively increase the capacity of its in-house team to oversee the registration of new medicines and clinical trial evaluations.

Since it remains illegal to use cannabis in public in South Africa, and to sell or supply it, this was evident at Africa's first ever cannabis expo. Held over four-days in December 2018, no cannabis products were featured or displayed.

History

South African indigenous Khoisan and Bantu peoples used cannabis before European settlers arrived in the Cape in 1652. The plant was also traditionally used by the Basotho to help with childbirth. The Dutch East India Company tried to establish a cannabis sales monopoly, and therefore prohibited cannabis cultivation by Cape settlers from 1680. There was, however, little profit from this due to cannabis growing readily in the wild, and the prohibition was lifted in 1700.

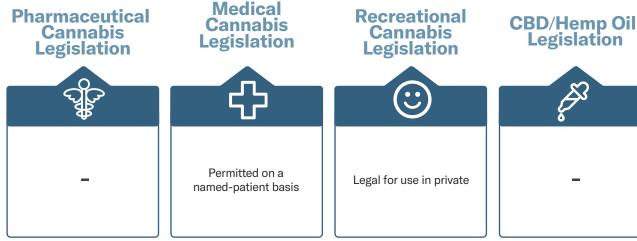
In 1891, the Cape Colony prohibited cannabis under Act 34, and cannabis trade was outlawed by the Free State in 1903. In 1908, Natal province began to regulate the sale of cannabis, whilst in the Transvaal, cannabis was sold freely by storekeepers to miners. During the 18th and early 19th centuries, white farmers grew cannabis, although rarely used it themselves. This cultivation fell out of favour later in the 19th



century, and by 1921, ac"moral panic" surrounding the use of cannabis ensued. In 1922, an amended Customs and Excises Duty Act, regulation 14, prohibited the

cultivation, possession, sale, and use of cannabis. By 1928, cannabis was wholly criminalised in South

REGULATORY ENVIRONMENT



Source: Prohibition Partners

South Africa's current framework allows for the use of medical cannabis, under strict regulations which include requesting permission from the Medical Control Council (MCC) for use in certain exceptional circumstances by registered GPs. The published medical cannabis guidelines for medical cannabis have paved the way for legal licences. However, medical authorities have warned that potential health risks connected with cannabis may not be well understood, and public access will likely depend on the outcomes of clinical trials.

In 2018, A research-team supported by the South African Medical Research Council (SAMRC) evaluated the evidence for a cannabis trial for pain management related to HIV associated sensory neuropathy (HIV-SN). The team concluded that clinical equipoise (the ethical basis for medical research that involves assigning patients to different treatment arms) exists for a cannabis spray trial for the management of painful HIV-SN.

SAMRC will be releasing a Request for Applications (RFA) from groups interested in participating in trials in due course. Once the guidelines are approved, the MCC will develop the licence application for growing medical cannabis. The MCC will work closely with the department of agriculture since cannabis is considered a foreign plant whose impact on in South Africa needs to be studied.

The MCC has stated that licence applications to manufacture an active pharmaceutical ingredient (an API) will cost US\$900. A cannabis cultivation licence fee is likely to have similar costs.

In November 2017, the Medicines Control Council of South Africa initially released guidelines and cultivating, framework processing for manufacturing of medical cannabis. With effect from June 1 2017, the Medicines and Related Substances Amendment Act, No 72 of 2008, came into force by proclamation by the country's President Jacob Zuma.

The Amendment Act is significant as it fundamentally changed South Africa's medicines regulatory regime and altered the Medicines and Related Substances Act, No 101 of 1965, as amended (the Medicines Act). This Act was first published in February 2018, then modified before it finally came into force on June 1, 2018.

The Medicines and Related Substances Act. 1965 (Act. 101 of 1965), herein referred to as the Medicines Act, mandates the Medicines Control Council (MCC):

 To regulate the availability of quality medicines which are safe and efficacious for their intended use. This mandate requires the MCC to apply standards for the manufacture, distribution, sale and marketing of medicines, medical devices and Scheduled substances.



- In considering the availability of any medicine for human or animal use, the MCC assesses the balance between its benefits and risks. In terms of Sections 21 and 22A(9)(a)(i) of the Medicines Act, authorised practitioners can apply to the MCC for permission to access and prescribe unregistered medicines when intended to treat individual patients.
- Cannabis-containing products intended for medicinal purposes may thus be made available, in exceptional circumstances, to specific patients under medical supervision. Authorisation is dependent on the submission of an appropriate dosage regimen, an acceptable justification for the proposed use, and regular reporting to the MCC.
- To date, patient access to unregistered cannabis or cannabinoid-containing medicines has been enabled by the MCC through importation of these products. In February 2018, Canadian producer Tilray announced its partnership with South African BGM Pharmaceuticals to export medical cannabis products to South Africa. These are described as "a GMP-manufactured, full-spectrum oral solution containing THC and CBD". The product is available to qualified patients under South Africa's named patient program.
- In order to ensure the availability of standardised quality-assured locally grown cannabis for the manufacture of suitable pharmaceutical products, the Department of Health and the MCC may permit the cultivation of cannabis solely for medicinal and research purposes.
- This framework, developed in consultation with the Department of Agriculture, Forestry and Fisheries (DAFF), is intended to control the cultivation, production and manufacturing of cannabis-containing products intended for medicinal use in South Africa.
- Licensed domestic cultivation of cannabis for medicinal use is aimed at ensuring the sufficient local supply for medical, scientific and clinical research purposes and the implementation of control measures necessary to prevent diversion and misuse and ensure patient safety. This guideline provides information relating to the standards required for the cultivation and processing of cannabis as a herbal starting material. The guideline also identifies the critical production steps that need to be taken to ensure a product of reliable and reproducible quality.

South Africa's Anti-Drug Alliance has been quoted as stating that public and professional awareness needs to be improved around medical cannabis. According to Krithi Thaver, a founding member of the fledgling Cannabis Development Council of South Africa, the government has recognised the benefits of medical cannabis but has much work to do in this area. The draft regulations released earlier in 2018 were a failure because they had been copied from the Dutch model and were not applied properly at the local level, said Thaver: "They were copied off a Dutch model, which failed. You can't take a First World model and copy and paste it on to a Third World country; it doesn't

A non-profit organisation, "Fields Of Green For All", acts as a watchdog and whistleblower on any attempt to impose control on the South African cannabis market. The name of the organisation has been chosen to remind members that they are challenging ancient prohibition laws to benefit every South African. Julian Stobbs, director of social activism for Fields of Green for All has been quoted as stating that they have a lot of work to do to make sure the cannabis legalisation benefits all citizens, not just the government or a few seriously ill patients who can afford scientifically grown medical cannabis.

Licences and Availability

There is no limit to the number of cannabis production permits that can be issued, but quotas will be restricted to those set out by the International Narcotics Drug Control Board (INCB).

SAHPRA scope has expanded to include not just medicines, but also medical devices including in vitro diagnostics, and aspects of radiation control.

SAPHRA also collaborated with the Department of Agriculture, Forestry and Fisheries (DAFF) and published guidelines to promote the local growing and production of cannabis for medical and research purposes. The guidelines contains requirements which relate to

- Personnel
- Security
- Buildings and infrastructure
- Equipment
- Storage and distribution
- Manufacturing
- Record keeping
- Reporting



This guidelines also addresses the requirements of obtaining a necessary licence under Section 22C(1)(b) of the Medicines Act in order to:

- cultivate and produce cannabis and cannabis
- o extract and test cannabis, cannabis resin or cannabinoids;
- manufacture a cannabis-containing or

- cannabinoid-containing medicine;
- import a cannabis-containing medicine;
- export a cannabis-containing medicine; or distribute a cannabis-containing medicine.

In addition to the licence application to SAHPRA, applicants wishing to manufacture products for therapeutic purposes containing THC must also apply to the director general of health for a permit under Section 22A(9)(a)(i) of the Medicines Act.

HEALTHCARE ANALYSIS



Source: Quantec / WHO/ INCB/ Prohibition Partners

According to the WHO, South Africa's public health services are divided into primary, secondary and tertiary sectors through health facilities that are located in and managed by provincial health departments. The provincial departments are the direct employers of the country's health workforce while the National Ministry of Health is responsible for policy development and coordination.

South Africa's constitution guarantees every citizen access to health services (section 27 of the Bill of Rights). Everyone can use both public and private health services with private healthcare dependent on an individual's ability to pay. The private health sector provides services through individual practitioners who run private surgeries. Another option is private hospitals, most of these are located in urban centres. At the time of writing, more than 80% of South Africans currently lack private medical insurance

South Africa has long-term plans to overhaul its healthcare system by implementing mandatory national insurance and reducing the cost of private

care. In June 2018, a draft law was published by the government which proposes to set up a national health-insurance fund which will purchase services from accredited public and private facilities. Legislators hope this will, in turn, provide care for members. Health Minister Aaron registered Motsoaledi stated that taxpayer contributions would be compulsory to fund the proposed new system.

According to the draft law, a committee answering to the National Health Insurance (NHI) fund board and the Health Minister would set the prices private facilities could charge on an annual basis. An advisory panel would decide which services should be offered. The government plans to fully implement the system by 2026.

South Africa's pharmaceutical imports accounted for 85% of the country's total pharmaceutical trade in 2015. The total expenditure was US\$3b, with 86.7% attributable to the private healthcare market and 13.3% to the public sector.



The main sources of pharmaceutical imports to the country are Asia and Europe. At a pharmaceutical investment seminar in India in June 2018, South Africa's Trade and Industry Deputy Minister, Bulelani Magwanishe, stated that by 2019, South African exports of pharmaceutical products are expected to reach US\$526m. Before being taken over by the MCC licensed domestic cultivation of medical cannabis aimed at ensuring sufficient local supply for medical, scientific and clinical research purposes. Conditions considered for medical cannabis are:

- HIV/AIDS,
- severe chronic pain,
- o severe muscle spasms, vomiting or wasting because of cancer,
- o severe seizures in patients with epilepsy where other treatment options have failed or have intolerable side effects.

At present, the use of cannabis as a medicine has not been rigorously tested in South Africa due to production restrictions and other regulations. Access to cannabis and cannabinoid-containing medicine is available in the country on a named-patient basis only. The physician is required to apply to the MCC directly on behalf of the patient. It is further recommended that the medication prescribed is registered under an aligned regulatory body such as the US Food and Drug Administration (US FDA), Australian Therapeutic Goods Administration (TGA), Health Canada, The European Medicines Agency (EMA), or Swissmedic.

Media reports stated that the MCC registered one medical cannabis product which was listed as a Schedule 6 product. This classed it as legal to possess provided that it has been obtained with a prescription from a GP.

Reports also indicated that the MCC issued authorisation for the use of an unregistered (and hitherto unknown) medical cannabis medicine. These reports were categorically rejected by SAHPRA in March 2017. SAHPRA issued this statement: "The MCC wishes to advise that this is not the case and that no licences or permits are being issued to authorise the manufacture, harvesting, growing or cultivation of cannabis for purposes of medicinal use. The MCC is working towards implementing a detailed regulatory framework to enable applications for licences and permits for the cultivation, production manufacture of medicinal cannabis products."

While the state continues with its measured processes for medical cannabis to be made freely available to South Africans, the country's black market is thriving. The long lead time required by the Medicines Control Council and the Department of Health to legalise medical cannabis is one factor attributed to flourishing of the black market.

COMMERCIAL OPPORTUNITIES

Forecast value of South African cannabis market, by sector, 2023



Source: Prohibition Partners



According to figures from the UN, South Africa produces around 2,500 tonnes of cannabis per year. Following the decision to legalise cannabis in the country, a fledgling industry capitalising on the various uses for the plant is noticeable.

In 1999, the Department of Health issued legal permits to the House of Hemp to conduct research on the health benefits of pharmaceutical grade CBD and other cannabinoids. Based out of Dube Tradeport at King Shaka International Airport, the company was established in 1999 as part of the National Hemp Foundation project which was formed to conduct legal research into hemp fibre and seeds, fibre production, and hemp CBD.

In May 2018, South Africa's first medical cannabis dispensary opened in Durban. One of the centre's founder creators is Krithi Thaver, the founder of Canna Culture and chair of the KwaZulu-Natal branch of the Cannabis Development Council of South Africa. The Holistic Relief Wellness and Pain Management Centre is said to combine traditional medical practices in chiropractics, physiotherapy, diseases and illnesses (acute and chronic) to treat the whole body.

Patients will see a doctor, chiropractor or traditional healer who will consult and prescribe them different strengths oils infused with cannabis and ayurvedic ingredients.

The Holistic Relief Wellness and Pain Management Centre states that the aim of the dispensary is to set a benchmark for soon-to-be-legalised cannabis and described all its practitioners as having extensively researched the medical uses of cannabis extensively.

Local Expert Analysis

Julian Stobbs, one of the founding members of The Dagga Couple

What developments are expected for cannabis legislation in 2019?

Since the September 2018 Constitutional Court decriminalised judgement that de-facto possession and cultivation of cannabis in a 'private space', a number of developments have evolved. The police have really backed off. The judgement ordered them to. As of now, the onus is on the arresting officer to prove any private cultivation is for the purposes of "dealing". Any arrests that have we been made aware

of as a Cannabis Non Profit Company with an arrest helpline, post judgement, have resulted in bail and a date to appear in court. Nobody has been detained overnight or for the weekend.

The seed banks we know are now really low on stock because everyone has started to cultivate cannabis on their private properties. Grow guides are springing up online, the indoor grow shops are flourishing and the online accessories head shops are all competing for their new found freedoms.

Seminars are becoming more and more prevalent with visiting international keynote experts on all things cannabis. Law firms are looking to the inevitability in a change of labour laws, however a lot of employers have reiterated by letter to their employees that there is still a zero tolerance for illegal drugs in their workplace. Estate agents and landlords have all voiced an opinion about what is, and is not a "private space". As far as any developments are concerned, the court gave the government 24 months in which to re-write the relevant sections of the 1992 Drugs & Drug Trafficking Act. Public participation is built into the process and we expect a lively debate.

What are the barriers and stimulus to any legislative change?

As with all drug debates, stigma will be a barrier to overcome. The prohibition of cannabis in South Africa has been enthusiastically enforced in the country for a 100 years and the propaganda surrounding the plant had been extremely effective. South Africa is a conservative country, as is most of Africa, but there is a huge cannabis culture behind the push for full legalisation.

There are already many interested parties driving the legalisation agenda, from civil society, to trade unions and healers associations to ensure the informal sector is able to enter the cannabis sector and not fall prey to a multinational company with a government license as we are witnessing in Canada.

Could South Africa develop a strong cannabis industry in the event of legalisation and how?

It's all down to the numbers. The WHO estimates South Africa to be the third largest producer in the world and we have an estimated 900,000 cannabis farmers, not to mention the 350,000 traditional healers already growing. The unregulated market is



organised and hundreds of years old, the rural fields stretch for kilometres in every direction and if this unregulated market were legitimised, South Africa would become a powerhouse green economy with one of the most conducive growing climates in the world.

What is your five year forecast for the cannabis system in Africa and why?

It all depends on how much control the government attempts to write into legalisation. September 2020 is the deadline for the legislators to re-write the offending parts of the drug laws, and if they don't come up with legalisation that empowers everyone, then we are scheduled to go back to the Trial Of The Plant 6 months after the deadline in March 2021.

We envisage more and more African countries attempting to award licenses for medical research, but we also envisage it will be to the detriment to the man on the street, as in the case of Lesotho where a few wealthy companies have licenses.





ZIMBABWE

MARKET OVERVIEW

Population (m)	16.5
GDP (US\$b)	17.8
Ruling Government Party	Zimbabwe African National Union - Patriotic Front, Movement for Democratic Change
Party Stance on Cannabis	Legal
Total Healthcare Expenditure (US\$b)	1.8
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	4.8
Prevalence of Tobacco Users (%)	15.8
Prevalence of Cannabis Users (m)	2.2*
Average Cost Per Gram of Cannabis (US\$)	1

^{*} Assumes regional average prevalence rate Source: World Bank/ WHO/ UNODC/ Prohibition Partners



In April 2018, Zimbabwe became the second African country to legalise the cultivation of medical cannabis. Zimbabwe's government announced a new law that would allow farmers to grow and sell cannabis for medical and research purposes. Former Health and Child Care Minister Dr David Parirenyatwa released new policies under the Statutory Instrument 62 of 2018 (Dangerous Drugs - Production of Cannabis for Medicinal and Scientific Use Regulations). According to the new laws, Zimbabwean businesses and individuals are now allowed to "apply for licences in growing cannabis specifically for medical and research."



Some of the most most important aspects of the licences include.

They are renewable

Licenses last a maximum of five years

Allow growers to own, sell, and transport cannabis in dried and oil forms.

In May 2018, the Zimbabwe government put plans to issue cannabis cultivation licences on hold, citing the need to first carry out feasibility studies before proceeding.

According to the Deputy Finance Minister Terence Mukupe, the Medicines Control Authority of Zimbabwe (MCAZ) had received more than 350 applications from local and foreign growers since the government published new regulations. However, MCAZ had to put licensing on hold until it was clear how it would be implemented in practice.

The news that the government were to issue licences for cannabis farming received mixed reactions from

locals as many incorrectly interpreted it as a general legalisation of cannabis. Unlicensed cannabis growing and possession remains a crime in Zimbabwe and can result in a 12-year prison sentence.

In September 2018, former minister of Health and Child Care, David Parirenyatwa, told a Zimbabwe Medical Association conference that the government plans to establish a research institute that will position the country as a hub for medical cannabis. Zimbabwe's Medical Research Council, the regulator of medical research, states that as cannabis is a new area the organisation needs to develop a framework for acceptable projects.

As of February 2019, more than 200 foreign and local investors had expressed an interest in becoming producers of medicinal cannabis, the Zimbabwean government has approved 37 of them.

Proposals will go through a rigorous approval process and scientists will need to purchase a licence to conduct cannabis experiments. However, the high costs of licences coupled with uncertainty regarding the Zimbabwean government's investment in cannabis science have curtailed any developments.

Zorodzai Maroveke, founder and CEO of the Zimbabwe Industrial Hemp Trust, a lobbying organisation argues that there is a need for Zimbabwe to undertake research and data gathering as well as running clinical trials if it is to secure any competitive advantage in the cannabis industry.

REGULATORY ENVIRONMENT

Pharmaceutical Cannabis Legislation



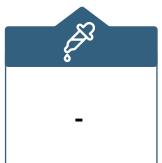












It is legal to cultivate medical cannabis

Source: Prohibition Partners



In Zimbabwe, cannabis regulation governs the entire plant (any of the genus cannabis), and its derivatives, with three exceptions:

- 1. Fiber for use in manufacturing (canvas, etc),
- 2. Crushed seeds that cannot germinate, and
- 3. Fixed oil from the seed.

Cannabis has been classed as illegal in Zimbabwe since 1955, under the country's Dangerous Drugs Act, CAP 15:02 and through Act 28/1955 (Federal), Act 25/1956 (Federal), Act 61/1971, Act 18/1989 (s. 26), Act 3/1995; Act 1/1996, Act 22/2001 and Act R.G.N. 685/1963. Effectively, these acts have prohibited import. export, production, possession, distribution and use of cannabis.

Zimbabwe's new medical cannabis policy aims to provide national researchers with the ability to conduct their own clinical trials and investigate potentially new therapies. However, there are some hindrances to the development such as high costs and uncertainty around the government's investment in cannabis science.

- An application for the issue of a licence in terms of section 27 of the Act shall be made to the Minister, in duplicate and shall be accompanied by the appropriate fee and three copies of a plan of the site proposed to be licensed which shall comply with the requirement specified in these regulations;
- A licence to cultivate cannabis costs \$40,000;
- Growers will also be required to pay an annual return fee of \$15,000;
- An application to renew a producer's licence will cost \$20,000;
- A licence to conduct cannabis research is \$5,000;
- An application for renewal of a licence to conduct cannabis research will cost \$2,500;
- An application for variation or amendment of a licence, would also cost \$2,500; import and export licence applications as well as inspection licences have now been folded into the license fee:
- Applicants are required to state plans for the growing site along with quantity for production and selling as well as production period. The health minister has the prerogative to reject a licence if it causes risks in terms of public health and security. The producer licence will be valid for five years and

may be renewed thereafter before it expires.

According to regulations, individual producers must be Zimbabwean citizens or have proof of residency or obtain a waiver from the minister. Companies must produce proof of incorporation in Zimbabwe. Producers will submit to routine audits by the health ministry. Applications must also contain information on the maximum quantity (expressed as net weight in grams) of fresh cannabis, dried cannabis, cannabis oil that the applicant will produce under the licence. It must also also provide details of the production period and the maximum number of cannabis plants to be sold or provided.

Zimbabwe's former Health Minister, Dr David Parirenyatwa told the Lesotho Times that Zimbabwe had moved to legalise the growing of medical cannabis due to its huge potential to grow the country's economy through exports of medical cannabis oil.

Licences and Availability

Since April 2018, companies and individuals in Zimbabwe have been able to apply for a license to cultivate cannabis for medical and research purposes. The five-year renewable licences permit the growing, possession, transportation and sale of fresh and dried cannabis as well as cannabis oil. Licences can be refused if it is suspected that the applicant intends to divert produce to an illicit market or use.

Producers intending to possess, produce, sell, provide, ship, deliver, transport or deliver cannabis at more than one site will require a separate licence per site.

Cannabis producers must be licensed by the minister and are subject to the following rules:

- Licence applications in terms of section 27 of the Act need to be made to the Minister.
- An individual is required to demonstrate proof of citizenship or proof of being ordinarily resident in Zimbabwe or proof of an exemption by the Minister.
- Companies must demonstrate proof of citizenship or proof of being ordinarily resident in Zimbabwe for the majority of directors.
- Companies must also provide proof of incorporation in Zimbabwe of the company:



- The Minister has powers to audit the activities of the licensed producer with respect to cannabis and the application for the licence must provide a detailed description of the method that the applicant will use to keep records.
- The application must also contain the following, if applicable:
 - o the maximum quantity expressed as net weight in grams of fresh cannabis, dried cannabis, cannabis oil to be produced by the applicant under the licence and the production period
 - the maximum number of cannabis plants to be sold or provided by the applicant under the licence and the period in which that quantity is to be sold or provided.
- An applicant for a licence to sell or provide fresh cannabis or cannabis oil must first provide the Minister with the dried cannabis equivalence factor determined under section 73 and the method that was used to determine it. This is prior to commencing selling the product.
- An applicant who intends to possess, produce, sell, provide, ship, deliver, transport or destroy cannabis at several sites, must submit separate applications for each proposed site.
- A licensed producer must designate one authorised person in charge at the site to have overall responsibility for the activities. They may, if appropriate, be a licensed producer. The responsible person in charge will ensure that the site activities comply with regulations.
- The licensed producer may also designate alternative responsible persons in charge at the site who will have authority to replace the main designated responsible person when that person is absent.
- The Minister will not issue, renew or amend a producer's licence if certain requirements or if the Minister has reasonable grounds to believe that false or misleading information or documents has been submitted alongside the application.
- A licence will also be denied if information has been received from a peace officer, the authorities or the UN, that the applicant has been involved in the diversion of a controlled substance or precursor to an illicit market or use. The Minister will not issue

- a licence if this is likely to create a risk to public health, safety or security, including the risk of cannabis being diverted to an illicit market use.
- The producer licence is be valid for five years and may be renewed after it has expired.

A consortium, NIRCAN ZW Ltd, a subsidiary of the NIRCOM A.S.I.G, has applied to the Zimbabwe government for a Medical Cannabis Cultivation and Growing Licence for Export. NIRCAN has subsidiaries in the United Kingdom, Germany and Canada. The US\$4m facility in Mazowe, Mashonaland Central is set to be Zimbabwe's first ever medical cannabis production plant and the company has set aside US\$10m for the first stage of the project.

Media reports state that former Health and Child Care Minister Dr David Parirenyatwa has, in principle, agreed to the application by NIRCAN ZW Ltd. However, all 'in principle' licenses under Parirenyatwa have now been turned down by the government of Zimbabwe.

In its first year, the project is projected to produce at least 4.9m grams of cannabis, earn a gross revenue of US\$11m and create 500 jobs. By its fifth year, production is projected to be 105m grams, earning more than US\$250m. The initial cultivation stages are set to focus on high-end cannabis flowers with plans to expand into manufacturing and processing cannabis plant derivatives including oils, edibles and pharmaceutical products. hh

A study by the WHO describes Zimbabwe's pharmaceutical market as "modest with a balanced set of supply and demand fundamentals". Although there is a huge need for medicines used in disease management, the funding gap is currently too wide to meet this need.

On the supply side, local generic manufacturing companies have relatively balanced product portfolios and are able to supply some 47% of medicines by item on the Essential Drug List for Zimbabwe (EDLIZ). However, these portfolios are dated and highly commoditised, resulting in poor export performance and intense competition from foreign suppliers. Despite the balanced product portfolios of local generic pharmaceutical companies, the speed of generic drug product development and launch on the Zimbabwean pharmaceutical market is very slow. This is evident from the absence of current medication for malaria, tuberculosis and HIV/AIDS. These are diseases where medical cannabis could step into the breach and ease the burden on an overworked healthcare system.

Zimbabwe's pharmaceutical sector is in crisis. Leading voices in the industry say the future looks uncertain as the Reserve bank of Zimbabwe (RBZ) is failing to clear outstanding invoices for drugs - amounting to over US\$50m backdating to 2017. The pharmaceutical industry is heavily dependent on imported products. However, as most raw materials for local production

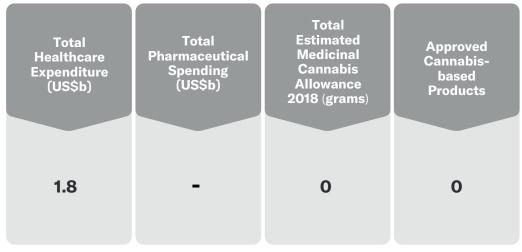
are sourced externally, the industry is vulnerable to shortages of foreign currency which limits procurement. According to the Pharmaceutical Wholesalers' Association chairwoman Valerie Musere, the fiscal crisis is such that just only 10-20% of the required \$2m worth of medication each month is received.

As a result of these financial shortalls, Zimbabwe's public health sector relies heavily on donated medicines funded by humanitarian agencies such as the United Nations Children's Fund, Global Fund, United States' President's Emergency Plan for Aids Relief and the United Kingdom's Department for International Development. More than 90% of drugs in public hospitals are supplied by donors.

The role of Cannabis

Cannabis is widely used in traditional medicine in Zimbabwe to treat conditions such as asthma, epilepsy and mental illness, some people use it as recreational drug;it is also reportedly used for cosmetic reasons such as to make hair grow quicker. Zimbabwe's Binga district has been coined the cannabis capital of Zimbabwe. The residents, in particular the Tonga people, consider cannabis a cultural drug which they rely upon to treat or prevent various diseases.

HEALTHCARE ANALYSIS



Source: WHO/ INCB/ Prohibition Partners



COMMERCIAL OPPORTUNITIES

Forecast value of Zimbabwean cannabis market, by sector, 2023



may not sum due to rounding

In addition to legalising medical cannabis products through a licencing process, Zimbabwe has further scope to be a key cannabis research player. In September 2018, the government announced plans to establish a research institute that will position the country as a hub for medical cannabis.

Local Expert Analysis

Nathan Emery, Founder & Chief Operations Officer, Precision Cannabis Therapeutics

As cannabis is so widely grown across the region, would cultural and economic circumstances mean that people are likely to self-medicate with home-grown products instead of seeking out pharmaceutical variants of the drug?

Of course. Maybe not self-medicate, but definitely they consult the local traditional healers. This is a common practice throughout Southern Africa. With the world price so high for cannabis oil and known tinctures made locally for treatments with cannabis (mostly teas or snuffs), this is definitely a possibility if the prices are not commensurate with the amount of income spent of medicine.

Traditional healers in South Africa are being given a large role in the cannabis sector as the Cannabis Development Council (CDC) of South Africa, which has been given the regulator mantle for the country, is putting traditional healers at the forefront, as well as Indigenous Knowledge and resource poor farmers.

In this respect, South Africa may end up with more of a policy orientation on the level of Thailand. The CDC also wants to become a regional body for Southern Africa and could push its policy framework into Lesotho and Zimbabwe, but they are unlikely to have much sway as massive international incentives would dissuade a more local approach.

What developments do you expect to see in legislation in the next 12 months/5 years?

South Africa is in a unique position in the world regarding cannabis at the moment, with the legalisation of recreational use without regulation. This has allowed for private use and the ability to grow for that use without specifying how much any single consumer can grow. The Cannabis Development Council South Africa (CDCSA) is about 18-24 months away from bringing meaningful regulation to the

Although hemp production licenses are now being given, the process is very slow. The major cannabis companies like Canopy are lobbying the African National Congress (ANC) tightly. Supreme Cannabis has already partnered with the main monopoly player in Lesotho, MediGrow, which is highly politically connected, and Canopy has secured a License without a production plan as well; all to gain a foothold into the South African market.



Lesotho is quite set on keeping the common man out of the business while setting up the real possibilities of collecting rents from international players multi-dimensionally with allocating land, easing regulation, and accessing licenses, which are yearly renewable currently. There does not seem to be a long-term strategy for inclusion and public good in the cannabis business in Lesotho.

Zimbabwe has a slightly different strategy and is being very conservative in its roll-out. The licensing fees are not extortionate, but the mandatory partnership with a security sector with indeterminate shareholding, is definitely a rent on the industry. There are currently limited licenses being offered (around seven) and full licensing is dependent on a developed security infrastructure. It remains to be seen whether the government will hold to this, but so far, it seems to be the case.

South Africa will be the main end-market for most of these cannabis projects in the region and domestically, unless production costs are drastically reduced and quality is assured. This can only be achieved through outdoor grows with good and verified GMP in post-harvest practices. If the flower price is, per unit much cheaper than anything the global North can produce (barring China entering the market), then Africa has a real chance to disrupt the market.

This will not happen in Lesotho as land is scarce and water even more so. It is likely in South Africa and Zimbabwe where commercial farms and irrigation infrastructure exists. The post-harvest processes will dictate whether Africa will be a disruptor in price on the market.

Zimbabwe has a decent chance, due to its infrastructure. The only thing that could be damaging to the industry is the ongoing instability of the economic situation. Security is not really an issue for cannabis firms in Zimbabwe because of the partnerships demanded from the government, unless partnerships are somehow Agriculture inputs are zero-rated for tax in Zimbabwe so building the infrastructure for a grow or processing should not be a major challenge, although recurrent expenditure line items and logistics could be severely affected by shortages caused by the informed hoarding of fuel or currency.

As mentioned above, the CDCSA has plans to integrate policy in the region, but this is highly unlikely as South Africa has a very bad image and history in regional integration programs and the governments of Lesotho and Zimbabwe have too much to lose on rents to capitulate to the lip-service South Africa is paying to indigenous beneficiation.

On a long-term market forecast, South Africa is still the main market for regional and domestic players in the value chain and South Africa will also lead the way in input supply as they have a high functioning agriculture sector (both input and output) but a fairly nascent processing industry in regards to capacity for cannabis (for medicine, recreational and hemp).

Issues of land expropriation will also limit investment in production until these issues are sorted out. If Zimbabwe did follow some of the tenants on policy that South Africa is espousing, they just may be more successful than South Africa in the production arena. When the tobacco industry in Zimbabwe tanked after the expropriation of land, slowly but surely the small farmers were organized and after more than a decade where a few thousand white farmers produced a high volume of tobacco for the world markets, today, 120, 000 some small black farmers have equaled and surpassed this quantity and maintained quality. This means the small-holder farmers do have the potential to produce cannabis on a mass scale and retain quality up to post-harvest in Zimbabwe. South Africa, on the other hand, has failed miserably at agrarian reforms to bring small black farmers into the value chain in a meaningful way.

At any rate, the end markets for medicinal cannabis products will and are being serviced at the retail level by imports and this will continue for another two years until the industry gets geared up and the first investors tailor their income forecasts to a local market.

Do you envisage any changes in how cannabis could become a local farmer's most important cash-crop? Will the licensing system change how farmers grow cannabis?

Initially this might be the case for South Africa, but Zimbabwe is being cautious and will definitely have an amorphous regulatory and licensing system as their pilot approach plays out.

What innovations, if any, have you seen in the way cannabis is farmed / strains of cannabis cultivated etc in the region? What underpins this?

There is nothing like this. The legal grows, only



functioning in Lesotho and to a small degree in South Africa (House of Hemp in Durban), are all fairly high input cost greenhouse operations, which are not differentiated from North America much. Most of the infrastructure, being that the large international firms have partnered with most licenses, will be turn-key, and thus undifferentiated.

In South Africa they are looking at greenhouses previously used for floriculture and/or vegetables. These are mostly large operations which will garner high overheads. Saying that, the Cannabis Development Council (CDC) does have a plan for contract farming and zonal growing of cannabis and hemp, although it does not seem there is much realism in the plan, especially with the demarcated lines to lessen cross-pollination. The culture of farming in South Africa leans towards quick gains, with little long-term thinking, and is at risk of failing to consider the vast illegal production of outdoor cannabis in Kwa-Zulu Natal and the Transkei, which would negatively impact this plan.

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

I see it as one of being captured into turn-key solutions and the majority of the inauthentic players using the continent for their pump and dump schemes. I think this will eventually filter out, with some countries turning their backs on the experience while others forge ahead. Real change makers have little say domestically in Africa as most industries are captured by politically aligned elites, this will mean many opportunities will be lost to short-term rent seeking, while larger international players will most likely dominate the scene as they can weather attrition.

That said, some local players will make the right partnerships and remain unfettered by rents and malfeasance and bring some real innovation to the market. I doubt this will be in cannabis oil (THC/CBD), but will be based in parallel end products and complementary ones.

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

Rents. No one at the decision-making level understands this commodity, they have just looked at how the prevailing market has priced cannabis products and the hype around the market potential and think it is the next gold or diamonds. There is very little understanding of current production capacity, patient scale-up in the Global North, the designs by big pharma and the alcohol and tobacco industries regarding control of post-harvest and production through "pharmaceutical grade" standards (which are not necessary at production level, but make a good exclusionary tactic for the monopoly industry players), nor is there much care.

It's not just governments collecting rents, but the fly-by night pump and dump "investors" who have a low opinion of Africa but feel it is a good place for opaque business practices.

African countries legalising cannabis should look to Thailand for inspiration in regards to their process to legality, including Highlands Action Group, which spearheaded legalisation and stayed out of politicising position by not involving themselves commercially. Although possibly idealistic, Thailand has shown great nationalism in regards to opportunities for farmers and in denying patent over molecules, and this should be emulated in the Global South to widen opportunity.

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

Within the next year, cannabis production in South Africa will not be up and running, only Lesotho will most likely have product, as Zimbabwe will only be gearing up in the next few months. No other countries have taken the plunge as yet, and the farther North you go in Africa, the more conservative it becomes. I don't think much will happen in the next 12 months.





LESOTHO

MARKET OVERVIEW

Population (m)	2.2
Î GDP (US\$ь)	2.6
Ruling Government Party	All Basotho Convention (ABC) in Coalition
Party Stance on Cannabis	Legal
Total Healthcare Expenditure (US\$b)	0.2
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	5
Prevalence of Tobacco Users (%)	26.7
Prevalence of Cannabis Users (m)	0.2
Average Cost Per Gram of Cannabis (US\$)	11.9

Source: World Bank/ WHO/ UNODC/ Prohibition Partners



Cannabis cultivation has long been a vital part of the fabric of life in Lesotho. A UNESCO report from 1999 said; "Cannabis is grown almost everywhere in the country". In the 2000s, it was estimated that 70% of the cannabis in South Africa came from Lesotho. Although cannabis is cultivated across Lesotho, including the capital, the primary growing areas are in the central mountain zones and western foothills.

Cannabis was long recognised as a necessary part of the agricultural economy, with the government acknowledging the negative consequences that would arise from any attempts to enforce restrictive policies.



The fact that cannabis is a leading contributor to the economy is a key reason that there has been no formal steps to legalise or regulate the country's network of existing farmers and traders. Many of Lesotho's small-scale farmers have relied on cannabis crops for survival and are unable afford the infrastructure and licensing costs required by the legal trade.

In 2008, Lesotho introduced the Drugs of Abuse Act which repealed the Dangerous Medicines Act of 1973 and aimed to ensure the availability of certain drugs for medical, scientific and related purposes. This law has helped to set the scene for the country's cannabis industry.

In May 2017, Lesotho became the first African nation to grant a licence to grow medical cannabis legally. The licence permits the manufacture, supply, export, and transport of medical cannabis and cannabis products from Lesotho.

However, currently only large businesses can afford the hefty US \$37,000 licence fee - small-scale farmers are still cultivating it illegally. The country's new law spells out who can prescribe medical cannabis and under what conditions, but lacks the details for creating and sustaining a workable and inclusive domestic cannabis industry.

Lesotho's climate and low labour costs have proved attractive to Canadian investors looking to expand their businesses. The government has, however, taken steps to build up the regulatory infrastructure, such as establishing a Lesotho Narcotics Bureau and encouraging some international cannabis businesses to invest in the country's medical cannabis program. Despite the climate attracting foreign investors, in the highlands the temperatures can go below zero for 3 months or more resulting in a requirement for external heating and thus increasing production costs. Lesotho is over 3,000 km south of the equator meaning that during the winter, artificial light hours would be required (unless autoflower strains are used) further driving production costs. In addition, Lesotho lacks good perennial water sources resulting in some companies utilising hydroponic systems. This has implications for those looking for organic certifications and could impact on 'medical grade'.

A World Bank report describes Lesotho as a country "at a crossroads needing new engines for growth, a more streamlined role for the state, and a dynamic private sector to help it seize opportunities in regional and global markets".

If Lesotho succeeds in establishing solid regulations, it

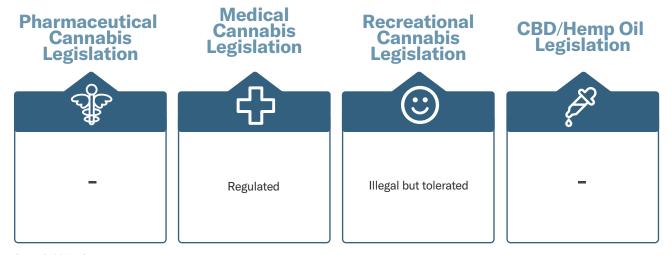
could become a prime cannabis export hub. Media reports have said that international business executives expect the country to act as a staging ground for entry into other, larger African markets, including Ghana, South Africa, Zambia, Zimbabwe and eSwatini.

History

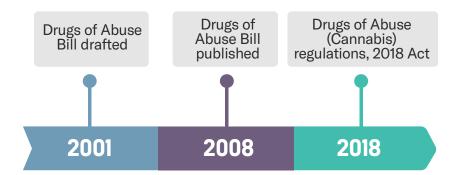
Cannabis use in Lesotho dates back to the 16th century, when the Koena people traded cannabis with local San tribes in exchange for land around 1550. By the 19th century, cannabis was a staple crop in the kingdom. Lesotho's farmers have been growing cannabis for the consumption at home and for export for centuries.

Lesotho suffers from grave poverty - the United Nations Development Programme (UNDP) classifies Lesotho as one of the least developed nations in the world with almost six in ten of Lesotho's population living below the national poverty line. As a result, many small-scale farmers in Lesotho grow cannabis among their maize crops to export to South Africa and other African countries to survive. In 2008, Lesotho became the first country in Africa to regulate medical cannabis.

REGULATORY ENVIRONMENT



Source: Prohibition Partners



In 2001, Lesotho drafted the Drugs of Abuse Bill, which brought the country into line with numerous international drugs law standards, including UNODC's 1961 Single Convention on Narcotic Drugs. In one joint South African-Lesotho operation in 2006, 47 tonnes of cannabis were seized. Cultivation is for the most part tolerated, however, due to the high rate of poverty and the economic benefits the cannabis trade provides.

Cannabis is regulated in Lesotho by the Drugs of Abuse Act of 2008 and the Medicines Control and Medical Devices Control Bill 2018 Act No. 5. Any new licences issued are regulated in terms of the newly published Drugs of Abuse (Cannabis) Regulations of 2018 being published and fully operational since May 2018. The government has established the Lesotho Narcotics Bureau which will be responsible for the issue and renewal of licences. The LNB was formed in order to comply with UNDOC's 1961 Convention.

Recreational cannabis in Lesotho is illegal for any use, but is largely tolerated. Cannabis, the nation's most significant sustenance crop, is widely produced.

While Lesotho's 2008 medical cannabis law lacks the details necessary to set up a domestic market, it does have enough of a framework for exports, which are currently the primary focus of the industry.

The 2008 law sees no distinction between hemp and cannabis, so it does not limit the potential of cannabis or forms that can be exported. Flower and oils are both allowed to be exported, subject to receiving approval for the transaction between the licensed importer and alicenced exporter. Approval must be granted from the health ministry of the importing country. According to our research, huge opportunities exist up and down the value chain. Lesotho's cannabis industry lacks the specialisation seen in more mature markets such as the US. There exist no suppliers specifically for cannabis companies, including companies which produce general infrastructure such as irrigation equipment, greenhouse, farming generators, equipment, nutrients and cannabis-specific fertilizers.

As for the domestic market, the government is working on the Drugs of Abuse (cannabis) Regulations, which



may address the technical gaps in the 2008 law that have kept a mature medical cannabis industry from developing. It could, however, be months or years before the follow-up legislation is approved.

Licences and Availability

A number of foreign companies have been drawn to Lesotho, attracted by its cannabis cultivation-friendly climate and inexpensive and experienced local workforce. At the time of printing, five companies in Lesotho were awarded licences to produce medical cannabis, including MediKingdom Ltd being the first to be officially awarded in May 2017, Medigrow (2017) and Verve Dynamics (2017) and Daddy-Cann. In February 2017, Lesotho's Ministry of Health and Social Welfare granted a Prohibited Drug Operator license to the Pharmaceutical Development Company (PDC) Ltd to legally cultivate, supply, hold, import, and export cannabis). A few months following this event, PDC's director resigned and was replaced by US-based businessman Michael Ogburn. The entirety of PDC's shares were then transferred to US-based Corix Bioscience Inc.

To date, just five key companies have been licensed as "prohibited drug operators". This includes cultivation, manufacture, distribution, storage and export/import under provisions of the aforementioned 2008 law and 2018 cannabis regulations act.

A deadline of 1st November 2018 was established for all current licence holders to demonstrate compliance to the updated legislation with the following provisions deemed necessary including:

- Certified identification documents of all directors together with valid police clearance certificates
- Proof of right on any operating land
- Aerial map of operating site
- Proof of capital adequacy and funds registered in a Lesotho bank account to assure the government that a company has enough capital to undertake the operation it is applying to run
- Off-take agreement or letter of intent of the licence's market
- Site plan showing how the site is to be used for licensee's activity

- Floor plan of the premises and facilities where the licenced activities are taking place
- Details of plans for record keeping
- Security arrangement plan including security plan for transportation
- An Environmental Impact Assessment licence also needs to be issued

It was further noted that:

- Licenses would be valid for one year, renewable annually. The initial licences were issued for a 10-year term;
- All final products will have to be tested by a certified laboratory before being sold for domestic or export use. One such is US-based Proverde Laboratories which opened an office in Maseru in mid-2018 where it will set up a laboratory. Among the tests conducted by the company are cannabinoid potency, terpene content, moisture content and water activity.

Founder and Chief Scientific Officer of ProVerde Laboratories, Dr. Christopher Hudalla, was quoted saying: "If a cultivator or producer has failures it is our goal to work with them to help understand where the problem rose and help them fix it. We brought this service to Lesotho so that Lesotho can be one of the leading producers of cannabis in the world."

The Companies Act of Lesotho allows foreigners to own 100% of local businesses, but in reality local connections are essential for anyone seeking to enter the market. International companies who want to get a foothold in Lesotho are advised to team up with one of Lesotho's local licenced producers.

The schedule of fees in Lesotho's new regulations, the Drugs of Abuse (Cannabis) Regulations, 2018 Act, are as follows:



SCHEDULE 2 FEES		
1	Non- Refundable application fee for all licences	M 15 000
	Licence fee (sec 11 (2) (b)	
	(a) Licence for cultivation	M 150 000
	(b) Licence for manufacturing	M 150 000
	(c) Licence for testing	M 100 000
2	(d) Operator Licence	M 500 000
	(e) Licence for research	M 50 000
	(f) Licence for transportation	M 50 000
	(g) Licence for storage	M 10 000
	(h) Licence for supply	M 50 000
	Renewal of Licence fee (sec 21)	
	(a) Licence for cultivation	M 100 000
	(b) Licence for manufacturing	M 100 000
	(c) Licence for testing	M 75 000
3	(d) Operator Licence	M 350 000
	(e) Licence for research	M 50 000
	(f) Licence for transportation	M 25 000
	(g) Licence for storage	M 7 500
	(h) Licence for supply	M 25 000
4	Permit in relation to Medical and Scientific Programmes and Seed bank	M 5 000
5	Annual inspection fee	M 25 000
6	Change of location fee M 10 000 Plus inspection fee	M 35 000
7	Change of information (Amendment) fee	M 5 000
8	Import, Export, transit and supply (sec 14) 1.5% of the consignment value	

Please note that prices have not been converted into US dollar owing to currency fluctuations. At the time of writing, 1 Lesotho Maloti (LSL) = US\$0.073, but in January 2019, this also dropped to US\$0.013.

must first meet with the Lesotho Narcotics Bureau and declare their intention to establish a cannabis business and explain their company objective and policy.

The above regulations came into force on 18 May 2018. Prior to applying for a licence, a prospective applicant

The applicant must also provide recently audited financial statements, bank statements and any other



information which may be required to prove they have the required capital. The Bureau should respond to the applicant in seven days and furnish them with an overview of industry laws, application evaluation criteria and an application form. The application form must be completed and then returned to the Minister of Health. When a licence has been granted, the applicant must notify the minister 30 days prior to commencing operations.

Manufacturing has to be conducted under conditions and controls which minimise the potential growth of micro-organisms, allergen cross-contact, contamination and/or deterioration of the cannabis product. An independent laboratory will test the cannabis product for heavy metals such as mercury, lead, cadmium and, arsenic as well as microbiological impurity.

At the time of writing, the Lesotho government had issued licenses for the production of medical cannabis to 33 companies although it was reported that 20 Basotho companies had not paid their operator licence fee and licences would be revoked in January 2019. The following are amongst those companies who do have licences in the country:

- Medi-Kingdom Majority owned by UK founder with local Lesotho partners
- Verve Dynamics roughly 30% ownership by Aphria (Canada)
- Medigrow Lesotho PTY 10% acquired by **Supreme Cannabis (Canada)**
- Pharmaceuticals Development Corp (PDC)
- Daddy-Cann 100% acquired by Canopy Growth (Canada).

In December 2018, Lesotho's Prime Minister, Dr Motsoahae Thomas Thabane officiated the inaugural launch of the first company officially awarded with a licence to grow medical cannabis in Lesotho. Medi Kingdom Ltd's new facilities are being built this year on a 42 hectare Medi Central site. The site will become Medi Kingdom's new global head office and is dedicated exclusively to the cGMP production, cGAP cultivation and research of medical cannabis. In addition, much of the first wave of production of cannabis will be exported to Australia following recent approval by the Australian ODC (Office of Drug Control).

Medi Kingdom plans to start commercial export of medical cannabis to Australia, Canada and Europe in 2019.

Also in 2017, Lesotho's Ministry of Health granted medical company Verve Dynamics a licence to cultivate, process and sell cannabis for medical and scientific purposes. In July 2017, Verve's licence enabled the company to begin growing high CBD containing sativa strains which as since commenced. Their licence also enables them to explore other varieties once the company has established itself within the market. Richard Davies, the managing director of Verve Dynamics Group, holds the patent to the Sceletium tortuosum-based product Trimesemine. Verve has a benefit-sharing agreement with South Africa's Khoe Khoe community for Sceletium products with the intention to set up a similar community profit-sharing deal in Lesotho for medical cannabis products. Once the fields are producing a satisfactory product, the cannabis will be processed into capsules, tinctures, and other medical consumables.

The companies have stated that Lesotho's climate, friendly investment environment and ample supplies of water, power and a skilled workforce make it an attractive location for large-scale cannabis production. Medi Kingdom expects to produce one tonne of GAP cultivated medical cannabis per month by the end of 2019, all for export.

In March 2018, Canadian company Supreme invested US\$10m in a 10% stake in Medigrow Lesotho, Lesotho's first legal medical cannabis producer. Supreme has stated that "they hope in due time to be able to churn out quality medical cannabis oils that can be exported back to Canada and fuel the international cannabis supply chain. This is however, subject to regulatory approvals by the Lesotho government."

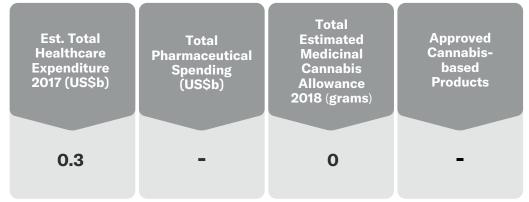
In late 2018, Toronto-based Nuuvera signed an agreement with Verve for three tonnes of purified THC and CBD extracts per year. Antonio Costanzo, head of international development at Nuuvera stated: "Lesotho has a number of international trade agreements that allows it to export its products to jurisdictions worldwide." This deal was folded into the Aphria deal when Aphria bought Nuuvera in 2018.

Other Canadian cannabis firms who have invested in Lesotho's cannabis industry include Canopy Growth Corp.

In a bid to discourage companies from trading licences without building out infrastructure, in February 2019, the Lesotho Minister of Health announced that all cannabis licence renewals or new applications have been increased from 500,000 Maloti to 5,000,000 (5 Million) Maloti effective from 1st March 2019. Anyone that has not renewed their licence and fails to comply with the 2018 Cannabis regulations will have their licence revoked.



HEALTHCARE ANALYSIS



Source: WHO/ INCB/ Prohibition Partners

Lesotho's healthcare system faces a number of challenges including a lack of state finances, access to healthcare services and the outbreak of epidemics. In 2011, it was reported that access to health services is difficult for locals, especially in rural areas where almost three quarters of the country's population resides.

Epidemics such as HIV/AIDS, coupled with a lack of expertise and human resources, pose severe challenges for the country's health system. Serious patient emergencies are often sent to South Africa as Lesotho has only one referral hospital, a public-private partnership managed by a consortium led by South African private health care provider, Netcare.

Lesotho's Ministry of Health (MoH) currently provides around 42% of the country's health centres and 58% of the hospitals. Some 38% of all hospitals and health centres are owned by the Christian Health Association of Lesotho (CHAL), the largest private-not-for-profit public health provider.

CHAL plays a crucial role in providing health care services to at least 40% of the population, most of whom live in areas with poor coverage by government-owned facilities. The remaining facilities are either privately owned or operated by the Lesotho Red Cross Society.

In addition, there is an extensive network of private surgeries, nurse clinics and pharmacies providing health care including the dispensing of medicines. There are also a number of NGOs and private-for-profit healthcare providers (Lesotho Planned Parenthood Association-LPPA, Red Cross Society, Partners in Health-PIH, Lesotho Flying Doctors, Irish Aid, Mission Aviation Fellowship) who deliver healthcare service in

urban and rural areas. There is no local pharmaceutical manufacturing in the country - all pharmaceuticals are imported.

Data published by the World Bank cites the prevalence of high HIV/AIDS and a TB co-epidemic as Lesotho's greatest health challenges. HIV prevalence rates stand at some 25% in the adult population aged 15-49 years, the second-highest in the world. The 2017 Global TB report puts Lesotho's incidence rate of TB at 724 per 100,000, the second-highest in the world.

Cancer is also becoming an increasing burden on local healthcare services as there are inadequate facilities and specialists to respond to the demand for cancer diagnosis and treatment. The government, with support from the International Atomic Energy Agency (IAEA), plans to establish a national cancer treatment centre in order to utilise the latest health technologies and specialised HRH to provide quality cancer care.

Around 61% of Lesotho's population is aged between 15-46 years, whilst 34% are aged 15 and under. This young demographic could prove to be a factor in a growing medical and recreational cannabis market.

The Prime Minister of Lesotho, Dr Thomas Thabane has been quoted as saying that it is currently a critical time in the country's history as its health system is overwhelmed by non-communicable diseases such as cancer, hypertension, diabetes, injuries and senile dementia. The diseases claim the lives of countless inhabitants every year, and in most cases prematurely, he said: "Due to the benefits of medical cannabis, we are confident that our health system will be in a position to mount a meaningful fight against cancer, autism, epilepsy, heart diseases and many others".



COMMERCIAL OPPORTUNITIES

Forecast value of Lesotho's cannabis market sectors by 2023



Source: Prohibition Partners

Lesotho aims to capitalise on cannabis by encouraging international investment in both cultivation as well as processing. Masello Sello, legal adviser for the health ministry which issues licences, stated: "We want to export finished products. So, the plan is to cultivate and manufacture pharmaceutical products, nutritional products, cosmetics, and the extraction of active pharmaceutical ingredients".

Some of the future business opportunities within Lesotho's medical cannabis market are:

- Businesses that gather market data,
- Consultants to help businesses and government streamline regulations,
- Opportunities involving educating doctors and patients,
- International medical cannabis tourism with a focus on targeting South Africans.

In early 2017 Medi Kingdom was the first company in Lesotho to legally cultivate cannabis for medical purposes having obtained the first and only issued R&D licence granted by the Lesotho Ministry of Health.

It is understood that Medi Kingdom successfully cultivated various medical cannabis strains outdoors on their 0.5 hectare high altitude site in Oacha's Nek. This was the precursor to Medi Kingdom being awarded the first cannabis cultivation licence on the African continent in May 2017.

Medigrow was issued Lesotho's third licence (behind Verve Dynamics), and is setting up cannabis production operations at Marakabei in the Maseru district. The project was commissioned in January 2018 and includes the construction of polytunnels where the cannabis plant is cultivated as well as an extraction and packaging facility. Phase one of construction of the infrastructure for the medical cannabis plant is being undertaken by LSP Construction and will have a footprint of around 48,000 square metres.

The company has also set up an administration block and living quarters for staff. The company stated that it will empower local communities by giving them up to a 42% stake in the company. Commercial production is yet to commence as some parts of its plant are still under construction.

Medigrow's CEO, Andre Bothma, has been quoted as saying the project is valued at around US\$62m at full scale production and that so far US\$14m injected into the facility. Some of Medigrow's investors include the Canadian firm, Supreme Cannabis, which has so far invested US\$7.5m into the project. In February 2019, the plant was classed as a 'work in progress' according to the website of LSP Construction, the firm building

Local Expert Analysis

James Mather, CEO, Medi Kingdom

What barriers did you experience in becoming the first company to be awarded a licence to cultivate medicinal cannabis in Lesotho?



The acceptance and low levels of awareness surrounding the safety, efficacy and therapeutic benefits of cannabis in certain international arenas was quite frustrating as it had already been adopted as the standard of care for dozens of maladies in many first world countries. The lack of cultivation and manufacturing standards (GAP/GMP) created a very challenging backdrop to work against.

To resolve this, our Regulatory Affairs and QC teams studied the best of breed sets of standards and regulatory frameworks globally and created an internal quality control framework which we subsequently incorporated and applied to Medi Kingdom's standard operating procedures. This has now allowed us to be positioned and accepted as a tier one producer by any international standards.

A certain degree of hypocrisy existed as Lesotho was renowned for being Africa's most significant producers of cannabis or "dagga", but at the same time it was outlawed, it was also tacitly approved as a necessary subsistence crop grown by poor regional farmers as the only way to educate and hopefully better the life of their children.

The blatant abuse and exploitation by South African illicit dealers creating demand or opportunities to benefit themselves in return for the most meagre financial trade of the crops produced by the local growers.

We experienced massive hurdles and difficulty in finding skills, resources and materials locally to prove the viability of the industry to the government within our first R&D grow operation. We imported skills and provided skills transfer and training frameworks to the local employees to ramp up capacity fairly swiftly. This has ensured the local communities get the economic benefit across our various facilities.

What did Medi-Kingdom do differently to other companies that enabled you to secure the first license?

As we expected it to be extremely challenging to secure Africa's first license, we planned accordingly. We were acutely aware that government would be thorough and ultra-discerning in their selection of licensees. With an amazing innovation team, we built a approach that really strategy and governments criteria and ambitions. The process commenced with spending the first 18 months educating everyone from local people, councils, district chiefs, universities, local politicians, government ministries through to private audiences with previous and current Prime Ministers.

We subsequently focused on real social and economic issues that the rural areas were facing and established the Medi Kingdom Foundation which is now a cornerstone of upliftment in the region. We adopted a hearts & minds approach and that common thread is woven through all company activities, both internal and external.

In order to obtain our quotas for production we interfaced with the INCB alongside the Ministry of Health. Their scrutiny was exceptionally thorough and it proved that with our transparency and open cards approach they were more than satisfied with both our systems and ambitions as a key contributor to the global medicinal market.

In February 2017, we were awarded the only officially issued Research & Development license. With this we had no guarantees that we would be issued a Commercial license but we took the bull by the horns so to speak and went to task on developing our first site to cope and handle a large scale organic crop that would be acceptable by international buyers.

Do you think companies that follow in your footsteps will experience the same barriers, or how could regulation/ legislation make the process smoother?

Companies or more aptly, the multi-billion dollar Limited Partnerships (LPs) that have followed in our footsteps have the easiest entry to market now. Our plight has paved the way for them which is somewhat astonishing given the fact that prior to our May 2017 licensing, not one international player was interested, or had any belief in pursuing this opportunity further.

What developments do you expect to see in legislation in the next 12 months/five years?

On the local front, the legalisation of medicinal cannabis. This will surely affirm Lesotho's position as the leading innovator on the African continent. The result downstream will see Lesotho continue to rise as a hub of cannabis knowledge, resources, production and trained hands on skills for the African continent.

On the international front, EU countries and their legislative arms are becoming increasingly pro-cannabis. This is due to the snowballing public support for legalisation and the resultant commercial



and social benefits. More so, the current review of CBD and THC by the World Health Organisation is expected to open up the floodgates of countries adopting and recognising the legitimacy of medical cannabis. Europe currently represents about 40% of all legal cannabis markets globally which could quite easily move to 60% as legislation changes.

What impact do you see this having on the market in Lesotho and overall in Africa?

Apart from huge local job creation, providing vast opportunities to the higher educated students, providing new government revenues to the fiscus, we will see a real benefit at a grass roots level where previously the barriers to enter the small and medium business categories were insurmountable. Demand will be the driver of a whole host of economic opportunities.

We have noticed a significant change since we started in the number of companies that have diversified their product ranges within their known markets to include cannabis - making it easier to access resources and materials in Southern Africa. Prior to this, much of the specialised products needed to be sourced abroad. For Medi Kingdom, it opens up new sources of off-take at a way more competitive price whilst removing the logistical barriers for regional buyers.

Do you envisage any changes in how cannabis is local farmers' most important cash-crop?

As part of our continuing upliftment program, we intend to build a dedicated on-site training academy at Medi Central staffed by international experts to train local farmers.

Will the licensing system change how farmers grow cannabis?

We intend to provide full nurtured training to allow farmers to grow crops legally and offer guaranteed purchase of their crops. This converts into surety for the farmers. There are some exciting models being explored locally using cooperative systems which will result in the farmers getting market related prices for their crops as opposed to getting exploited by illicit dealers.

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

Emerging cannabis producing nations in Africa enjoy ideal conditions for cannabis production, an excellent climate for cultivation, lower workforce costs and an increasingly enabling legal and regulatory environment. In excess of 10,000 metric tonnes of illegal cannabis are currently produced on the African continent each year, according to the United Nations.

However, African governments have not yet followed the trends of legalisation seen in Europe, South America and the USA, presenting a vast opportunity for developing legal production. Lesotho and Zimbabwe are signalling a broader shift toward more liberal policies and the result is that several other African governments are considering tapping into what can be a lucrative natural resource for the continent.

It will be a busy five years in Africa with more and more countries opening themselves up to trade in medicinal cannabis. We expect to be able to offer help to emerging markets and assisting new licence holders to avoid the pitfalls of managing their licence to produce revenue.

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

Africa is set to become a force to be reckoned with as a whole but because of Africa's poor financial reputation, international investment is approached gingerly, giving us a unique opportunity to offer turnkey solutions to other license holders within the African continent and guide them through each of the critical steps that need to be observed.

A license has value but it takes a lot more than possession to turn it into revenue. This being said 2019 is going to see the beginning of Africa's journey as one of the leading cultivators in the world.

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

Use of locally grown cannabis grown to meet international medical standards and used as a medicine by all African countries.





NIGERIA

MARKET OVERVIEW

Population (m)	190.9
GDP (US\$b)	375.77
Ruling Government Party	All Progressive Congress
Party Stance on Cannabis	Illegal
Total Healthcare Expenditure (US\$b)*	13.5
Total Beauty & Wellbeing Expenditure (US\$b)	1.2
Alcohol Consumption (Litres Per Capita Per Year)	13.4
Prevalence of Tobacco Users (%)	5.8
Prevalence of Cannabis Users (m)	14.9
Average Cost Per Gram of Cannabis (US\$)	5.88



Medical and recreational cannabis, are both illegal in Nigeria. Despite this, the country boasts the world's third highest recreational cannabis prevalence rate according to UNODC figures, at 14.3% amongst 15-64 year-olds - the equivalent to almost 15 million users. Despite being illegal, cannabis is widely grown across the country in areas including Ondo State, Edo State, Delta State, Osun State, Oyo State and Ogun State.

*Estimate based on most recent healthcare expenditure as % of GDP



Nigeria is currently experiencing large numbers of teenagers and students addicted to pharmaceutical drugs such as tramadol and codeine. Local media reports state that the number of addicts is in the "hundreds of thousands". The main reasons for their popularity is easy access through the black market and inexpensive prices. Codeine can typically be purchased for US\$1 for a 60ml bottle, and Tramadol is typically \$0.05 for a 200mg capsule. Many users are also addicted to cough syrups containing codeine.

In March 2018, the UN addressed Nigeria's pharmaceutical addiction problem and emphasised the "miracle" properties of medical cannabis. Harsheth Kaur Virk of the UN's Office on Drugs and Crime in Nigeria, urged Nigeria to check the "rising menace of pharmaceutical drugs abuse among youth in Nigeria" through the legalisation of medical cannabis. In April 2018, the Nigerian government banned the production and import of cough syrup containing codeine.

In view of this, the national attitudes towards cannabis seem to be shifting. Nigeria's former president and current chairman of the West Africa Drugs Commission, Olusegun Obasanjo is one of those who has called for cannabis to be decriminalised.

History

The first mention of cannabis cultivation in Nigeria was made by indigenous peoples during the 18th century. Cannabis gained a further foothold in Nigeria in the 20th century when it was introduced to the area by soldiers and sailors returning from conflict zones in North Africa and the Far East during, and after the Second World War. There are also indications that British colonial authorities grew cannabis in Nigeria in the 1930s.

By the 1950s, there is evidence of documented arrests of Nigerian cannabis farmers, with some of the Nigerian cannabis being exported to the USA and Europe, whilst cannabis from South Africa and the Belgian Congo were imported into Nigeria.

During the 1960s, cannabis cultivation spread at such speed that it became a public issue due to its abuse by individuals and psychiatric patients. By the early 1970s, cannabis use was common among soldiers who consumed it to "suppress timidity". Cannabis gained popularity among the younger generation between 1980-90, not least due to the success of the internationally renowned musician Fela Kuti, who became synonymous with using cannabis as a creative and philosophical aid.

REGULATORY ENVIRONMENT

Medical **Pharmaceutical** Recreational CBD/Hemp Oil **Cannabis Cannabis** Cannabis Legislation Legislation Legislation Legislation Illegal Illegal Illegal Illegal

Source: Prohibition Partners



In line with the rest of the African continent, cannabis possession is illegal in Nigeria and punishable by a minimum sentence of 12 years incarceration. Serious trafficking cases can lead to life imprisonment.

In 1984, following a military Junta, Nigeria's drug laws underwent a radical overhaul and the death penalty was introduced as a punitive measure. An amendment to the Indian Hemp Act (itself an amendment to the Indian Hemp Decree of 1966) was also enacted. This was called the Indian Hemp (Amendment) Decree; the law repealed the 1975 Act and upheld severe penalties for trafficking in or sale of cannabis.

An even more significant development in drug legislation was the Special Tribunal (Miscellaneous Offences) Decree (Decree 20). This law mandated the death penalty by firing squad for "dealing in, buying, selling, exposing or offering for sale or inducing any person to buy, sell, smoke or inhale the drug known as cocaine or other similar drug".

This Decree focused on cocaine, the death penalty by firing squad was removed in 1985.

In 1994, the Nigerian government focused on eradicating cannabis with the launch of "Operation Burn the Weeds". This eradication program peaked in 1999 at 3,500 hectares before plummeting during the 2000s. It is unknown how large a share of the country's overall cannabis production was eradicated.

Licences and Availability

At the time of writing, there are no licences available in Nigeria.

Nigeria's National Drug Law Enforcement Agency (NDLEA) was created in 1990 as a federal agency charged with eliminating the growing, processing, manufacturing, selling, exporting, and trafficking of hard drugs. The agency was established by Decree Number 48 of January 1990.

The NDLEA has a presence in the country's international airports, ports and border crossings. Its role is to eradicate cannabis by destroying crops. In serious trafficking cases, life imprisonment may be imposed. According to the Decree Number 48 of 1989, the possession or smoking of cannabis, or even allowing one's premises to be used for cannabis dealing, can result in a prison sentence ranging from 15 years to life.

Following Lesotho's legalisation and the UN's apparent approval of medical cannabis, there are indications that Nigeria might relax its legislation. One of the campaigners for legalisation, is Omoyele Sowore, presidential candidate for African Action Congress (AAC) and publisher of online news outlet Sahara Reporters.

Sowore has been quoted in local media as promising to "make Nigeria a cannabis exporting hub if elected president". Sowore also stated: "We have to start taking care of our cannabis such that we can also contribute to the GDP of the world. Some of the best cannabis in the world is grown in Ekiti state. We should be focusing on it."

HEALTHCARE ANALYSIS

Total Approved **Estimated** Total Estimated Total annabis-Healthcare **Medicinal Pharmaceutical** based Products Cannabis Expenditure Spending Allowance (US\$b) (US\$b) **2018** (grams) 22.9 13.5 0 0

Source: WHO/ INCB/ Prohibition Partners



Nigeria has, according to the World Health Organisation (WHO), a weak national health service. A 2018 survey of Nigerians by PriceWaterhouseCoopers (PWC) found that more than 90% of respondents associated the quality of advanced healthcare delivered in Nigeria as "low quality". There are key challenges in the country's pharmaceutical market such as counterfeit medicines, poor healthcare infrastructure and the limited spending power of the population. No medicine regulation exists; there are no pricing regulation which defines maximum or minimum profit margins for both wholesale and retail medicines. Patients currently do not pay professional fees such as pharmacies' dispensing fees.

In 2005, the National Health Insurance Scheme (NHIS) was launched. However, the type of medicine exemptions for categories of patients and the percentage of the population covered are yet to be defined. It is still the case that most patients across all health care levels pay for their treatment.

Public sector dispensing of medicines varies according to facility. In dispensaries and primary health care facilities, medicines are prescribed and dispensed by the nursing personnel or the community health extension worker who oversees the facility. This would indicate that the most natural channel for the sale of medical cannabis products.

Nigeria's different national states have various funding policies in which a few have payment exemptions for children and pregnant women whilst others have free malaria treatment. However, Tuberculosis (TB) and family planning medicines are free throughout the country. The WHO states that Nigeria is one of seven countries worldwide who collectively account for 64% of the world's TB cases. Cannabis can be used to treat TB symptoms, such as:

- Fatigue
- Chest pain or pain when coughing or breathing
- Nausea from treatments
- Stress
- Depression
- Unintentional weight loss
- Loss of appetite
- Constant feeling of tiredness
- By introducing medical cannabis products, Nigerian health services would be able to help far more TB sufferers than at the present time.

Despite the government introducing policies in 2004 to support local production of essential medicines with National Drug Policy (NDP), Nigeria remains heavily reliant on imported pharmaceuticals. According to a UNIDO survey, Nigeria has around 120 local drug manufacturers and the sector manufacturing capacity is severely underutilised at only 40%.

There is currently ample cannabis production and widespread use in the country, making the introduction of locally manufactured medical cannabis products a logical choice. Nigeria already has one of the highest cannabis consumption prevalences at 14% (among 15-64 year olds) and a growing number of farmers are switching from cultivation of cocoa to cannabis due to its higher yield.

In 2016, the International Cocoa Organisation stated, one tonne of cocoa would sell for US\$2,520/tonne. One tonne of cannabis, on the other hand, stated the NDLEA would sell for about US\$31,720 on the street. In March 2018, the Nigerian press widely reported that UN's Project Officer of the Office on Drugs and Crime in Nigeria, Harsheth Kaur Virk had urged Nigeria to consider legalising medical cannabis:



"Cannabis is a miracle drug allowed for medical purposes by the United Nations, but not for recreational purposes. Nigeria as a sovereign nation has its stringent laws against it but international conventions of the **UN have approved it for medical** purposes based on outcome of researches conducted to that effect by globally recognised institutes."



COMMERCIAL OPPORTUNITIES

Forecast value of Nigeria's cannabis market, by sector, 2023



Source: Prohibition Partners

Euromonitor reports state that Nigeria is home to one of the largest personal care and beauty markets in the continent in 2012 and valued at \$2b. The country is currently seeing a resurgence in locally made cosmetics and personal care products made from traditional ingredients. Local brands and traditional products such as African Black Ash soap have seen

particular popularity. African Black Ash soap is traditionally made from the ash of locally harvested African plants, often using secret recipes that have been handed down generations, giving the soap a distinctive dark hue. This trend for natural ingredients and indigenous plants may be good news for locally grown cannabis or hemp products.



MOROCCO

MARKET OVERVIEW

Population (m)	35.7
GDP (US\$b)	109.1
Ruling Government Party	Justice and Development Party
Party Stance on Cannabis	Illegal but tolerated
Total Healthcare Expenditure (US\$b)	6.15
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	0.6
Prevalence of Tobacco Users (%)	23.4
Prevalence of Cannabis Users (m)	1.5
Average Cost Per Gram of Cannabis (US\$)	8.17

Source: World Bank/ WHO/ UNODC/ Prohibition Partners



Cannabis has been cultivated and used for centuries in Morocco. Its introduction to the country dates back to the period of successive Arab conquests of North Africa between the 7th and 15th Century.

Largely tolerated by the authorities despite being illegal, smoking cannabis is regarded as part of the local culture. Cannabis leaves appear prominently on Facebook pages promoting festivals and events, alongside calls for cannabis to be legalised for medicinal purposes.

Traditionally the flowers from the plant are chopped



and mixed with chopped tobacco creating a mixture known as kif (meaning "supreme happiness" or "cannabis flower") which is smoked in a pipe with a small clay or copper bowl called a sebsi. There is also a tradition of using cannabis in sweets (maajoon) and tea. Medicinal usage is reported to be minimal.

Most cannabis produced in Morocco is processed into cannabis resin (hashish). Morocco is cited in the 2016 World Drugs Report as the largest hashish producer in the world, followed by Afghanistan, Lebanon, India and Pakistan. UNODC figures for 2015 put Morocco's open-air production at up to 38,000 tonnes, with indoor production reaching 760 tonnes. The Rif mountains (North East Morocco) is where most of the country's cannabis is grown and processed into hashish.

The end result of a clandestine culture means that an estimated 80% of hashish production is destined for export with Morocco supplying cannabis resin to Europe and a number of North African countries through smuggling networks.

Whilst Europe is the main export destination of Morocco's cannabis resin, the country's cannabis culture has long been popular with tourists since the 1960s . Although the 1990s saw officials advising sightseeing tourists to avoid the Rif region, there has been a resurgence of European visitors heading to the hills. Despite the drug being illegal, the popularity of for cannabis tours in Ketama and Chefchaouen in the mountainous Rif region is gaining momentum among European tourists. Tourists also continue to smoke hashish away from crowds on quiet beaches or other nature spots.

As the product has mutated from kif to hashish and the market evolved from domestic consumption to a huge international export business, inhabitants of the poverty-stricken Rif region have found a way to escape economic hardship through cannabis cultivation. With the arrival of the sieving production method from Lebanon towards the end of the 1970s, the scene was set for further development.

New seed and plant strains have also been introduced. Lebanon was an early provider and, in recent years, hybrids from the Himalayas and commercial growers in Europe, with much larger yields and potency, have been welcomed. As a result, the original Moroccan varieties are much less in evidence and said to be rare.".

While Moroccan law bans the sale and consumption of the drug, that has not stopped farmers growing vast plantations where it reportedly provides a living for

between 90,000 and 140,000 households. The industry employs at least 800,000 people (according to Bloomberg) and estimates put a value of US\$10b a year on sales. Some attribute a growing movement for legalisation to this huge market value and the potential for the government to accrue wealth through taxation.

Others cite a desire to end the criminal nature of the market, and to a lesser extent, the growing problem of drug addiction as reasons for more transparency and market regulation. Since 2011, the Moroccan parliament has been considering regulating cannabis for industrial and medicinal uses in an effort to shift the pendulum towards regulation.

History

The introduction of cannabis to Morocco dates back to a period between the 7th and 15th century, in the wake of successive Arab conquests in North Africa at that time. By the 18th century, the isolated Rif Mountains of northern Morocco had become the main growing area. The region is still the heartland of cannabis cultivation today, despite the outlawing of cultivation in 1956, when the country became independent from French and Spanish rule.

Morocco has a long history with rural development programmes that evolved to include cannabis crop substitution after prohibition in 1956. When, in 1960, the postcolonial Moroccan government initiated such a programme it also sought technical assistance from the United Nations. Under the Special Fund Scheme operated by the Food and Agriculture Organisation (FAO) seeds and fertilizers were distributed to assist farmers (in Ketama in particular) to switch to other crops. Studies were also undertaken to convert cannabis cultivation to other crops such as tobacco.

However, these alternative development projects have failed to diminish or even contain cannabis cultivation in the Rif region and some have reportedly had counterproductive unintended consequences. For example, improved irrigation techniques intended for alternative crops were diverted for the benefit of and increase in cannabis cultivation.

Today, well-maintained cannabis fields in the Rif area are very much in evidence on terraced slopes and along the side of the main roads. The adoption of high-vielding varieties of cannabis, agricultural practices and modern hashish production techniques which began in the mid-2000s and accelerated after the mid-2010s, have resulted in more potent and varied cannabis derivatives being produced.



REGULATORY ENVIRONMENT



Pharmaceutical

Cannabis

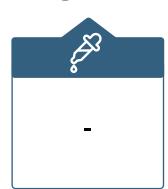




Recreational Cannabis Legislation



CBD/Hemp Oil Legislation



Source: Prohibition Partners

While illegal, smoking hashish in Morocco is commonplace - historically the culture of smoking kif is embedded in the male population in Morocco despite the penalty for smoking or buying hashish nominally leading to 10 years imprisonment. Those most likely to be fined on the spot or penalized (imprisoned) are the unaware or careless tourists buying from an undercover policeman in a marketplace.

Small cafes in Moroccan towns and cities like Casablanca and Marrakech are populated by local men playing cards, drinking mint tea and smoking water pipes called hookahs.

Young men also openly offer hashish for sale and customers can buy small pipes (sebsis) or water pipes in most markets around Morocco. The pipes may not be on display outside shops but can be found inside small bazaars. While risky and illegal, some guesthouses and hostels also turn a blind eye to smoking cannabis, especially in towns like Chefchaouen in the Rif region.

In recent years, the Moroccan government has been more willing to discuss regulation of cannabis for medicinal or industrial purposes, but not for recreational use.

Since 2013, the Moroccan parliament has been considering regulating cannabis for industrial and medicinal uses due to pressure to offset the negative impact, notably criminality, of the official ban which was imposed in 1956. In 2014, an opposition party in the Moroccan parliament with close ties to the monarchy proposed a bill to legalize cannabis

production for medical and "industrial" use. While the bill failed, the movement suffered a further setback with the resignation of the lobbying body's leader, Ilvas El Omari.

Prime Minister Abdelilah Benkirane's (Nov 2011-Mar 2017) Islamist Justice and Development party, as well as the opposition Authenticity and Modernity, were also known to be considering decriminalising the hashish industry.

In December 2018, a hearing was held in the Moroccan parliament to review the legality of cannabis in order to improve the country's economic prospects. The hearing was organized by the Party for Authenticity and Modernity (PAM), with PAM members putting forward the argument that an estimated one million Moroccans who depend on cannabis cultivation would benefit from the legalisation of cannabis farming.

"We are not seeking to legalize the production of drugs, but to search for possible medical and industrial uses of this plant and create an alternative economy in the region," said Milouda Hazib, head of the party's parliamentary delegation.

A potential benefit of regulating the industry would be the generation of revenue for the government. However, there are those who take the view that as cannabis is unofficially Morocco's biggest foreign currency earner, the government cannot afford to make a serious crackdown on the business.

There has also been opposition to legalisation from cannabis farmers who are concerned their crop might



lose value: large growers who have invested heavily in new production methods are assured of a steady income from the dealers and other traffickers.

Conservative religious groups are also not wholly approving of regulation and decriminalisation. Organisations and individuals who continue to lobby for the reversal of the ban state that it has in fact encouraged both criminalisation and the creation of 'mafias' in northern Morocco. The Transnational Institute (TNI), in their study on Morocco and Cannabis (March 2017) stated that "Legalising cannabis would circumvent mafias and increase farmer's profits."

One grower lobbying body, the Global Forum of Producers of Prohibited Plants, (GFPPP) in Jan 2016, organised by the Netherlands-based organisation Transnational Institute proposed the provision of "short, medium and long-term solutions" for Morocco. One of these solutions would involve the European community to engage in a debate as part of an effort to be seen as proactive rather than criminal. The demand is for "information, education and training for alternative uses of crops, agricultural and ecological tourism."

Another debate centres on the growing problem of drug addiction in Morocco. In comparison to other neighbouring Maghreb countries such as Algeria and Tunisia, both with around 300,000 addicts, Morocco has the highest addiction rate. Figures show that there are currently 600,000 Moroccans who are addicted to drugs, alcohol and cigarettes, including 16,000 who consume 'hard drugs' such as heroin and cocaine on a daily basis.

Drug addiction is widespread among young people aged between the ages of 18 and 28, and there has also been a rise in the number of children under the age of 15 and mostly living in poverty, who take drugs.

Production

According to the World Drug Report 2016, based on reports from Member States during the period 2009-2014, Morocco continues to be the world's largest producer of cannabis resin, followed by Afghanistan and, to a lesser extent, Lebanon, India and Pakistan. At present, there are no reliable statistics on the exact location of cultivation areas, the scale of cannabis cultivation or the amount produced. Discrepancies exist in the figures that are available. UNODC estimated Morocco's cannabis resin open-air

production to be in the region of 38,000 tonnes (2015). Indoor production amounted to 760 tonnes in the same year. According to figures cited by the interior ministry in 2013, an estimated 90,000 households, or 760,000 Moroccans, depend for their livelihoods on cannabis production, which is concentrated in the northern Rif regions of Al-Hoceima, Chefchaouen and Ouazzane. Other observers estimate that as many as 140,000 growers are involved in cannabis cultivation, and if their families are taken into account, more than one million people (Morocco's population is almost 36 million) could depend on the illicit economy.

The last 50 years have seen cannabis growers in the Rif region prove to be remarkably resilient to attempts by local and international governments to reduce or even end cannabis cultivation as well as a strategic ability to adapt to changing market conditions.

As policy to block cannabis production took shape prohibition. Portail de l'Agence Développement du Nord (APDN), the body in charge of development projects in the Rif region, created three categories of growing areas:

- 1. "Historical" zones (around Ketama where cannabis has been grown for centuries and the growers claim to have authorisation from the dahir (a Moroccan King's decree) in power in 1935),
- 2. Areas that have been actively cultivated for less than 50 years and
- 3. Cultivation areas that are less than 20 years old.

Political pressure from the EU and the US to reduce cannabis cultivation included the provision of funding to facilitate the process. Between 2005 and 2012, the US gave US\$43m to help farmers find new crops to replace cannabis. Since 2003, Morocco has received €28m from the EU, aimed at eradicating the cultivation of cannabis. However, the results have been mixed.

Moroccan authorities claim that in a decade, the area under cannabis cultivation in the country decreased by 65% from an official all-time high of 134,000 ha in 2003 to 47,196 ha in 2013. Moroccan authorities say that they expect the total area to decline further to 34,000 ha in 2018.

Most industry observers agree that cannabis cultivation has undoubtedly declined, but it has also been modernised, allowing for considerably higher yields. This explains, to some extent, why and how hashish production levels have been maintained. Estimates about the new hybrids point to a rise in the yield of three to five times.



The still ongoing modernisation and professionalisation of the Moroccan cannabis industry is testimony to its leading position in global hashish production and the value placed on the crops by farmers. The adoption of modern farming techniques has increasingly enabled the production of higher quality hashish and more potent modern extracts which explains why the THC contents of seized hashish have increased in the past decade.

In addition to utilising modern organic fertilisers and vast irrigation systems to supplement the limited nutrients and moisture provided by the soil, most farmers in the area import seeds to ensure a bigger harvest. In addition to a range of Dutch genetics that are grown, more recent arrivals have a varying heritage and include the plants from Mexico plant, Afghanistan and the beldia variety (Arabic for domestic). Newly introduced commercial strains include Amnesia Haze plants, along with Matanuska

Farmers are increasingly focusing on land strategy and planning, and some can set up their land to produce three harvests per year. The first crop to be harvested is often the indica-dominant khardala, which due to its origins in the Himalayas is suited to a short growing period and early harvest. The landrace beldia, closely-related group of sativa-dominant varieties that have been cultivated for centuries in the Rif, is next to be harvested. The last crops to be harvested are the slow-growing delicate varieties that were originally developed for indoor/greenhouse production in the cooler and more temperate climes of Europe and North America and therefore require the most attention, need extra nutrients and water. Farmers also collect the seeds from the Amnesia, Matanuska and Critical strains and sell them to other farmers, making up to approximately US\$500,000 from this trade.

Spain remains the main route through which Moroccan cannabis resin is transported to Europe, usually by land. More recently, the Integrated Police (Europol) detected a new route through Libya which is being used by traffickers to transport the drug. Estimates put five or six intermediaries between the local producer and the consumer resulting in a significant shift between producer and consumer price. According to some sources, prices can be multiplied by ten at the national level and by 20 or 30 internationally.

Licences and Availability

None recorded as cannabis remains illegal for both medicinal and recreational purposes.

During 2015, Morocco saw the third largest number of drug seizures in the world. The UN's report notes that cannabis resin seizures from the kingdom increased substantially, reaching 235 tonnes.

HEALTHCARE ANALYSIS

Total Healthcare Expenditure (US\$b)	Total Pharmaceutical Spending (US\$b)	Total Estimated Medicinal Cannabis Allowance 2018 (grams)	Approved Cannabis- based Products
6.15	1.48	1	-

Source: WHO/ INCB/ Prohibition Partners



Morocco is considered an "emerging player" in the global pharmaceutical market. Contributory factors include its central location in the Mediterranean area, connecting Sub-Saharan Africa, Middle East and Europe, and stable political framework. Morocco is also home to both multinational pharmaceutical companies as well as domestic enterprise operational and manufacturing. For these reasons, along with an ambitious health insurance programme launched by the Moroccan government (the 2011 Constitution emphasizes equal access of citizens to health care) which aims to cover 90% of the population by 2021, further consolidation of the pharmaceutical and healthcare sector in expected in the near future.

Morocco's healthcare spend reached US\$6.15b in 2017, an increase of 5.1% on the previous year. The pharmaceutical market has also evolved positively, reaching US\$1.48b sales in 2017 with forecasts of US\$1.9b in 2021 with a compound annual growth rate of 6.7% (data BMI Research, Morocco Pharmaceutical and Healthcare sector report, Q3 2017).

Currently pharmaceutical sales represent approx. 1.5% of Morocco's GDP. In 2016, prescription medicines represent 70.9% of the whole market, around US\$993m. Patented medicines represented 41.2% of the total market and 58.1% of the prescription market but are likely to decrease in the coming years as generic drugs and biosimilars gain traction, strongly government. supported by Moroccan over-the-counter sector is also likely to be negatively impacted by generics and is expected to see a decrease in market share, falling to 22.8% by 2026.

However, the 2011 Constitution's emphasis on equal access of citizens to health care does not seem to play out in reality: the experience of people seeking healthcare in Morocco would seem to indicate the opposite of a humane and accessible healthcare system.

When care in hospitals is provided, a large proportion of the population is not able to cover the medical costs even to the extent that hospital patients can be required to pay for equipment such as sterile syringes or bandages. Corruption is also reported to be common within hospital wards, as patients struggle to get attention from doctors or nurses. In contrast, the cost of prescribed medications is deemed too expensive and aimed at increasing the pharmacy's sales, but often not affordable to the poor.

In a country where around 41% of the population lives in rural areas with no fixed income or form of social security, disease and illness results in a decrease of income, progressive poverty, and stress. Reports also highlight that although the government has pledged to provide insurance coverage for the up to eight million people with no fixed income or form of social security (and those more vulnerable to illness and disease), when they travel to towns and cities seeking care, their needs are often not met.

Morocco remains a demographically young country (27% of its population under the age of 15, 18% between the ages of 15-24, 42% between 25-54 years old, 7% between the ages of 55-64 and just 6% 65 years and older).

This, combined with a high fertility level above the replacement level (2.5 births per woman), means the population should continue to grow in the decades to come, although not at great speed. It's projected that Morocco will have a population of about 40.1 million by 2028 and 46 million by 2050.

Statistics published by the Institute for Health Metrics and Evaluation in 2017 highlight that amongst the top ten disorders afflicting the Moroccan population are:

- Lower back pain
- Depression
- Headaches
- Anxiety
- Neck pain
- Other musculoskeletal

CBD oil is marketed for its capacity to reduce the negative impact of these disorders and therefore the potential exists for a target market for CBD products as other forms of healthcare are not meeting consumer requirements.

The commercial centre of Morocco and the most populous city is Casablanca with a population of more than three million. However, the political capital is Rabat, home to 1.4 million citizens. Other major cities include the gateway city of Tangier, the religious centre of Fez and the tourist destination of Marrakech. The urban population of Morocco was 58% of the total population in 2010, with ongoing urbanisation estimated at an annual rate of 2.1%.

COMMERCIAL OPPORTUNITIES

Forecast value of Morocco's cannabis market, by sector, 2023



UNODC notes in its 2017 world report that 80% of cannabis production in Morocco is destined for export, leaving around 20% for local consumption. As already highlighted, cannabis is widely available and easily accessible despite its illegality. According to farmers, a kilogram of kif sells for US\$8.

In North Africa alone, the number of cannabis users in 2017 is estimated at 5.7 million (just under 3% of the population) and estimates for Morocco put the number of occasional or regular smokers at around 1 million (around 2.7% of the population). Other studies estimate a higher figure of about 8% of the population to be cannabis users.

The youthfulness of Morocco's population is a factor that underpins relatively robust forecast growth rates in the recreational consumption of cannabis. Cannabis and tobacco are more popular with adolescents compared to alcohol and other "illicit drugs". In part, this is due to the prohibition and disapproval of alcohol/illicit drugs for religious and socio-cultural reasons.

With Morocco being the largest producer of cannabis resin in the world, cannabis is also relatively easy and inexpensive to obtain by teenagers who are aware of an unofficial tolerance level despite its official status as illegal. Normalisation of substance use at societal level is also a factor likely to underpin growth in the recreational use of cannabis, particularly among younger people.

As Morocco's unemployment rate in the 15-24 age range hovers around 28% (Q3 2018) compared to an overall rate of ten percent, the self-medication theory

of the use of psychoactive substances to self-regulate or alleviate stress highlights other societal factors at play. Studies carried out by the Mediterranean School Survey Project on Alcohol and Other Drugs (conducted in 2009 and 2013) among 15-17-year-olds in Morocco, revealed that substance usage began at an early age. Similarly, the 2010 and 2016 Global School Health Surveys highlighted an increasing prevalence of substance use, notably tobacco and cannabis, among adolescents aged 13-15 years.

Other studies conducted among 11-23 year-old school students in the north central region of Morocco reported that 9.3% of students use "psychoactive substances" with cannabis (8.1%) being the most prevalent, followed by alcohol (4.3%).

Research findings also point to significant links between psychological problems and substance use in adolescents.

Increasingly, efforts to maximise crop yields and increase financial gain are resulting in seeds of innovation in derivative products. Experimentation with producing oil from the leftover and unneeded seeds of the beldia and khardala crops is giving rise to the potential for skincare products. Hemp-plastic packaging also sends out eco-friendly signals and branding that includes the mark of the Rif region could encourage tourism.





MALAWI

MARKET OVERVIEW

18.6
6.3
Democratic Progressive Party (DPP)
Illegal
0.59
-
3.7
14.5
2.5*
0.2

^{*} Assumes regional average prevalence rate Source: World Bank/ WHO/ UNODC/ Prohibition Partners



Malawi is one of the most impoverished and underdeveloped countries in the world, with a large rural population and an economy heavily dependent on agriculture. Around 80% of Malawi's population is rural, and many crops grown there are commercial and intended for export - the country's biggest legitimate crops are tobacco, sugar cane, cotton and tea. The country has been adversely impacted by the WHO's drive to reduce smoking which has significantly impacted on its major foreign exchange earner, tobacco. As a result, the country hopes that turning to cannabis farming will boost its economy.



Medical cannabis and industrial hemp were both set to be legalised in Malawi and in the middle of December 2018, a draft bill was sent to ministries for further scrutiny. At the time of writing, no further information was available on this decision. The Medical Cannabis Industry Hemp (cultivation, production, processing, storage, exportation, distribution and use) Bill was presented in the Parliament and supported by Members of Parliament from both sides. However, the members agreed to send back the bill to be scrutinised by ministries of Homeland Security, Justice and Agriculture.

The Special Crops Act is in place and it is expected that the Malawi government will approve of regulations that will govern cannabis cultivation. Licencing will commence pending government approvals.

The new law also establishes an industrial hemp trial program; if the trials are successful, industrial hemp will become a permanent agricultural crop for Malawi and will be another source of foreign exchange earnings that supports the country's National Export Strategy.

Much of the country is suitable for cannabis cultivation, from the hot, humid lowlands of the Great Rift Valley, to its more temperate upland surrounding regions. Due to the extreme levels of poverty among Malawi's rural populations, cannabis cultivation is increasingly attractive to farming communities, and cultivation sites have sprung up in many regions.

The growing, consumption and trafficking of cannabis has become Malawi's primary illegal activity; women are generally involved in the production and processing of cannabis and men are responsible for the sale and trafficking. Cannabis crops commands a higher price than other crops making it lucrative for farmers, despite the fact that only a small fraction of the ultimate retail price goes to the farmer - the majority goes to the traffickers and distributors.

The Malawian cannabis, especially Malawi Gold, is internationally renowned as one of Africa's finest sativa strains (although widely referred to as a strain, it is technically a process). A World Bank report described it as among 'the best and finest' cannabis strains in the world, generally regarded as one of the most potent psychoactive pure African sativas. Despite this, cultivation, processing and selling of cannabis and cannabis-related products remain illegal in the country.

However, in December 2018, the Malawi parliament approved steps to draft a bill for the legalisation of medical cannabis. Deputies agreed to let independent

deputy Boniface Kadzamira draw up the bill.

The bill would propose to licence farmers to grow cannabis strictly for medicinal use, but before it is tabled, it will be scrutinised by five governmental committees. One of the deputies, Lucius Banda stated in an interview with Agence France Presse (AFP): "The benefits of legalising cannabis for medicinal and industrial purposes are endless for a country like Malawi, which is famed for producing a lot of cannabis which is illegally sold on the international market".

While recreational cannabis remains illegal and the possession of cannabis and its related products is still considered a criminal offence, industrial hemp trials are almost complete, with over ten hemp varieties from around the world having undergone trial.

Vice President Saulos Chilima has offered to legalise hemp if elected President in Malawi's 2019 Tripartite Elections: "Our friends in South Africa, Canada, and the US are legalising cannabis. Let us not lag far much behind when the legalisation would push Malawi's economic growth."

Chilima has also urged Malawi to speed up research on medical cannabis. He added that his sentiments were not in support of growing and smoking recreational cannabis.

History

Cannabis is thought to have arrived in Malawi between the 10th and the 15th centuries, possibly brought by Arab or Portuguese traders or the nomadic Bantu tribes that are present throughout southern Africa. It is believed that cannabis was introduced from a range of potential points of origin including West Africa and Asia.

In the mid-19th century, when British colonists arrived at the shores of Lake Malawi, cannabis use was widespread as a medicine and intoxicant. Livingstone observed cannabis being planted and smoked by the Malawi people in 1865, and at that time a significant cultural pattern of use had emerged, not just in Malawi but in almost every country in southern and eastern Africa.

The 1970s saw cannabis tourism spring up in Malawi as tourists on safari passed through the Great Rift Valley and stopped at the beautiful shores of Lake Malawi for rest and recreation. Whilst there, they were able to sample locally-grown cannabis and home to



tell of their discovery which returned more tourists. Today, Malawi's tourism sector as a whole is increasing and its infrastructure is improving, making the region increasingly attractive to cannabis tourists.

The cannabis, or "chamba", in Malawi is mainly grown in remote parts of the central and northern regions. In the north, it is found growing in Mzimba District's Likwawa hills, and in Nkhotakota district, Nkhotakota District is known for producing the best cannabis, particularly near the banks of Lupache river. It can also be found in smaller quantities in the districts of Ntchisi, Kasungu, Ntcheu and Dedza.

Malawi's illegal cannabis trade amounts to around 0.2% of the country's GDP, or MWK 1.4b (US\$19,000). The majority of cannabis produced is exported out of the country.

REGULATORY ENVIRONMENT

Pharmaceutical Cannabis Legislation

Illegal

Medical **Cannabis** Legislation



Draft bill to legalise medicinal hemp

Recreational



Illegal

CBD/Hemp Oil Legislation



Awaiting cabinet approval for medicinal and industrial hemp. Cultivation and sale of products only permitted for research purposes whilst hemp trials are ongoing

At present, all forms of cannabis are illegal in Malawi, however, research trials on industrial hemp are hoped to be at the forefront of legislative reform. However, a Bill for reform cannot be presented to Parliament until the trials are completed. At the time of writing, Malawi's commercial research licence only allows for the cultivation and sale of cannabis products for research purposes.

Malawi authorities did not focus their attention on cannabis use until the 1930s. And only after the nation signed the UN Single Convention on Narcotic Drugs in 1961 did cannabis growers and traffickers become subject to punishment. Ever since, Malawi, lacking in resources and heavily dependent on foreign assistance, has struggled to impose order.

International pressure has proved an important incentive for authorities; the wave of crackdowns that started in 2000 were a result of criticism from member countries of the Southern Africa Development

Committee (SADC) that Malawi's attitude to drug traffickers was too tolerant.

By February 2019, Malawi's development of industrial hemp regulations was still awaiting cabinet approval. The Malawi Investment and Trade Centre will roll out industrial hemp and medicinal cannabis programmes at different levels. The special Crops Act is in place, but regulations governing industrial hemp, particularly the growth of industrial hemp, are still required.

Director Investment Promotion Joshua Nthankomwa has called for controls on who and how industrial hemp can be grown. Controls of the two sectors -industrial hemp and medicinal cannabis- will extend to include local processing of the plants as no raw hemp or cannabis will be exported. This is to ensure that Malawi gains maximum benefits from locally grown crops.

The Malawi government is currently cultivating hemp



on a trial basis, ahead the potential legalisation of the non-psychoactive cannabis strain, for industrial uses such as fabric and food products. Successful industrial hemp trials have already been run at Chitedze Research Station in Lilongwe, and further trials have been approved.

This development represents a major breakthrough following a lengthy battle with drug control groups and religious leaders who fiercely oppose any softening in policy. The issue of legalising cannabis has been at the forefront of Malawian politics since the 1970s when the government of independence leader, Hastings Kamuzu Banda, debated whether to establish tobacco or cannabis as the country's primary cash crop.

There is however, some confusion over the terminology regarding hemp and cannabis in Malawi. "Hemp" in Malawi refers traditionally to "Indian hemp" or cannabis, not industrial hemp as defined elsewhere.

Both advocates and critics of legalising hemp have suggested that cannabis could next be legalised, a longstanding demand of the country's Rastafarian minority, which claims that smoking "chamba" is integral to their culture.

Licences and Availability

According to the Malawi Hemp Association, the Malawi government is investing around US\$10m in the cultivation of industrial hemp. In May 2018, Malawi's Department of Agriculture Research Services (DARS) announced the completion of industrial hemp trials at Chitedze Research Station in Lilongwe, and the approval of further trials elsewhere in the country. The hemp varieties planted were shown to contain levels of the psychoactive substance (THC) below the limit set by the international community.

Local Malawi company Invegrow Limited, established in 2013 to grow and process industrial hemp in Malawi, details plans to start commercial growing of the crop 'by 2019', on its website. Invegrow has been working with the Malawi government to research the viability of hemp as a commercial crop, and has started mobilising resources for its factory in Lilongwe.

Invegrow Limited has introduced imported body wash, shampoo and face wash all with hemp seed oil to the Malawi market, in a bid to show the scope and potential of products that can be made from industrial hemp.

Invegrow was the first company to campaign for the introduction of hemp in Malawi, procuring the first license to trial the crop in October 2015. The company stated that any new crop or seed that comes to Malawi must be trialed, not just hemp. This process includes testing different varieties for THC content, observing reactions to different seasons, and acquiring knowledge of the plant's water requirements. "Industrial hemp has more economic opportunities as we will be extracting the oil for fibre from the seed and produce oil products and it is also edible," said Invegrow Limited's director, Nebert Nyirenda.

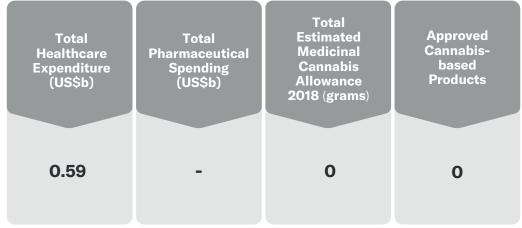
As the first company to be granted authorisation by the Malawi government, Invegrow Limited is able to conduct research trials on industrial hemp and these have taken place at Chitedze Research Station. The trial results have been submitted to the authorities pending further approval and proper framework for licenses to be issued. The key objectives of the trials

- Test geographical areas for potential cannabis growing and complete trials on industrial hemp in order to cultivate/process commercially by 2019
- Breed cultivars suitable for the sub-tropical region
- Establish processing facilities and produce Malawian-made hemp products
- Partner with commercial and small-scale farmers for cultivation
- Responsibly lobby and educate Malawians, politicians, and hemp enthusiasts about the commercial opportunity of the crop
- Attract investment into the industry
- Value-add within Malawi and promote the benefits of hemp products
- Secure international and domestic markets for Malawian hemp products
- Continue research and development with the Malawian Government for the future of industrial hemp in Africa

Ikaros Africa is another company emphasising the value hemp production could have for the Malawi, and describes itself as "dedicated to the research, development and cultivation of hemp." Ikaros has a sustainably sourced full spectrum, organically-grown CBD hemp oil and CBD extracts grown on its farm in Malawi.



HEALTHCARE ANALYSIS



Source: WHO/ INCB/ Prohibition Partners

Malawi's healthcare facilities are currently unable to address factors plaguing the population, including infant mortality and the very high burden of diseases, especially HIV/AIDS, malaria and tuberculosis.

According to Unicef, Malawi's health sector is one of the world's most donor-supported 80% provided by donors. Donor support has seen a steady growth, but has become more fragmented and is increasingly focused on treating specific diseases.

Malawi's government-run hospital system takes the form of a three-tiered network of interlocking medical facilities. The overall system is designed to fill the needs of the top tier first, then the second tier and finally rural hospitals on the third tier.

The third tier is a large network of rural hospitals woven throughout the country. They serve as the first

line of defence in the war against disease; they are free and often the only medical facility many villagers will ever encounter. There is a chronic shortage of doctors and few nurses at any of the rural hospitals. Many facilities have antiquated surgical equipment, and there are no surgeons present to carry out even minor surgery, so these units remain out of service. Medical supplies to rural hospitals are often unavailable.

When medical supplies run out, births, deaths and other illnesses are handled in villages often resulting in the spread of disease. Malawi ranks 170th out of 174 in the World Health Organisation lifespan tables.

Cannabis was once widely used by a large share of the population as an intoxicant and as medicine in treating conditions like anthrax, dysentery, fevers, malaria, or snake bite.

COMMERCIAL OPPORTUNITIES

Forecast value of Malawi cannabis market, by sector, 2023



Source: Prohibition Partners





GHANA

MARKET OVERVIEW

Population (m)	28.8
GDP (US\$b)	47.3
Ruling Government Party	New Patriotic Party
Party Stance on Cannabis	Legal with a licence
Total Healthcare Expenditure (US\$b)	2.8
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	2.7
Prevalence of Tobacco Users (%)	3.9
Prevalence of Cannabis Users (m)	3.8*
Average Cost Per Gram of Cannabis (US\$)	0.8

Assumes regional average prevalence rate ource: World Bank/ WHO/ UNODC/ Prohibition Partners



According to the most recently published International Narcotics Control Strategy Report (2017), Ghana is a key transit point for illegal drugs bound for European and North American markets. Cannabis is the most commonly used illegal drug in the country, and is typically trafficked to Spain with "increasing regularity".

In August 2017, more than two metric tonnes of cannabis were seized by the Customs Division of the Ghana Revenue Authority at Kpedze, near Ho in the Volta region. At the time of writing, there were no current statistics on cannabis cultivation in the



country, but local law enforcement officials report a rise in cultivation in recent years.

Cannabis is typically grown in west and southwestern regions of Ghana, in the Sefwi and Aowin regions of western Ghana, and the Ashanti and Brong Ahafo regions in the south-west, where the hot and humid climate offers optimum growing conditions. Owing to its illegal status, cannabis tends to be grown with subterfuge by intercropping it with other staples such as cocoa, cassava or okra.

According to UNODC, Ghanaians are heavy consumers of cannabis and it is widely tolerated despite its illegality. Cannabis forms an integral part of Ghanaian life both in terms of consumption and production. The country's Narcotics Drug Law prohibits any inhabitants from cultivating, using, importing, or exporting cannabis without a licence.

Patients requiring cannabis for medical use are required to obtain approval from the Ministry of Health, which then enables citizens to lawfully use, cultivate, import, and export cannabis.

In June 2017, Acting Head of Education of the Narcotics Control Board (NACOB), Ernestina Adjei stated that UN's world report on drugs found that Ghana remains the leading cannabis consumer in Africa and ranks third in the world. The UN's findings also indicated that 22% of Ghanaian school children are drug abusers.

Ghana's Police Drug Law Enforcement Unit has set out a comprehensive outreach program for students and teachers in various educational institutions to teach the negative effects of illegal drugs use. The unit has also put measures in place to track down dealers in the region. Operation "Trace the Root" has led to a number of arrests and prosecutions.

The legalisation or decriminalisation of cannabis is an ongoing debate in Ghana that is gathering momentum. Decriminalising cannabis could have positive impact on the country's finances given its high demand globally and Ghana is seeing a growing advocacy movement towards the legalisation of cannabis:

A pro-legalisation campaign has been gathering momentum in recent years with support from the former head of the Narcotics Control Board. The movement recently received another boost when the executive director of the Ghana Standards Authority suggested that state-led cultivation and export of cannabis could generate valuable income.

- Former UN Secretary General and respected Ghanaian Kofi Annan has put his weight behind legalising cannabis with the advice that regulations must be put in place by governments to curtail abuse.
- In September 2018, Ghanaian journalist Kwesi Pratt appealed to the Government of Ghana to give legal validity or sanction to cannabis use as it could boost the national economy. Pratt underlined the significance of cannabis within the health and cosmetic sectors and called for the government to consider legalising cannabis not only for its huge economic potential, but for medicinal purposes.
- In January 2018, sports analyst and former Okwawu United Coach, Nana Kwaku Agyemang, appealed to the Ghanaian government to soften its stance on cannabis and grant him a licence to start a cannabis growing facility. Agyemang outlined the medicinal properties of cannabis oil such as helping treat cancer sufferers, heart diseases and lung diseases, in addition to the export potential which could significantly boost Ghana's economy. He also recognised the need for detailed research and development to ensure cannabis could generate substantial taxes for the government.
- In 2017, Professor Alex Dodoo, the acting head of the Ghana Standards Authority called for a debate to be initiated on cannabis cultivation spurred on by other countries (in particular Canada) for the legalising of medical cannabis.
- In April 2016, Ghana's Rastafari Council released a statement calling for the full decriminalisation of cannabis. The council Chairman argued that decriminalisation of cannabis could influence the way young men were treated by the police.
- The West Africa Drug Policy Network is another pro-cannabis faction which is backing the call for Ghana to decriminalise cannabis. Maria Goretti Ane, the African representative of the International Drug Policy Consortium voiced concerns over Ghana's current drug regime which criminalises cannabis.
- In 2015, the executive secretary of NACOB, Yaw Akrasi Sarpong, called for the legalisation of cannabis in Ghana. Agreeing in this sentiment, was the Drug Law Enforcement Unit of the Ghana Police Service who has also advocated for the decriminalisation of cannabis to help fight drug abuse in Ghana.



Head of the Unit, David Selom Hukportie told Accra-based TV3: "...we also need to look at decriminalisation and here, I want to reiterate what Mr Akrasi Sarpong said. Many people misunderstood him, but when you look at the situation and you want law enforcement to tackle it without the criminal justice coming in to help it, it will be a problem."

But a vociferous backlash from government officials and mental health experts showed that legalisation may not be easily achieved. The opposing side of legalisation of cannabis include:

- Dr. Kwesi Anning, Director, Faculty of Academic Affairs & Research, at the Kofi Annan International Peacekeeping Centre (KAIPC). Dr. Kwesi Anning has stated that countries with cannabis oil production have experienced many problems and therefore cannabis should not be legalised in Ghana. In 2017, Dr. Anning described cannabis oil as "dangerous and powerful".
- The country's Mental Health Authority is another group wary of legalising cannabis in Ghana due to its health hazards. In 2017, Dr. Akwasi Osei, the Chief Executive of the country's Mental Health Authority highlighted the threats that cannabis poses to mental health.

 The influential Christian Council of Ghana has also spoken out against legalisation, warning that it would destroy the futures of Ghana's young people.

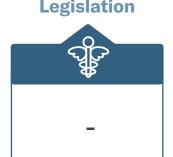
Despite the discussions, Ghana has not legalised cannabis. In 2016, a Ghanaian farmer was sentenced to 15 years in prison for growing 11kgs of cannabis without the proper permissions. In stark contrast, Ghana's Osu district prides itself on cannabis-infused akpeteshie drink, which is often consumed by locals for recreational purposes.

History

There are two main theories as to how cannabis originally arrived in Ghana; it was brought by troops returning from India and Burma after World War II, or spread by sailors coming down the coast, most likely from Sierra Leone.

The first report of illegal cannabis cultivation in Ghana occurred in 1960. In the 1990s, cannabis which had previously been an urban phenomenon in bars and nightclubs, had spread to rural areas as well. Cannabis was associated with youth involved in Rastafari culture, and with students who believed cannabis use would improve their ability to study.

REGULATORY ENVIRONMENT



Pharmaceutical

Cannabis

Cannabis Legislation



Legal with valid licence

Recreational Cannabis Legislation



Illegal but tolerated





Source: Prohibition Partners

Cannabis is illegal in Ghana without a licence. The Narcotics Drug Law prohibits the cultivating, using, importing, or exporting of cannabis without a licence. Within this law is PNDC Law 236 which criminalises narcotic drugs such as cannabis and recommends an imprisonment term of not less than 10 years. However,

cannabis is legal if patients obtain approval from the Ministry of Health, which in turn enables them to lawfully use, cultivate, import, and export cannabis.

Sections 1 and 2 of Ghana's Narcotics Drugs (Control, Enforcement and Sanctions) Law, 1990 (PNDCL 236) state:



- Anyone who imports or exports any narcotic drugs without a licence issued by the Secretary for Health is liable to imprisonment for not less than ten years.
- Anyone who imports drugs must notify the Pharmacy Board within 14 days.
- The Secretary for Health may grant a licence for the import of narcotic drugs if a satisfying application has been submitted and approved.
- It is illegal to smoke, sniff, consume, inject or otherwise administer narcotic drugs without lawful authority or excuse.

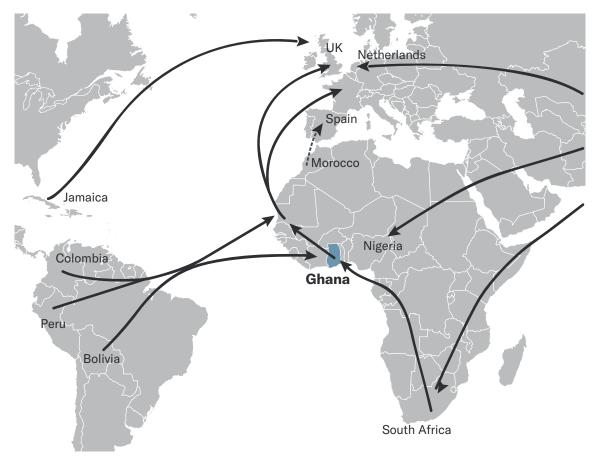
Ghana has a growing cannabis cultivation economy and, according to local news reports, a number of young workers are now focusing on growing Indian Hemp. Cannabis cultivation remains one of Ghanaian farmers' most resilient and profitable crops mainly due to increasing inequality between urban and rural areas.

One of the most prolific cannabis-producing nations in Western Africa, it has been reported that cannabis cultivation in Ghana is on the rise. NACOB estimates that at least half of the cannabis produced in Ghana has been destined for export since the 1980s with Accra's international airport, boats, trucks and the postal system all forming the main means of illicit export.

In 2012, UK Border Agency officials at Heathrow Airport seized the largest ever haul of cannabis arriving from Ghana to the UK, approximately 1.5 tonnes of cannabis was confiscated from three separate freight containers.

Cannabis trafficking between Ghana, the Americas and Europe is illustrated in the map below. The routes indicate the importance of Ghana in the trafficking of cannabis from both South Africa and the Americas. Ghana is a vital transit point within several hubs, a network and expertise which could prove helpful if the country legalises cannabis.

Illegal Cannabis Trafficking Routes



Source: Sensiseeds, Oct 2013

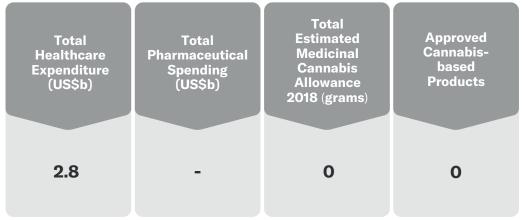


Licences and Availability

There is no information on company licences in Ghana as present. This may change should the country decide to legalise medical or recreational cannabis.



HEALTHCARE ANALYSIS



Source: WHO/ INCB/ Prohibition Partners

Ghana's health service consists of government hospitals and clinics, hospitals and clinics run by the Christian Health Association of Ghana (CHAG), and private facilities. The government pays most of the salaries of the staff physicians, house officers, nurses, and others in the government and CHAG hospitals. The CHAG hospitals must also be self-sufficient, and much of the operating expenses depend on income generated from patient charges.

Medical illnesses in Ghana overlap with those in other developed countries, but infection, trauma, and women's health problems are much more prominent. Medical practice in rural Africa faces extremely limited resources, a multiplicity of languages (hundreds in the case of Ghana), and the presentation of severe illnesses at later stages than seen elsewhere.

Despite these limitations, Ghana has established a relatively successful national medical insurance system and the quality of medical practice is high, at least where it is available. Ghana also has a well-established and sophisticated administrative

structure for the supervision of medical education and accreditation, but it has proven very difficult to extend medical training to rural areas where health care facilities are understaffed.

Physicians are badly needed in rural areas, but demand outstrips supply because of poor working conditions and financial limitations. Hospital wards and clinics are crowded with time per patient also being limited.

The Ghana Ministry of Health has introduced a national universal medical insurance system, the National Health Insurance Scheme (NHIS), which pays for hospitalisations and outpatient doctor visits, as well as basic laboratory testing and certain medications. All hospitals bill the NHIS monthly for the patients who have joined the program. The NHIS, however, does not cover HIV medications, thoracic, neuro or plastic surgery (except after trauma), other elective surgery, infertility evaluations, transplant medication or surgery, and many other expensive items, such as hemodialysis.



COMMERCIAL OPPORTUNITIES

Forecast value of Ghana's cannabis market, by sector, 2023





KINGDOM OF ESWATINI (FORMERLY SWAZILAND)

MARKET OVERVIEW

Population (m)	1.4
GDP (US\$b)	4.4
Ruling Government Party	King Mswati /The African United Democratic Party
Party Stance on Cannabis	Illegal
Total Healthcare Expenditure (US\$b)	0.31
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	9.9
Prevalence of Tobacco Users (%)	9
Prevalence of Cannabis Users (m)	0.2*
Average Cost Per Gram of Cannabis (US\$)	0.4



Cannabis is illegal in Africa's last absolute monarchy eSwatini, formerly known as Swaziland . The nation changed its name from Swaziland to the Kingdom of eSwatini in April 2018. A landlocked country in Southern Africa, eSwatini borders South Africa and Mozambique and has a population of 1.4 million. Data from the World Bank show that poverty levels have remained high in the five years to 2017 with almost two-fifths of the population living under the international \$1.90 a day poverty threshold in 2017. The country depends on its close economic relationship with South Africa which provides some 85% of its imports and 60% of exports. eSwatini's



major overseas trading partners are the United States and the European Union. ESwatini is also a member of the Southern African Development Community (SADC), the African Union, the Commonwealth of Nations and the United Nations.

Despite its illegal status, cannabis is grown throughout the country and exported mainly to neighbouring South Africa as a means for impoverished farmers to sustain their families. The local strain, referred to as "Swazi gold", is renowned for its potency and commands a premium price. The highest quality cannabis is often compressed into 1-2 kg blocks and smuggled via South Africa and Mozambique to Europe and the UK.

For years, eSwatini has seen fledgling campaigns calling for the legalisation of cannabis. In 2017, a group of Members of Parliament announced that legalising cannabis in the country could add US\$1.63b to the economy. This would provide a much needed boost to the economy which has been in decline for a number of years.

In addition, the country's export markets are in decline, largely owing to South Africa's sluggish growth. The World Bank has identified poverty, inequality and unemployment as the main development challenges. The eSwatini Development Index (SDI) has been defined with eight focus areas: economic prosperity, agriculture and environmental sustainability, education, health, government service delivery, infrastructure, governance and corruption. A number of these could be addressed through the legitimisation of the country's cannabis industry.

eSwatini's Council Against Drug and Alcohol Abuse estimates that about 70% of small farmers in the mountainous Hhohho region grow cannabis. In 2005, UNODC listed eSwatini as one of the major cannabis producers in southern and eastern Africa. Many eSwatini farmers are paid around US\$150 per kilogram by smugglers, significantly more than the national annual average income of about US\$1,500. The low remuneration for traditional crops like maize has resulted in many eSwatini cannabis farmers switching to cannabis cultivation for drugs cartels.

REGULATORY ENVIRONMENT

Pharmaceutical Cannabis Legislation

Illegal

Medical **Cannabis** Legislation



Recreational Cannabis Legislation



CBD/Hemp Oil Legislation



Cannabis is illegal in eSwatini under the Opium and Habit Forming Drugs Act of 1922 and the Pharmacy Act of 1929. The former Act deals only with cases of possession and use and stipulates a maximum five-year prison sentence for cannabis possession. However, the Pharmacy Act stipulates a 15-year maximum sentence or a fine of US\$17,000 for cannabis sale and distribution.

In March 2017, eSwatini's government, the Swazi House of Assembly, looked into possible products that can be manufactured from cannabis, including

carpets and army uniforms, as well as its uses in medicine for the treatment of diseases such as tuberculosis, cancer and HIV.

Prominent public figures have suggested using the cannabis crop to boost the country's ailing economy, including eSwatini's housing and development minister, while the national commissioner of police has called for a cannabis study.

In response, the House appointed a five-member committee to explore the possibility further. The



chairman of this committee, Hhukwini MP Saladin Magagula stated that a number of companies are interested in investing in eSwatini's cannabis industry and have thrown their support behind legalising medical cannabis.

In 2017, a select committee headed by Magagula was appointed to investigate the possibilities of issuing licences to special farmers for medicinal and commercial use of cannabis. However, according to the WHO, the country needs informed evidence on cannabis before it can progress legislation.

WHO Health Promotion Officer Dr Kevin Makadzange argued that cannabis did not represent a suitable alternative to existing medications used in the treatment of asthma, chronic bronchitis and emphysema or cancer owing to side effects and the likelihood of patients becoming "hooked" on it. Despite a very real economic need to legitimise cannabis farming, cannabis laws are unlikely to change in the immediate future.

Media reports describe how the legalisation of cannabis has been discussed for many years without coming to fruition against a background of police raids on farms and arrests of cannabis growers. Fines for smuggling in eSwatini are around US\$300. The Royal eSwatini Police and the South African Police work closely to curtail cannabis cultivation by aerial spraying insecticides using South African helicopters. However, these measures have not had much of an impact. The eSwatini Police Commissioner has acknowledged that the repeated destruction of large cannabis crops has not yielded desired results.

Licences and Availability

There are currently no provisions for obtaining permits for licencing processes available in eSwatini due to the illegality of all forms of cannabis. However, in theory, a company could obtain a licence to produce medical cannabis under eSwatini's Pharmacy Act, also known as the Medicines and Related Substances Control Act, 2015. Royal Swaziland Police Force spokesperson Assistant Superintendent Khulani Mamba has been quoted as saying: "It has never happened, but someone could seek a licence from the ministry of health. A board sits to consider applications for producing new medicines in the country."

A company called Profile Solutions has partnered with Stem Ventures to form StemPro International. The company will be owned 51% by Profile Solutions and 49% by Stem Ventures. Profile Solutions will assign the rights to the only licensed growing farm and processing plant for medical cannabis and industrial hemp in the Kingdom of eSwatini once it has been attained. In mid-January 2019, Profile Solutions announced the receipt of US\$2.5m putting it in line to become the only licensed growing farm and processing plant for medical cannabis and industrial hemp in eSwatini for a minimum of ten years.

At the time of writing, Profile Solutions was awaiting the finalisation of its ten year licence and related permits and the funds were being held in escrow. Unless mutually extended in writing, the company expects to have the licences by March 2019. Profile Solutions anticipates that medical cannabis could generate US\$12-20m with CBD hemp generating a further US\$10m.

The licence applied for include permits to:

- Operate an advanced hemp and medical cannabis manufacturing facility to grow and cultivate cannabis in accordance with strict **GMP** global health standards.
- Distribute hemp and medical cannabis within eSwatini.
- Export hemp and medical cannabis worldwide.
- Operate a medical cannabis R&D lab.
- Build a training facility to create jobs for the locals.

Dan Oran, CEO of Profile Solutions stated, "To become the only licensed growing farm and processing plant for medical cannabis and hemp in eSwatini, our mission has been to secure the required licenses, permits, land, resources and capital to commence operations. We believe Stem Ventures is the right partner to commence operations with. In addition to providing financing, we anticipate Stem Ventures being a value-added partner due to its investor base of financers, entrepreneurs and medical professionals as well as experience in all things cannabis."



HEALTHCARE ANALYSIS



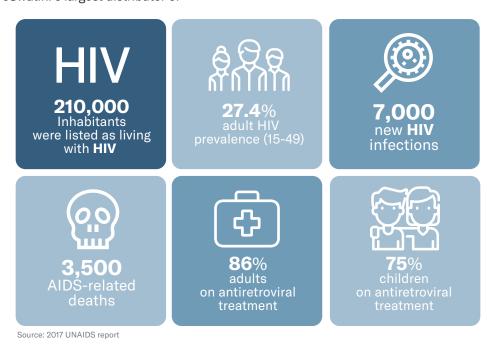
Source: WHO/ INCB/ Prohibition Partners

eSwatini is an impoverished kingdom where life expectancy is around 55 years for men and 60 years for women, according to the WHO. The country faces some daunting economic challenges. The national health service is close to collapsing due to the lack of finances. In his March 2018 budget speech, Finance Minister Martin Dlamini stated that the government owed a total of US\$230m to its goods and services suppliers.

In September 2018, it was reported that medicines had run out in public hospitals and health clinics across eSwatini. Nurses had been protesting to draw attention to the crisis. Media reported in July 2018 that Swazipharm, eSwatini's largest distributor of

pharmaceutical products and medical equipment to the national healthcare system, could not replenish stocks because the Ministry of Health had not paid its bill. By June 2018, there were only a dozen working public ambulances in the whole of eSwatini because the government had failed to maintain them. No new ambulances have been purchased since 2013. There is no new information on this national crisis situation, as per February 2019.

The nation is critically affected by the HIV and AIDS pandemic, which is now an existential threat to its society.





In a bid to tackle these grave health challenges, eSwatini's Ministry of Sports Culture and Youth Affairs has introduced A Comprehensive Lifeskills Education (CLSE) Programme in all secondary schools in the country. The CLSE concept has been adapted at community level, leading to greater involvement and reach out initiatives for young people out of school.

Part of this intervention has seen HIV prevention messages and information about gender-based violence being disseminated during traditional events that bring young people before the King. The Ministry of Health's Health Promotion Programme also runs radio and television shows educating locals about the dangers of HIV.

The country is also bearing the brunt of dual epidemic of TB and HIV, with 71% of all people who have TB also living with HIV. Furthermore, every year one in every 100 inhabitants develops active tuberculosis (TB) in eSwatini.

In addition, 4.2% of people with TB have multi-drug resistant TB. To tackle the problem, eSwatini has begun strengthening and integrating TB/HIV services.

These services have been decentralised, and are now offered in a "one-stop-shop", where people can seek screening for TB and HIV testing, as well as being able to pick up their treatment for both at the same time.

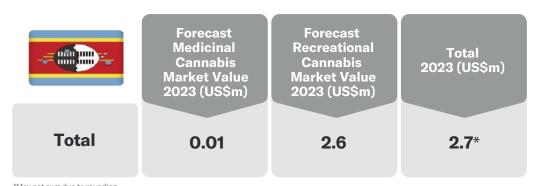
As of 2016, 97% of notified TB patients had a known HIV status; 79% of people with both TB and HIV had commenced receiving antiretroviral therapy. The TB treatment success rate for people co-infected with TB and HIV is 71%.

Stigma associated with HIV and AIDS in eSwatini prevents many people from being tested for HIV or declaring their HIV status. HIV is perceived to be linked with sexual promiscuity and often causes HIV-positive people to be excluded from family activities.

Local health workers are keen for medical cannabis to be legalised in the fight against HIV and Aids. Madzabudzabu Kunene, co-ordinator of the Swaziland Aids Support Organisation in Hhohho has been quoted in media as saying: "In terms of HIV, sometimes it can boost the immune system. It can help in boosting appetite, that is proven."

COMMERCIAL OPPORTUNITIES

Forecast value of eSwatini cannabis market, by sector, 2023



*May not sum due to rounding Source: Prohibition Partners

eSwatini has the potential be a successful cannabis producing nation and an attractive investment prospect if the country decides to legalise cannabis. 2017-report by The Cross Border Land Transport Agency in South Africa states that there are opportunities for the manufacturing of pharmaceutical products in eSwatini. The country boasts natural medicinal plants available for research and development within the state-of-the-art Science and Technology Park, which may prove helpful for future medical cannabis production.

The government is described as being committed to prioritising the promotion of a favourable investment environment. Due to its small domestic market, eSwatini has an export economy, enhanced by the country's strategic existing market agreements. One such agreement is the Economic Partnership Agreement (EPA), signed on 10 June 2016 Southern African Development Community (SADC EPA Group) and comprising Botswana, Lesotho, Mozambique, Namibia, South Africa and eSwatini and the EU.





ZAMBIA

MARKET OVERVIEW

Population (m)	17.1
GDP (US\$b)	25.8
Ruling Government Party	Patriotic Front
Party Stance on Cannabis	Illegal
Total Healthcare Expenditure (US\$b)	1.4
Total Beauty & Wellbeing Expenditure (US\$b)	-
Alcohol Consumption (Litres Per Capita Per Year)	4.8
Prevalence of Tobacco Users (%)	13.8
Prevalence of Cannabis Users (m)	0.88
Average Cost Per Gram of Cannabis (US\$)	0.2

Source: World Bank/ WHO/ UNODC/ Prohibition Partners



The status of medical cannabis in Zambia is one of contradiction. Cultivation of medical cannabis was legalised in Zambia in 1993, when the government introduced the Narcotic Drugs and Psychotropic Substances Act Cap 96. However, due to a lack of awareness, stigmatisation and/or contradictions in the law, the benefit of this legalisation remains unrealised.

At the time of writing, recreational cannabis in Zambia is illegal whilst medical cannabis is legal with a licence. It is vital to note that although technically



classed as legal, the authorities have never issued any licences to grow medical cannabis, pending satisfactory studies on the benefits of medical cannabis. It is legal to grow medical cannabis if a licence is obtained from the Minister of Health but in May 2018, Health Minister Dr. Chitalu Chilufya stated in a speech to the government that he had no intention of issuing any cannabis cultivation licences.

There are signs that medical cannabis could become legalised in the near future, according to the Zambian Minister of Health, Chitalu Chilufya. In May 2018, the minister announced that the government had received

unsolicited proposals for licences to grow medical cannabis but that would only consider issuing licences for medicinal use if there was evidence that it would not cause an increase in the recreational use of cannabis.

As part of the legalising process, in May 2018, Chilufya put in place a multi-sectoral team to conduct tours in nations where medical cannabis is being cultivated and produced. At the time of writing, there is no update on the team's findings.

REGULATORY ENVIRONMENT

Pharmaceutical Cannabis Legislation

Illegal

Medical **Cannabis** Legislation

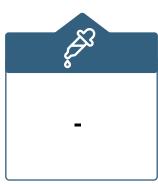


Cultivation is legal with a licence from the Minister of Health, but no licences have been issued to date.

Recreational Cannabis Legislation



CBD/Hemp Oil Legislation



Source: Prohibition Partners

In March 2017, the Minister of Home Affairs, Steven Kampyongo, informed the government that the existing national law provides for the cultivation of medical cannabis. This is according to the

Part II of the Dangerous Drugs Act of 1967, Cap 95 of the Laws of Zambia. In Zambia, the cultivation and use of cannabis and other related substances is mainly regulated by the following laws:

A. The Narcotics and Psychotropic Substances **Act of 1993**

B. The Dangerous Drugs Act of 1967

C. The Medicines and Allied Substances Act of 2013

The 1993 Narcotics and Psychotropics Substances Act trafficking, importation, exportation, possession and cultivation, use of, manufacture and

trading in narcotics, including cannabis.

The Dangerous Drugs Act provides for the licensing, importation, exportation, production, possession, sale, distribution and use of dangerous drugs (including cannabis and its derivatives, cannabis resin and all preparations of which cannabis resin forms the base) intended for medicinal and scientific use, whether in humans or animals.

Any person looking to import or export product drugs covered by the act are required to have a licence issued by the Minister of Health as delegated to the Zambia Medicines Regulatory Authority (ZAMRA). The cultivation of cannabis is prohibited without permission from the Minister of Health. A licence or authorisation to cultivate cannabis for medical or scientific purposes must be applied for via the minister through ZAMRA. The licence or authorisation may be granted with or without conditions attached.



There is a fee attached to the issuance of the licence to cultivate cannabis, though not prescribed by law. However, it remains the prerogative of the minister to decide on the fee to charge. Such a licence or authorisation may be revoked, suspended or amended if the minister deems it necessary.

The Medicines and Allied Substances Act of 2013 provides for the general regulation of the pharmaceutical industry in Zambia. Advertising, distribution, manufacturing and conducting of clinical trials, disposal and all activities related to Medicines and Allied Substances for both humans and animals are provided for in this Act.

Anyone who wishes to cultivate cannabis for medicinal or scientific purposes must apply to ZAMRA, the authority designated to enforce and administer the provisions of this Act. Zambian law allows for the cultivation of cannabis for medical use provided it has been authorised. However, conditions are put in place to safeguard the process from the farm to the factory, laboratory to the research institutions and finally, to the hospitals.

In March 2017, Minister Kampyongo issued a statement that legalising cannabis cultivation would increase Zambia's already high levels of recreational cannabis use. For this reason, the Zambian government would not authorise cannabis cultivation. The minister added that the Ministry of Health had no intention of issuing any cannabis growing licences.

However, one year later, in May 2018, Kampyongo

signed a ministerial statement legalising the personal growing of medical cannabis. Patients are required to obtain a licence from the Minister of Health before they can begin home cultivation. The licences are subject to certain conditions and possible fees; however patients could be allowed to sell or distribute cannabis to others registered in the program if permitted by the Health Minister.

Any individual caught growing cannabis without permission from the minister would still be subject to prosecution, even if they can make the claim they are growing it for medical purposes only. Under the country's Narcotic Drugs and Psychotropic Substances Act, the Home Affairs Minister may regulate illegal drugs via ministerial statement, which can be used to bypass the Zambian parliament.

Contravening Zambia's anti-drug law attracts a substantial fine and imprisonment of up to ten years. In October 2018, local media reported that anti-drug authorities in Northern Zambia arrested 18 people in connection with the cultivation of 100 tonnes of cannabis.

Licences and Availability

No licences have so far been issued in Zambia.

HEALTHCARE ANALYSIS



Source: WHO/ INCB/ Prohibition Partners



The general state of Zambia's healthcare system is poor. Although there are adequate private health facilities in the capital Lusaka, the public health system remains heavily underfunded, and patients requiring serious medical attention will often be evacuated to another country such as South Africa, where there are better medical facilities.

Zambia offers universal healthcare to all its citizens, although treatment is basic and chronically underfunded. Many Zambian doctors leave the country or work solely within the private health system, meaning that the public health sector is subject to a skills drain. The larger cities boast good private hospitals that cater mainly to foreigners and affluent Zambians.

There are pharmacies present in major towns and cities, however these tend to be understocked and lack many everyday drugs.

Zambia is also facing several serious health challenges:

- HIV had an estimated prevalence rate of 13.3% among adults (ages 15-49) in 2014
- Malaria is still endemic despite interventions, control/preventive measures in place
- In 2015, UNESCO estimated the country's average life expectancy was 61.8 years

In speaking to the government on medical cannabis in March 2017, Minister of Home Affairs, Steven Kampyongo listed the following conditions that would qualify for treatment with medicinal cannabis:

- chronic pain resulting from certain chronic medical conditions
- nausea and vomiting in patients receiving certain treatments such as chemotherapy
- loss of appetite in patients with certain chronic conditions
- epilepsy
- glaucoma, a condition associated with increased Intra-Ocular Pressure (IOP) in the eye
- multiple sclerosis symptoms, a condition that is association with spasticity, frequent urination and pain, inflammation of the skin, muscle and other connective tissues

The Minister also noted that due to other drugs available, Zambia did not currently have a gap that would justify growing medical cannabis.

President of the Zambia Medical Association, Dr. Aaron Mukakati is one of Zambia's public supporters of legalising medical cannabis and was quoted by All Africa in February 2017: "Medicinal cannabis works. I am not an economist so I can't speak intelligently on the economic benefits. The risks can be managed, legalise medical cannabis."

Spokesperson for the National Restoration Party (NAREP), Bwalya Nondo has been quoted as stating that the legalisation of cannabis for medical purposes is long overdue. Furthermore, Nondo has stated the NAREP "had critically looked into the issue and found out that the benefits of legalising cannabis for medicinal purposes far outweigh the disadvantages".

COMMERCIAL OPPORTUNITIES

Forecast value of Zambia's cannabis market, by sector, 2023



Source: Prohibition Partners



REST OF AFRICA

Cannabis is widely consumed but mostly illegal across the entirety of the African continent, bar the aforementioned countries. It is very likely that more African nations will trend towards legalisation in a bid to capitalise on the burgeoning global cannabis market, but it is hard to predict how soon this will happen or indeed which country will come to the fore

Below are some of the countries with the highest rates of cannabis consumption in Africa:

The Democratic Republic of the Congo (DRC)

Cannabis is illegal in DRC but cultivation is widespread. Media reports refer to narcotics experts who predict that DRC may become Africa's most prolific cannabis producer, second only to South Africa. Media reports also refer to a study of Congolese farmers, conducted by Professor Ann Laudati from Berkeley University of California, which suggests that 60% of famers in parts of the Kivu region of eastern Congo and up to 90% percent in other unnamed locations grow cannabis.

Egypt

Cannabis is illegal in Egypt, but its use is widespread and often consumed openly in cafes. The International **Narcotics** Control Strategy report acknowledges a "significant market for hashish" in Egypt even though the country is not a major source for of illicit drugs.

In October 2018, Deputy Governor of Cairo MP John Talaat proposed a draft law which seeks to decriminalise cannabis, allowing users treatment instead of detainment. In 2015, Egypt's Tobacco Merchants Association "submitted a proposal to the cabinet in order to legalise the trade and use of hash", arguing that the legislation would help "reduce the state budget deficit within a few years through imposing taxes on hash."

Medical cannabis dates back to Ancient times in Egypt, with references as far back as the Ebers Papyrus (c.1550 BC), the Ramesseum III Papyrus (1700 BC), the Berlin Papyrus (1300 BC) and the Chester Beatty Medical Papyrus VI (1300 BC).

In addition, the ancient Egyptians used hemp in

suppositories to relieve the pain of hemorrhoids, and cannabis to treat sore eyes. Arabic does not have a distinct word for hemp and therefore hemp, CBD and THC would be referred to as "cannabis", which is illegal in the country.

Ethiopia

Cannabis is illegal in Ethiopia and arrests for possession are widespread, despite the country being the spiritual home of Rastafarianism. Cannabis possession sentences usually range from fines to short prison sentences. However, for distribution and trafficking, penalties are more severe, ranging from prison sentences of 5-10 years or longer and a fine of US \$6,100. The serious lack of healthcare infrastructure within the country means the majority of poor Ethiopians continue to use traditional medicines, including cannabis for illnesses. Cannabis is widely used by traditional healers, particularly to aid in the healing of wounds.

Kenya

Cannabis is currently illegal in Kenya but the country could follow in the paths of Lesotho and South Africa towards legalisation in the near future. There have been several petitions in Parliament requesting the legalisation of cannabis. In April 2017 and March 2018, Kenyan researchers, Gwada Ogot and Simon Mwaura delivered their initial petitions to the Parliament. This was followed by Kibra MP Ken Okoth's recent notice of the introduction of the Cannabis Control Bill 2018 in the National Assembly to decriminalise the use of cannabis and draw up regulation for its growth and

Sierra Leone

Cannabis is illegal in Sierra Leone but consumption is widely tolerated. The country is a prolific producer of cannabis and its cultivation is increasingly important to the country's rural economy. Sierra Leone is considered to be the chief cannabis exporter in West Africa to other African countries, the Middle East, Europe and the United States.

In 2013, the National Drug Law Enforcement Agency conducted a survey on the use of illegal drugs in the country. The survey was conducted between July to December 2013 on citizens aged between 14 and 60, and found that around 60% of soldiers and 55% of the Sierra Leone Police are active cannabis consumers.



Uganda

Cannabis is illegal in Uganda. The country's Narcotic Drugs and Psychotropic Substances Act 2015 states that anyone involved in the manufacture, production, sale or distribution of a narcotic drug or psychotropic substance has committed an offence and is liable, on conviction, to a fine of up to US\$645 or up to five years' imprisonment, or both.

The law also prohibits the cultivation of any plant from which narcotic drugs and psychotropic substances may be extracted, without permission from the Uganda health minister. Despite this, news outlets the Times of Israel and Uganda's New Vision Daily reported in July 2018 that Israeli-based medical cannabis manufacturer and distributor Together Pharma Limited, had secured land in Uganda to cultivate cannabis commercially. The firm was reported to have placed an order for cannabis seeds from a supplier in the Netherlands with production slated for the first quarter of 2019.

"The order of the seeds represents an important milestone towards growing cannabis on a farm in Uganda and marketing produce to a Canadian customer by the beginning of next year (2019)," said Nissim Bracha, Together Pharma Limited's CEO.

New Vision Daily quoted spokespeople from National Drug Authority (NDA), Ugandan Investment Authority and the Ugandan police force who all denied any knowledge of whether such a licence had been issued.



APPENDIX ____



THE AFRICAN CANNABIS REPORT ™ DEFINES AFRICA'S REGIONS AS FOLLOWS

EAST AFRICA

Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, Uganda and United Republic of Tanzania

NORTH AFRICA

Algeria, Egypt, Libya, Morocco, South Sudan, Sudan and Tunisia

SOUTHERN AFRICA

Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe

WEST AND CENTRAL AFRICA

Benin, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone and Togo

APPENDIX GLOSSARY __



AAC	• • • • • •	African Action Congress
AFP	• • • • • •	Agence France Presse
APDN	• • • • • •	Portail de l'Agence de Développement du Nord
API	• • • • • •	Active Pharmaceutical Ingredient
ANC	• • • • • •	African National Congress
ATODRU	• • • • • •	Alcohol, Tobacco and Other Drug Research Unit
ВС	• • • • • •	Before Christ
CAP	• • • • • •	Chapter
CBD	• • • • • •	Cannabidiol
CDC	• • • • • •	Cannabis Developing Council
CDCSA	• • • • • •	Cannabis Developing Council of South Africa
CHAG	• • • • • •	Christian Health Association of Ghana
CHAL		Christian Health Association of Lesotho
CINV	• • • • • •	Chemotherapy-induced nausea
CLSE	• • • • • •	Comprehensive Life skills Education
CEO		Chief Executive Officer
CSO	• • • • • •	Chief Strategy Officer
DAFF		Department of Agriculture, Forestry and Fisheries
DRC	• • • • • •	Democratic Republic of the Congo
EDLIZ		Essential Drug List for Zimbabwe
EPA	• • • • • •	Essential Drug List for Zimbabwe
EU	• • • • •	European Union
GDP	• • • • • •	Gross Domestic Product



APPENDIX GLOSSARY ____



GFPPP		Global Forum of Producers of Prohibited Plants
GP		General Practitioner
IAEA		International Atomic Energy Agency
IFP		Inkatha Freedom Party
INCB		International Narcotics Control Board
INC		Incorporated
IOP		Intraocular Pressure
KAIPC	• • • • • •	International Peacekeeping Centre
LFN		Laws of the Federation of Nigeria
LLC		Limited Liability Company
M&A		Mergers & acquisitions
MCAZ		Medicines Control Authority of Zimbabwe
MCC		Medical Control Council
MP	• • • • • •	Member of Parliament
NACOB	• • • • • •	Narcotics Control Board
NDA	• • • • • •	National Drug Authority
NDLEA	• • • • • •	National Drug Law Enforcement Agency
NHF		The National Hemp Foundation
NHI		National Health Insurance
NHIS	• • • • • •	National Health Insurance Scheme
NAREP	• • • • • •	National Restoration Party
ODC	• • • • • •	Office of Drug Control
OECD		Organisation for Economic Co-operation and Development



APPENDIX GLOSSARY ____



PDC	• • • • • •	Pharmaceutical Development Company
RBZ	• • • • • •	Reserve bank of Zimbabwe
SA	• • • • • •	South Africa
SADC		Southern African Development Community
SAFTU	• • • • • •	South African Federation of Trade Unions
SAHPRA	• • • • • •	South African Health Products Regulatory Authority
SAMRC		South African Medical Research Council
ТВ	• • • • • •	Tuberculosis
THC	• • • • • •	Tetrahydrocannabinol
TNI		Transnational Institute
UNDP		United Nations Development Programme
UNESCO		United Nations Educational, Scientific and Cultural Organisation
UNIDO		United Nations Industrial Development Organisation
UNODC	• • • • • •	United Nations Office for Drug Control
US		United States (of America)
WHO		World Health Organisation
YOY		Year On Year
ZAMRA	• • • • • •	Zambia Medicines Regulatory Authority