DRAFT NATIONAL CANNABIS MASTER PLAN FOR SOUTH AFRICA

CONFIDENTIAL

VERSION 5

CONTENTS

ACRONYMS

ARC	Agricultural Research Council
CBD	Cannabidiol
CSIR	Centre for Scientific and Industrial Research
DALRRD	Department of Agriculture, Land Reform and Rural Development
DEFF	Department of Environment, Forestry and Fisheries
DJCS	Department of Justice and Correctional Services
DHET	Department of Higher Education and Training
DoH	Department of Health
DTIC	Department of Trade, Industry and Competition
DSI	Department of Science and Innovation
GCIS	Government Communication and Information System
IDC	Industrial Development Cooperation
ITAC	International Trade Administration Commission of South Africa
NAMC	National Agricultural Marketing Council
SAPS	South African Police Services
UN	United Nations
UPOV	International Union for the Protection of New Varieties of Plants
THC	Tetra-Hydra Cannabinol

1. INTRODUCTION

The legalisation and commercialisation of *Cannabis Sativa* (Cannabis) has been on the forefront of public debate and on top of the agenda of policymakers globally. Cannabis refers to two closely related plant varieties, namely hemp and dagga. These plant varieties belong to the genus known as cannabis. It is a genus of flowering plants in the family Cannabaceae. Three well known species within the genus are *Cannabis sativa*, *Cannabis indica* and *Cannabis ruderalis*. However, *C. ruderalis* may be included within *C. sativa* or all three species may be treated as subspecies of a single species, *C. sativa*. The genus is widely accepted as being indigenous to and originating from Central Asia, with some researchers also including upper South Asia in its origin.

While the more than a century-long prohibition of cannabis has impacted the scientific community comprehensively and exhaustively researching this plant, studies and control tests do provide strong evidence that there are numerous medical benefits to using this plant. Studies also provide evidence that Cannabis's recreational use for adults is a better social policy apparatus as it allows for policymakers to better regulate—ensuring an end to an illicit market and its negative side impacts on society; allows for better oversight; and minimises adolescent access and protects adult consumers from harms of an illegal and illicit market. Furthermore, cannabis, as a recreational-use product, has also been found to be less harmful than alcohol, tobacco and opioids. For a nation-state, there are additional socio-economic benefits of legalisation of cannabis, as there exist a net-positive economic growth opportunity of incorporating the cannabis market into the formal economy. In many states globally, while the criminal penalties or imprisonment for personal use and possession of cannabis was removed, they left the supply of cannabis to the illicit market—fuelling a crime-prone underbelly and networks of individuals operating outside the realm of ethical and moral behaviour.

With the growing public support and judiciaries overturning legislation that criminalises cannabis, a new dawn is emerging that is showing the way for a cannabis global market coming to existence that will uphold democratic principles such as human rights and better application of science and research into the sale and use of cannabis—both medically and recreationally.

On 18 September 2018, the Constitutional Court of South Africa ruled that South Africans can now smoke cannabis in the privacy of their own homes—this provides the impetus to recognise the commercialisation of cannabis. Furthermore, with South Africa's economy facing sluggish growth and society facing the impacts of COVID-19, the commercialisation of cannabis has a net-positive impact on the country by potentially creating new jobs.

The country's economy has been in steady decline for a number of years according to various reports from Stats SA. This state of affairs is attributed to various factors like unreliable energy supply, poor transport systems, declining investments in infrastructure and many other related factors. The economic challenges resulted in increased liquidations and bankruptcies of many companies. The poor state of the economy has also resulted in reduction in government revenues and subsequent increases in poverty and high unemployment rates. Geopolitics are in a flux which further compounded economic problems for South Africa. The emergence of a new bipolar world order, with USA and China as protagonists, has also slowed down global economic growth. Both countries are major export destinations for South African products. Consequently, South Africa was negatively affected by these tensions.

The cannabis plant contains at least 70 unique compounds, collectively known as phytocannabinoids, of which two are tetrahydrocannabinol (THC) and cannabidiol (CBD). THC is a cannabinoid that produces a psychoactive effect but also has medicinal properties. CBD is a cannabinoid with mostly medicinal properties. The major difference between the hemp and dagga is the physical appearance and the amount of THC they contain. Hemp plants are generally taller whereas dagga plants are shorter and bushy. Industrial hemp and medicinal cannabis are currently broadly classified as hemp, although the cultivation practices, morphology, growth pattern, cultivation requirements, etc. are quite different. Hemp for industrial use is generally suitable for open field production while medicinal cannabis is grown under protection for optimum results. Hemp plants contain lower levels of tetrahydrocannabinol (THC). Dagga, on the other hand, contains high levels of THC. THC and CBD, as well as other cannabinoids and compounds, are secreted by glandular trichomes on flower buds of female plants.

Cabinet took a decision in July 2019 that the country needs a national strategy to commercialise cannabis in order to increase economic growth, create jobs and alleviate poverty. The development of this Cannabis Masterplan is underpinned by the Re-imagined Industrial Strategy which is operationalised through the application of a master-planning process that seeks to create a shared vision and secure reciprocal action-oriented commitments between industry, government and labour for long-term sustainability and growth of the national priority sectors. Therefore, the development of the master plan will follow an integrated approach with various affected departments assigned different pillars to lead. The scope of the master plan includes both hemp and dagga. The Department of Agriculture, Land Reform and Rural Department (DALRRD) is the convener of this process in line with Cabinet's decision.

2. PURPOSE AND OBJECTIVES

The purpose of the master plan is to provide a broad framework for the development and growth of the South African cannabis industry in order to contribute to economic development, job creation, inclusive participation, rural development and poverty alleviation.

The purpose is anchored on the following key objectives:

a. Establish an inclusive, sustainable and globally competitive cannabis industry in South Africa
b. Increase the volumes and variety of cannabis products destined for both local and export markets
c. Establish and increase the capacity of South African farmers to produce dagga and hemp
d. Create opportunities for creation of small- and medium-sized enterprises across the cannabis value chain
e. Increase investments in research and technology development to support increased production, productivity and competitiveness of the cannabis industry
f. Establish and increase the manufacturing capacity of the South African cannabis industry
g. Designate cannabis and hemp products with the designated local content legislative framework

3. IMPORTANCE OF CANNABIS

Cannabis has long been a subject of intrigue and perceptions. Humans have used the plant for hundreds of years for fibre, oils, medical treatment, food and recreational purposes. It is used for a variety of purposes as discussed below:

3.1 MEDICINAL

The cannabis plant has a history of medicinal use dating back thousands of years in many cultures. Medical cannabis refers to the type of cannabis and cannabinoids that are prescribed by physicians for their patients. The use of cannabis as medicine has not been rigorously researched and tested owing to production and governmental restrictions, resulting in limited clinical research to define the safety and efficacy of using cannabis to treat diseases. Preliminary evidence suggests that Cannabis can reduce nausea and vomiting during chemotherapy, improve appetite in people with HIV/AIDS, reduce chronic pain and muscle spasms and treat severe forms of epilepsy. Medical cannabis is administered through various methods, including capsules, lozenges, tinctures, dermal patches, oral or dermal sprays, cannabis edibles and vaporising or smoking dried buds. Synthetic cannabinoids are available for prescription use in some countries, such as dronabinol and nabilone.

Cannabis is used to treat illnesses such as pain and inflammation, controlling epileptic seizures and possibly even mental illness and addictions. In some countries it is also prescribed to help with a range of medical conditions, including chronic pain, glaucoma, and poor appetite.

There is evidence that indicates that dagga (marijuana) or some of its components, such as CBD, is useful for relieving severe pain, inflammation, nausea and chronic conditions. However, CBD is just one of at least 70 substances (cannabinoids) found in marijuana. People have many health concerns about the use of the drug. Another primary component of dagga is delta-9-tetrahydrocannabinol (THC), which is the key mind-altering (psychoactive) substance in dagga (marijuana).

CBD is produced mainly in the flower buds. The CBD oil is used in many forms, including CBD oil tinctures, gummies, creams and many more. CBD oil contains cannabidiol and often other cannabinoid compounds in an oil suspension (carrier oil) and is typically ingested orally. Topical CBD such as balms and creams can be applied to the skin. The concentration of CBD varies from product to product and claims on potential health benefits are numerous, although very few proven by clinical tests. The greatest amount of evidence for the therapeutic effects of Cannabis relate to its ability to reduce chronic pain, nausea and vomiting due to chemotherapy and spasticity. Furthermore, there are no approved quality standards currently available in South Africa and similarly no quality control on products currently sold on the local market. In South Africa, extraction of CBD or THC from the cannabis plant is considered to be 'manufacturing' in terms of the Medicines and Related Substances Amendment Act, 2015 (Act No14 of 2015) and requires a licence to manufacture issued in terms of Section 22C of the Act. Hemp seed oil (if within the thresholds mentioned above) is excluded from the Medicines Act.

3.2 RECREATIONAL

Recreational use of cannabis refers to the variety of ways Cannabis is consumed. The common ways of consumption include inhalation (smoking and vaporising) and ingestion. Each method leads to different psychoactive effects because of the THC and other chemicals being activated and then consumed through different administration routes. It is generally considered that smoking, which includes combustion toxins, comes on quickly but lasts for a short period of time, while eating delays the onset of effect but the duration of effect is typically longer. Research has revealed that vaporiser users experience the same biological effect, but without the toxins associated with smoking.

Cannabis can be smoked with implements such as joints, blunts, bongs and pipes. Makeshift pipes or commercial pipes may be used, or cigarette-like joint or cigar-like blunt may be smoked. Local methods have differed by the preparation of the Cannabis plant before use, the parts of the cannabis plant that are used, and the treatment of the smoke before inhalation. A vaporiser heats herbal cannabis which causes the active ingredients to evaporate into a gas without burning any plant material. Vaporising releases a lower proportion of carbon monoxide and other toxic chemicals than smoking, although the proportion may vary depending on the design of the vaporiser and the temperature at which it is set.

Cannabis flowers, when harvested and dried, give rise to one of the most common drugs in the world. Cannabis is usually consumed for its relaxing and calming effects. It is smoked or made into a concentrate, which involves refining it into a more potent product, infused products and edibles.

A key component of dagga is delta-9-tetrahydrocannabinol (THC), which is the key mind-altering (psychoactive) substance in marijuana. It acts on specific brain receptors, causing possible mood changes, depression, suicidal thoughts, memory issues and disruption to normal learning abilities. It may also produce dependency. The compound is also known to stimulate appetite (informally known as "the munchies") and induce a relaxed state, as well as other effects on sense of smell, hearing, and eyesight. THC can also cause fatigue and in some people, it may reduce aggression.

Cannabis herb consists of dried and crumbled leaves and flower buds of the female cannabis plant, which are generally smoked. By contrast, hashish (or hash) is comprised of extracted cannabis trichomes, which contain the psychoactive compound, as well as other cannabinoids such as CBD, CBN and CBG. There are many different ways to make hash, and some of these techniques have been developed over hundreds of years by traditional cannabis-growing communities. Cannabis resin are made by sifting mature cannabis flowers through a series of sieves until only a resinous powder remains. This powder is compressed and heated to allow the resins to melt and stick together forming blocks.

3.3 INDUSTRIAL

Both dagga and hemp have a multitude of industrial and commercial uses. Hemp is one of the fastest growing biomasses known and identified as one of the earliest domesticated plants. Hemp is used to make a variety of commercial and industrial products, including rope, textiles, clothing, shoes, ceiling boards, bricks, food, paper, biodegradable plastics, paint, insulation, and biofuels. The bast fibres can be used to make textiles that are 100% hemp, but they are commonly blended with other fibres, such as flax, cotton or silk and also virgin and recycled polyester to make woven fabrics for apparel and furnishings. The inner two fibres of the plant are woodier and typically have industrial applications, such as mulch, animal bedding and litter. When oxidised, hemp oil from the seeds becomes solid and can be used in the manufacturing of oil-based paints, in creams as a moisturising agent, for cooking and in plastics. Dagga, on the other hand, is used mostly for medicine, cosmetics, industrial and recreational purposes.

3.4 FOOD AND BEVERAGES

Reports from several countries indicate that food products made from cannabis are the fastest-growing part of the market. The cannabis food and beverage market size was valued at $427.0 million globally in 2018 and is estimated to reach $2,632.0 million by 2026. Cannabis edibles are food products that contains cannabinoids, especially tetrahydrocannabinol (THC). They include mints, gummies, candy, ice-cream and cookies. Infused products include alcohol, ointments, and vaporisers. Hemp seeds can be eaten raw, ground into hemp meal, sprouted or made into dried sprout powder. Hemp seeds can also be made into a liquid and used for baking or for beverages such as hemp milk and tisanes. Hemp oil is cold pressed from the seed and is high in unsaturated fatty acids. The leaves of the hemp plant, while not as nutritional as the seeds, are edible and can be consumed raw as leafy vegetables in salads and pressed to make juice. Hemp seeds have been used in bird feed mix as well. Hemp seed is also used as food for other animals.

Cannabis-infused drinks also form part of the edibles. Most edibles contain a significant amount of THC, which can induce a wide range of effects, including relaxation, euphoria, increased appetite, fatigue and anxiety. THC-dominant edibles are consumed for recreational purposes. Some edibles contain a negligible amount of THC and are instead dominant in other cannabinoids, most commonly cannabidiol (CBD). These edibles are primarily used for medical purposes only. Foods and beverages made from non-psychoactive cannabis products are known as hemp foods.

Hemp seed oil is the oil obtained by cold pressing the seeds of the hemp plant. Hemp seed oil does not contain cannabinoids, such as CBD and THC, apart from trace levels that may be present. As animal feed, hemp can benefit health and increase performance. The seed is high in much-desired fatty acids, such as Omega 3, Omega 6 and Omega 9, while it is also very high in proteins and high in fibre, aiding an animal's digestive system. It also is a good source of minerals, such as copper, iron, boron, manganese, nitrogen and zinc.

The cannabis food and beverage market has been fragmented based on product differentiation, distribution channels and region. The market is subdivided into bakery products, chocolate, cereal bars, candy, beverages, ice cream and others. However, its distribution channel is categorised into mass merchandisers, specialty stores, online stores and others. The regional markets for food and beverage are divided as follows: North America, Europe, Asia-Pacific and Latin America, Middle East and Africa (LAMEA).

Cannabis beverages have been very popular in the mature and emerging markets. This could be attributed to rise in number of people choosing cannabis-infused products. Furthermore, an increase in disposable income has aided the cannabis food and beverage market growth. Moreover, introduction of additional innovative beverages that are made by infusing cannabis are some other factors that further drive the growth of the market. However, fluctuating prices of raw materials act as a restraint for this market. On the contrary, growth in demand for cannabis food and beverages by high income groups and introduction of new variety of cannabis flavoured water are anticipated to provide growth opportunities for the cannabis food and beverage market.

When analysing the cannabis food and beverage market by product type, the bakery products segment generated the highest revenue in 2018. This can be attributed to increasing demand for bakery food infused by cannabis such as THC and CBD in countries such as the United States of America (USA) and Canada. Moreover, rise in penetration of cannabis in beverages industry and spirits is expected to increase the demand for cannabis in the countries such as Mexico and Brazil. However, the cereal bars segment is expected to grow at the highest CAGR throughout the cannabis food and beverage market forecast period owing to increase in demand by athletes who are preferring cannabis food products for relaxation after workouts.

In terms of distributions channels, the specialty store segment was the leading supply chain point with highest cannabis food and beverage market share in 2018. This can be attributed to increasing adoption of cannabis products from specialty stores chains in both the mature and emerging markets. Moreover, the one stop solution provided by hypermarkets and supermarkets where consumers can get all types of cannabis food and beverage market makes it a very popular option for shopping for consumers. However, the online sales segment is expected to witness the fastest growth through the forecast period owing to rapid penetration of cannabis food items on the E-commerce platforms. Availability of cannabis drinks on leading online platforms is also playing a crucial role in the cannabis food and beverage market.

4. STATUS OF GLOBAL CANNABIS INDUSTRY

The global medical cannabis industry is estimated to generate U$82,9 billion by 2027. Amidst the COVID-19 pandemic, a new report expects Canada’s recreational marijuana industry to double revenues this year and grow more than 500% by 2025. Canada has also made recreational cannabis legal.

Many analysts have predicted that the industry could increase to USD$272 billion by 2028. The International Monetary Fund (IMF) indicated that cannabis is the 59th largest economy in the world. It is clear that this industry has great potential to impact the global economy as well as various other related industries. Cannabis is quickly becoming more broadly accepted around the globe, which is a trend that is likely to continue in coming years.

The United Nations estimates that approximately 3,9% of the global adult population, or 190 million people, are cannabis users compared to one billion smokers. The highest prevalence of cannabis users was found to be from Europe, followed by the US and the Oceania Region. Although small, the Oceania Region is considered significant given its access to the Asia Pacific region.

Increased liberation and legalisation coupled with the increased use of dagga in medical as well as recreational applications is expected to promote the growth and development of this industry. Growing adoption of cannabis as a pharmaceutical product for treating severe medical conditions, such as cancer, Parkinson’s disease, Alzheimer’s disease, arthritis and other neurological conditions is anticipated to drive demand for medical marijuana in the forthcoming years. Increasing need for pain management therapies and growing disease burden of chronic pain among elders is also expected to boost demand.

Legalisation of medicinal marijuana and decriminalisation in some countries has led to a significant decrease in the black market, as people are resorting to legally purchasing cannabis for medicinal as well as recreational use. Moreover, government earnings through taxation are further viewed as opportunities for countries to earn revenues. Presence of a large customer pool and legalisation of medical marijuana in most countries is expected propel the product demand across the globe. However, legalisation of medicinal cannabis in European countries, accompanied by stringent rules and regulations regarding the product sale and cultivation, may limit the overall growth in Europe and in turn for the global market.

Other promising markets for cannabis are Australia, Germany, Poland, Colombia, Uruguay and Israel. Israel is currently at the forefront of providing technology and knowledge transfer to the other world markets. As the newer markets such as the U.K. and Thailand create their legal structure for cannabis, the revenue growth is expected to witness significant growth. Legalisation of medical marijuana in South Korea and Thailand could signal the beginning of that trend in Asia. Countries that are proceeding towards legalising recreational cannabis in the near future include Mexico, Luxembourg and New Zealand. It is highly likely that there will be increased adoption of medical marijuana programmes in coming years, even in countries that have been traditionally hesitant.

Many countries, which include Argentina, Australia, Canada, Chile, Colombia, Croatia, Cyprus, Finland, Germany, Greece, Israel, Italy, Lithuania, Luxembourg, North Macedonia, Norway, the Netherlands, New Zealand, Peru, Poland, Switzerland and various states in the United States, among others, have legalised the medical use of cannabis. In some jurisdictions, decriminalisation manifests itself in a reduction of legal penalties. This can be done either by changing them to civil penalties, such as fines, or by diverting drug use offenders away from a criminal conviction and into education or treatment options. Various US States, among others, Connecticut, Delaware, Illinois, Maryland, Mississippi, Nebraska and New Hampshire, have decriminalised private possession or the use of small amounts of cannabis by adults. Other jurisdictions that have decriminalised the adult use of limited amounts of cannabis include Belgium, Australia, Belize, Bermuda, Bolivia, Columbia, Czech Republic, Estonia, Israel, Mexico and the Netherlands.

Hemp was the first in terms of been legalised for use by most countries for the last 20 years. There are close to 38 countries that are reported to be growing hemp on a commercial scale. Canada was the first country to legalise the cultivation of hemp in 1998. Other countries followed in years later. The driving force for these developments was that it is been used for industrial purposes.

4.1 MAJOR CANNABIS PRODUCING COUNTRIES

Countries that are at different stages and levels in terms of regulating Cannabis throughout the world is described below:

a. **Canada**. Canada’s first-mover status has helped the country emerge as the global leader in cannabis. Canada is the first country to legalise dagga for medical use. Canada had now gone further and became the first-ever country to legalise dagga for recreational use. Canadian companies also gained some success venturing south of the border into USA. The United States of America has generally been less welcoming to Canadian cannabis companies. This included imposing a travel ban on Canadians who are investing in the US cannabis market. This had forced some of these countries to look at the European and other markets across the world.

b. **Portugal.** Cannabis laws in Portugal are regarded as amongst the most progressive in the world. In 2001, the government decriminalised personal cannabis use, focusing rather on treatment rather than punishment. Treatment is provided free of charge and is accessible to all drug users. The overall number of drug users in the country had declined. Portugal legalised medical cannabis in 2018. Drug trafficking remains an offence in Portugal and trafficking in cannabis is punishable with a period of imprisonment ranging from four to 12 years, unless users sell drugs to finance their own consumption, in which case the maximum penalty is reduced to three years.

c. **Uruguay.** Uruguay fully legalised cannabis in 2013. Uruguay is one of the few countries in the world to fully legalise the production, sale, and consumption of recreational marijuana. Interestingly, the government is also actively involved in the regulation process. Adult resident users must register with the authorities that monitor their purchases, which can be no more than 40 g per month. Residents can also collaborate and grow their own through Uruguayan cannabis Clubs. These organisations, formed by up to 45 adults and with a legal limit to grow up to 99 plants, appear to provide a safe method of procuring cannabis. The country has about 85 cannabis clubs. Over 8 000 Uruguayans are registered as home growers. This was followed by a sharp decline in crime rates and an increase in employment opportunities. These are clear indications that a legal cannabis industry can contribute to economic growth and job creation.

d. **Spain.** Although legislation does not criminalise the possession of cannabis, the dealing in cannabis is criminalised. This has resulted in the formation of cannabis clubs, which are non-commercial entities with the goal of providing their members with enough cannabis to meet their personal needs. The social clubs were first established in 2002 and can provide cannabis to their members. Members are not allowed to sell cannabis or distribute it to minors. In Spain, the possession of large quantities of cannabis does not constitute an offence unless this is done for the purpose of trafficking. Consumption of marijuana in public is not permitted.

e. **United States of America.** The federal law (the Controlled Substances Act of 1970), classify cannabis as a Schedule I substance, determined to have a high potential for abuse and no accepted medical use, thereby prohibiting the use, possession and even the medical use of cannabis. Colorado and Washington approved recreational cannabis in 2012. Alaska, Oregon and the District of Columbia followed suit in 2014. California, Maine, Massachusetts and Nevada approved adult-use recreational cannabis in 2016 and Michigan in 2018. In 2018, Vermont became the first state to legalise marijuana for adult use through the legislative process, rather than a ballot initiative. Although Maine approved recreational use of cannabis in 2016, it was only legalised in 2018. In 2018, various other US States (Connecticut, Delaware, Georgia, Hawaii, Kansas, Kentucky, Maryland, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New Mexico, New York, Pennsylvania, Rhode Island, South Carolina, Wisconsin and West Virginia) considered bills that would legalise the recreational use of cannabis. Draft legislative proposals were filed in Hawaii, Massachusetts, New Hampshire, New Mexico, North Dakota and Rhode Island. The measures in New Hampshire and Rhode Island were enacted and established commissions to study the legalisation, regulation and taxation of marijuana.

f. **Luxembourg.** Luxembourg has recently indicated that it also considering legislation to legalise the recreational use of cannabis.

g. **Amsterdam.** Cannabis is not legal but can be consumed in “coffee shops.” Amsterdam is famous worldwide not just for its unique art, architecture, and history, but also their “coffee shops” which have made the nation a must-visit tourist destination. With almost 600 “coffee shops”, aka establishments where locals and tourists can purchase and consume cannabis, recreational cannabis is still illegal—but its usage and consumption are often tolerated by authorities. While cultivation is strictly illegal, possession and sale of small quantities, up to 5 g, is not punishable under law. Foreigners, on the other hand, are not allowed to purchase at all, but that does not seem to stop the tourists.

h. **Italy:** One of the top hemp producers in the early 20th century, cannabis forms an integral part of Italy’s history and culture. Medical marijuana was legalised in 2007 and earlier this year political movements have garnered momentum to legalise it recreationally.

i. **Germany:** Home is to the largest medical marijuana market in Europe, as reported by Prohibition Partners. Talks are in progress between the Green Party and the Free Democratic Party—part of which includes complete legalisation and sale through pharmacies or licensed dispensaries.

j. **Mexico:** Open to change and hoping to follow Portugal's example, the government is looking into decriminalisation to put an end to drug cartels by allowing people to possess very small quantities of marijuana.

k. **Colombia:** Another nation aiming to fight the illegal drug trade. After the decriminalisation of marijuana possession, medical marijuana was legalised in 2016; next on the cards is probable legalisation for recreational marijuana.

l. **Jamaica:** Marijuana was decriminalised in small quantities in 2015 and in 2016 marijuana was legalised. Inspired by the booming prosperity of the industry in the US, there is a strong push to legalise recreational marijuana in the country.

m. **Czech Republic:** By legalising medical marijuana and decriminalising recreational marijuana, Czech Republic, has become one of the topmost tourist attractions when it comes to cannabis enthusiasts.

n. **Paraguay:** The second largest producer of cannabis on the black market (after Mexico). Paraguayans are not allowed to cultivate for recreational purposes. Since the legalisation of medicinal marijuana allowed importing and growing for medicinal use, activists have been fighting for the right to grow their own plants.

4.2 AFRICAN COUNTRIES

The cannabis industry in most African countries is dominated mostly by recreational use than other uses as described below:

a. **Nigeria**. This country is described as being home to the largest number of cannabis consumers on the African continent by a huge margin of over 20 million users. Cannabis consumption for medical and recreational purposes in Nigeria is illegal and carries the potential for serious penalties. Prohibition does not seem to have had much of an effect on the level of consumption.

b. **Ethiopia.** The country is the largest user of cannabis on the continent. There are about 7 million consumers of the drug despite the fact that cannabis for medical and recreational use is illegal in all forms.

c. **Egypt**. The country ranks third in the continent with 5.9 million cannabis users. Cannabis products are illegal to possess and consume, even though the use of hashish has a long cultural and social history in the country.

d. The **Democratic Republic of the Congo** is fourth on the list, with 5 million cannabis users.

e. **Tanzania** has the highest number of cannabis users in East Africa and is ranked fifth in the continent with just over 3.5 million consumers.

f. **Kenya** comes in close behind at second most consumers in East Africa and sixth most overall.

g. **Sudan** is seventh with 2.7 million users, and Uganda comes in eighth with 2.6 million users. **Madagascar** is ninth with 2.1 million users, with **Ghana** a close tenth with 2 million.

h. **Lesotho**. In 2017, Lesotho became the first country in Africa to allow cultivation of cannabis for medicinal purposes. However, an exorbitantly expensive licensing process has ensured that the market is dominated by foreign companies. Many local farmers in the country have been complaining that they are not benefiting anything from this industry. Lesotho has issued over 100 licenses, but for any capital that comes in, all the profits go out. Meanwhile, the rural farmers outside of licensed premises are still being arrested and prosecuted.

i. The countries with the fewest cannabis users are Malawi, Niger, Zambia and Zimbabwe, all of whom are home to less than 1.5 million cannabis users.

5. CURRENT STATUS OF CANNABIS INDUSTRY IN SOUTH AFRICA

The size of the cannabis industry in South Africa is estimated to be about R28 billion. The bulk of the sector had largely operated underground and its products were traded on the black market. Cannabis in South Africa is largely grown for recreational use. The number of dagga users in South Africa is estimated at 3.5

million. Interpol rated South Africa as the fourth largest producer in the world. South Africa has good climate for growing both hemp and dagga.

Cannabis is still largely regarded as an illegal drug in South Africa. There is a long list of regulatory instruments used over the years to prohibit the cultivation, possession and use of cannabis in this country. Cannabis was wholly criminalised in South Africa in 1928 under the Medical, Dental, and Pharmacy Act. Cannabis is currently regulated under the Medicine and Related Substances Act as well as the Drugs and Drugs Trafficking Act. It is largely regarded as an illegal substance according to these two pieces on legislation. Therefore, cultivation, possession, trade and use of both dagga and hemp is prohibited.

The cannabis industry has been inhibited by regulatory restrictions for most of recent history, but the legal market has emerged rapidly as more governments legalise medical and adult use. Driven by efficacy, medicinal marijuana is gaining traction both within the medical fraternity and with the general population. The stigma is slowly being challenged and will eventually be removed. Medicinal acceptance of the drug will lead to the eventual legalisation for recreational use.

The cannabis industry in South Africa entails the production and use of both hemp and dagga as illustrated in the subsections below:

5.1 HEMP

Hemp cultivation in South Africa officially started in 1999. The Eastern Cape Provincial Department of Agriculture in collaboration with the then National Department of Agriculture, as well as Department of Trade and Industry embarked on a National Hemp Pilot Initiative aimed at establishing the hemp industry in South Africa. This initiative was informed by preliminary studies done by the CSIR and partners, which indicated favourable conditions for growing hemp within parts of Eastern Cape, Western Cape and KwaZulu-Natal.

The Agricultural Research Council was given the mandate to conduct breeding and agronomic research on hemp. These programmes were conducted over a period spanning more than twenty years. The hemp breeding programmes resulted in development of two cultivars, namely, SA Hemp 1 and SA Hemp 2. The two cultivars are currently awaiting variety listing and registration for plant breeder's rights, once all the current legal restrictions had been removed. The agronomic research work resulted in documentation of best practices in the form of production guidelines that are appropriate for South African conditions.

Commercial trials were conducted under the guidance of the ARC, DAFF and the Eastern Cape Department of Agriculture. The trials proved that commercial hemp production in South Africa is possible and might be feasible. They further proved that commercial production of hemp by smallholder farmers is possible, but the production costs are too high. The security requirements regarding putting up a 2 m-high fence around the field is unaffordable for most farmers. This may be a serious barrier for new entrants.

The National Agricultural Marketing Council (NAMC) was commissioned to carry out economic feasibility studies to determine as to whether the hemp industry will be economically viable in South Africa. The NAMC worked with organisations like the Industrial Development Corporation (IDC), private sector companies, the Agricultural Research Council and many others.

These studies proved that the hemp industry in this country may be economically feasible and sustainable if all the current legal restrictions can be addressed or removed altogether. The key recommendations from these studies are:

a. South Africa imports hemp products from other countries which gives a clear indication that there is demand for hemp products domestically. Consequently, local production has potential to replace these imports at a lower cost.
b. Out of all the three main components of a hemp plant, the most profitable one is seed followed by leaves. Fibre comes out last. This particular finding is also in line with global trends.
c. There is a need for the establishment of an industry association to coordinate matters relating to the hemp industry which will serve as a representative body on behalf of all role players.
d. The legal status around hemp needs to be sorted out in order to unlock the economic potential of this industry. There is a need for responsible government departments to consider effecting amendments to existing legislation that prohibits production of hemp in South Africa.

Hemp grows well in Eastern Cape, KwaZulu-Natal and Western Cape. The development in terms of technologies will make production in other parts of the country be feasible.

5.2 DAGGA

Dagga has a long history in South Africa. It had been cultivated by rural growers in parts of the Eastern Cape, KwaZulu-Natal and other provinces for many years. Dagga was harvested and transported to most parts of the country, especially to major towns and cities were it was sold for recreational use. There are also reports that some of the dagga is being exported to other countries. All of this was done even though it is illegal. The income derived from illicit dagga cultivation served as source of livelihoods to many households in the poverty-stricken areas of South Africa. The growers managed to put food on the table for their families and pay for their children’s education.

Dagga grows well in almost all the nine provinces. The optimum growing conditions exist in what is known as the dagga belt. This is an area that extends from Eastern Cape to KwaZulu-Natal. It is referred to as a traditional crop in this area. It is estimated that more than 900 000 small-scale farmers are growing dagga. The target market for majority of their harvest is Cape Town, Johannesburg, Durban and also other South African towns and cities. Millions of people depend on income from dagga.

The landmark Constitutional Court judgement in September 2018 brought a new dimension to the cannabis industry in South Africa. The court ruled that the use, possession and cultivation of cannabis in private dwellings was not illegal and should be allowed. The Court gave Parliament 24 months from the date of the judgment to bring the ruling in line with South African laws. Even though private use of cannabis has been decriminalised, the buying and selling of cannabis, cannabis oil and cannabis seeds remains illegal. The Cannabis for Private Purposes Bill was developed to address the concerns raised by the Constitutional Court. The indigenous dagga growers and sellers are now worried that everyone will be able to plant their own dagga in their own homes, therefore they will not be able to make money from selling what they are growing in that area. The other problem is that as the number of buyers decreases, the surpluses will increase and the prices will go down.

The Department of Health is currently piloting the use of cannabis for medicinal use. A number of licenses had been issued in this regard. Companies issued with these licenses were required to obtain off-take agreements on export markets because local trade is currently not allowed. These companies are also expected to import seed from other countries and not source them from within the country because local trade in cannabis seed is prohibited.

6. CHALLENGES FACING THE CANNABIS SECTOR IN SOUTH AFRICA

6.1 LEGAL CHALLENGES

The cannabis industry has been inhibited by regulatory restrictions for many years. Cannabis is controlled under the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol (Schedules I and IV).

The biggest legal challenge is that there is no law in the RSA that allows for commercialisation of cannabis. The Departments of Justice and Health can only remove impediments for commercialisation, but they cannot be the drivers of commercialisation. There needs to be another department or departments that will drive such legislation.

In South Africa, cannabis is regulated in terms of two pieces of legislation, namely:

a. **Medicine and Related Substances Act, 1965 (Act No.101 of 1965),** administered by the Department of Health. The purpose of the Medicine and Related Substances Act, 1965 (Act No. 101 of 1965) is to provide for the registration of medicines and related substances intended for human and for medical devices.

The Department of Health had, during May 2020, changed the legal status of cannabis. Cannabis had been removed from Schedule 7. THC is now listed as Schedule 6 which legalises it to be used for medicinal purposes. CBD is listed as Schedule 4 if it is going to be used as complementary medicine. It is listed under Schedule 0 if it is being used for food, cosmetics, beverages and other manufactured products. Problems, however, remain with regard to regulation of cannabis seed. The listing of CBD in both Schedule 0 and Schedule 4 is potential source of confusion in terms of implementation.

b. **Drugs and Trafficking Act, 1992** (Act No. 140 of 1992), administered by the Department of Justice and Correctional Services which is enforced by the South African Police Services. The purpose of the Drugs and Drug Trafficking Act, 1992 (Act No. 140 of 1992) is to provide for the prohibition of the use or possession of, or the dealing in, drugs and of certain acts relating to the manufacture or supply of certain substances or the acquisition or conversion of the proceeds or certain crimes; for the obligation to report certain information to the police; for the exercise of the powers of entry, search and seizure; and for matters connected herewith.

c. **International Law**

South Africa is party to three international Treaties that impact the legal status of Commercialising cannabis:

- The UN Single Convention on Narcotic Drugs, 1961 (as amended by the 1972 Protocol);
- The UN Convention on Psychotropic Substances, 1971;
- The UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.

6.2 HIGH BARRIERS FOR NEW ENTRANTS

Currently, the only route into the legal Cannabis trade in South Africa is by obtaining a South African Products Regulatory Authority license for medical marijuana. Nevertheless, for rural farmers, there are considerable barriers to entry, including an extensive list of quality control measures and infrastructure that need to be implemented, accompanied by prohibitive costs. It is estimated that the costs for setting up a facility to the required licensing standards and prepare a license application would be as high as R6 million. The application fee alone is approximately R24 000. The current regulations also forbid anyone with a criminal record or any form of drug-related offence from applying for a license, which further restricts the number of small-scale growers.

The current legislative framework allows permits to be issued only to those people or organisations who intend on undertaking research projects. No commercial permits are allowed at the current moment. Applicants are also required to pay application fees of about R900. They are also required to put up a 2 m high fence around their lands and ensure that the gates are locked for 24 hours. These measures are seen as creating high barriers to resource-poor farmers and companies that would like to enter and participate in the hemp industry.

6.3 NEGATIVE PUBLIC PERSPECTIONS

Cannabis invokes mixed reactions from general public and other stakeholders. Most people feel that government must put more restrictions on this industry to protect vulnerable members of the society against drugs. The opposition to any legalisation of cannabis is associated with the beliefs that it will worsen the public security conditions in the country. There are also strong perceptions that cannabis will serve as a gateway to the use of harder and heavier drugs. The addictive nature of dagga raises many concerns. Use of dagga by adolescents is associated with an increased risk of a range of negative health outcomes, including future depression and anxiety disorders. There are many people who believe that any relaxation of current restrictions will lead to a situation where government will be unable to curb increased illegal trafficking.

6.4 SEED SUPPLY CHALLENGES

There is currently no formal seed supply system for cannabis due to the fact that it is treated as an illegal commodity. Seed is currently obtained via informal markets and networks. This creates a regulatory challenge in that it is virtually impossible for government to regulate and guarantee the quality of seed that is traded. The farmers are therefore at risk of being sold poor quality seed with low germination percentages. The availability of seed as and when needed is a serious challenge for producers. The other option is to import seed from other countries, thereby incurring additional costs. This increases overall production costs for farmers.

6.5 MANUFACTURING CHALLENGES

The manufacturing of variety of products from cannabis is a huge challenge for South Africa. There is lack of appropriate machinery and expertise to produce a variety of cannabis products. Manufacturing of a variety of products from raw material is crucial for the sustainability of the cannabis industry. South Africa might be forced to import machinery and the appropriate expertise from other countries. The long-term solution will be to incentivise local production of the appropriate machinery for cannabis.

6.6 RESEARCH AND DEVELOPMENT CHALLENGES

Research, development and innovation (RDI) are essential for product development, manufacturing and commercialisation of cannabis products. South Africa has both the innovation and technology capacity to conduct world-class studies on cannabis. Some of the existing and emerging challenges that the cannabis RDI sector will face is limited financial resources across the innovation value chain. While the sector is developing rapidly, the so-called Historically Black Universities are still excluded in terms of appropriate human capital and strategic infrastructure. These institutions are located in rural areas, where most of the poor and marginalised cannabis growers are situated. The challenge will be leveraging resources to finance basic and applied research, pre-clinical and clinical trials, product development, technology demonstration and commercialisation studies. The focus will be on medical and medicinal cannabis, and to a lesser extent hemp, as sufficient studies have been conducted in South Africa.

6.7 PROLIFERATION OF UNREGULATED CANNABIS PRODUCTS

South Africa is facing a huge deluge of cannabis products of all kinds. These products range from energy drinks, chocolates, beers, health and beauty products and many others. These products are sold mostly through street vendors, garage shops and smaller retail outlets. Unfortunately, these products had not gone through any form of regulatory system to test for their safety and efficacies. This means that the general public is consuming drinks and food that had not been approved by any government department or its agencies. The same applies to health and beauty products along with a whole range of other products that are being sold to the general public. The problem is that people are being ripped off in terms of their finances and at the same time their health is also at risk.

6.8 FRAGMENTATION

The cannabis industry is highly fragmented. The main reason for this is that it is still an illegal industry and therefore role players had not come out openly. It is said that there are more than 900 000 smallholder dagga farmers that are involved in primary production of the commodity. There are also an unknown number of buyers, middlemen, and traders of the commodity. Because of all these factors, there is no single industry body that represents the interests of the majority of these stakeholders.

6.9 MARKET CHALLENGES

The legalisation of cannabis will need local and export markets to absorb whatever products that will be produced. Export markets are unpredictable due to shifting rules. As a result, the expectation is for local market to take a bigger share of the produce in the initial stages. As more countries relax their restrictions on cannabis, it is expected that more export opportunities will open. South Africa currently imports several cannabis products that are sold on the local markets. The low-hanging fruit in terms of creating a local market for the South African cannabis industry is to replace imported products with the locally produced products.

6.10 MARKET CONCENTRATION

There is potential risk that big corporations with huge financial muscles are to dominate the new cannabis industry in South Africa. This scenario will lead to a situation in which smaller enterprises might be squeezed or even be taken out of the cannabis industry. The total dominance or takeover by big corporates remains one of the serious challenges for the new cannabis industry in this country. It is inevitable that there will be a few corporations which take over and take advantage of this industry. The global trend is that small-, medium- and large-sized cannabis businesses will be acquired by bigger companies unless they develop a dedicated target market. It will be important for government to use competition laws to deal with this challenge to create an inclusive cannabis industry.

Legalising cannabis will open opportunities to all interested stakeholders, including big business. The challenge for government will be how to avoid a situation where big corporations might try to dominate the whole dagga and hemp value chains at the expense of rural communities that have been growing these crops for hundreds of years. These communities have been suffering from arrests and imprisonment for years.

7. STRATEGIC INTERVENTION MEASURES

The growth and development of the cannabis industry in South Africa depend on a range of intervention measures that are necessary to ensure a sustainable cannabis industry that will contribute to economic development, poverty alleviation and job creation. These intervention measures are packaged into nine pillars, as outlined below:

7.1 PILLAR 1: EFFECTIVE REGULATORY SYSTEMS

Government is expected to maintain a delicate balance between the need to protect the general public against drugs as well as the need to promote legitimate economic activities that would be brought about by commercialisation of dagga and hemp. The country is also expected to comply with international obligations on drugs and related substances in terms of the UN Conventions that government had signed. It is also important to ensure that commercialisation of cannabis does not lead to unintended negative consequences for the country and its citizens.

The international legal and administrative framework for cannabis is provided under the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol. There is a general consensus that the current legislation on cannabis, namely the Medicine and Medicine Substances Act of 1965, and the Drugs and Drugs Trafficking Act of 1982 provide a solid foundation for providing a reliable regulatory framework for the future. There is a need to address the remaining restrictions in each of the two pieces of legislation. The proposed amendments would make it easy for South Africa to establish and grow a sustainable and globally competitive cannabis industry.

The pillar focuses on developing a new regulatory framework for both hemp and marijuana. It is important to establish a new legal regime that must be clear to the general public, industry stakeholders and law enforcement agencies, with enforceable rules and corresponding penalties that are proportional to the contraventions. This include amendment of existing legislation by removing existing constraints that are hindering commercialisation. The Department of Health leads this pillar, supported by the Department of Justice and Correctional Services; and Department of Small Business Development.

Key Activities:

The key intervention measures regarding this pillar include the following:

a. Finalise the necessary changes to the Drugs and Drugs Trafficking Act to remove the current restrictions that prohibits commercialisation of all aspects of the cannabis value chain.

b. Develop an appropriate policy framework and a new legislation to regulate the commercialisation and industrialisation of cannabis in South Africa. The new policy and legislative framework should be able to adapt to new developments regarding specific cannabis products.

c. Creation of enabling policy, legal, and regulatory environment for the inclusive economic participation of the previously disadvantaged community enterprises.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
   - Compliance to legislation and regulatory framework, in terms of licence and permit conditions, as well as other related matters.

b. Organised Labour
   - Compliance to legislation and regulatory framework.

c. Communities
   - Compliance to regulatory framework.

d. Government
   - Provide a conducive environment for the development and growth of the cannabis industry.
   - Issuance of the necessary permits and licenses to farmers, institutions and companies that want to participate in the cannabis value chains in a fair and transparent manner, subject to the law.

7.2 PILLAR 2: SUSTAINABLE SEED SUPPLY SYSTEMS

Seed is the key foundation of a sustainable cannabis industry. The key to regulated cannabis industry is seed certification. In this way the burden for compliance will fall on the seed producers and breeders. The Agricultural Research Council and other research organisations are expected to take responsibility of initiating and implementing breeding programmes for new dagga and hemp cultivars. They will be responsible for importing suitable cultivars from other countries and conduct adaptation trials before these cultivars are released for use in South Africa. This will be done in such a way that there is no contravention of international obligations like UPOV and country's competition laws.

This pillar will focus on production, processing, packaging and trade of seed and related products. This will also include supporting breeding programmes for cannabis. The Department of Agriculture, Land Reform and Rural Development will lead this pillar, supported by the DSBD.

Key Activities:

The key intervention measures regarding this pillar include the following:

a. Compulsory registration

- All companies and organisations involved in breeding, multiplication and sale of cannabis seed must be registered and have valid permits to conduct their activities. It will be compulsory for all these companies to keep reliable and up-to-date records of the amount of seed produced and sold as well as particulars of their clients.

b. Certification schemes

- All cannabis seed producers, packers and other role players will need to be included in a compulsory certification scheme. The schemes will ensure that all members comply with regulations regarding seed quality and all other related matters.

c. Import and export control systems

- There is a need for import and export control systems and protocols for cannabis seed to be developed and implemented.

d. Variety control and listing

- All cultivars of dagga and hemp will undergo testing to ensure their distinctiveness, uniformity and stability before they are released for sale on the South African market.

e. Seed testing

- Seed that is destined for export market alongside that for local markets will be tested for quality and viability. This is aimed at ensuring that only high-quality seed is used locally and exported to other countries.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
- Compliance to legislation and regulatory framework regarding to seed and related matters.
- Investment in local seed production, processing and trade.
- Provide opportunities to new seed growers and enterprises through contract growing and other arrangements.

b. Organised Labour
- Compliance to labour laws.

c. Government
- Develop and implement a regulatory system for cannabis seed.
- Promote compliance to regulatory framework by farmers, seed companies, breeders and other stakeholders.
- Support the development of new seed growers and enterprises.
- Facilitate training of new seed growers through the SETAs.
- Issuance of export and import permits for cannabis seed.

7.3 PILLAR 3: RESEARCH DEVELOPMENT AND INNOVATION

Poverty is a national emergency in South Africa, and cannabis research, development and innovation (RDI) offer the country opportunities to create jobs, alleviate poverty and reverse inequality. The Department of Science and Innovation (DSI) leads the RDI pillar of the masterplan and is in the process of facilitating several flagship projects on Medical cannabis. The Medical Cannabis RDI initiatives are coordinated by the African Medicines Platform of the Indigenous Knowledge-Based Bio-Innovation Programme. The DSI has been funding medical cannabis studies since 2015 and its strategic imperatives together with its partners are limited to facilitating research to ultimately support local industrialisation.

In order to avoid re-inventing the wheel, a tried and tested value-chain model that supports ''integrated applied research and inclusive innovation'' is herein proposed. This is currently implemented through a forty-member Indigenous Knowledge-(IK) Based Bio-Innovation Programme, which is constituted by signatories from science councils, universities, partner government departments, traditional health practitioners (THPs) and rural and township small-medium enterprises (co-ops) owned by IK-Holders.

The pillar is focussed on supporting research and development programmes for the South African cannabis industry. These include breeding programmes and development of new technologies needed across the entire value chain. The Department of Science and Innovation will lead this pillar supported by the DSBD and other relevant sector departments.

Key Activities

The DSI supports initiatives with national knowledge production, clinical research, product development, SMME support and commercialisation. The scope and strategic imperatives of envisaged teams should be systematic and geared towards:

a. Indigenous Knowledge Interface
   - Pioneer the pro-poor and IK-based ideation or concept generation for interfacing of IK-based technology and grassroots innovation within the national innovation system.

b. Integral (Applied) Research
   - Support IK-based (applied) research and discovery initiatives for new knowledge production and technology innovation in germplasm, agronomy, African Medicines, Cosmeceuticals, Nutraceuticals, Health Infusions and Hemp Product like textile and building materials, etc.

c. Inclusive Innovation
   - Implement inclusive innovation programmes, clinical research and product development programmes for social and economic development.

d. Local Technology Transfer
   - Enhance local technology transfer (incubation) and manufacturing processes for entrepreneurship and secondary economies (small and medium enterprise support).

e. Holistic Enterprise Development

- Facilitate holistic and evidence-based marketing (branding) and enterprise development models for competitive industrialisation and commercialisation.

f. Conscious Commercialisation

- Promote sustainable and conscious commercialisation and beneficiation initiatives for the emergence of new high-end industries, thriving societies and improved quality of life.

g. Germplasm collection and maintenance, breeding of new varieties, control of pests and diseases, amongst others.

h. Development of test kits for the police. supports the development of mobile test kits that would be used by police who would be manning roadblocks. These will be handheld testing kits that would rapidly determine the percentage/amount of THC in hemp in order to distinguish it from dagga. The Department of Science and Innovation as well as other standard setting organisations like SABS and NMISA (for calibration and measurements) should be involved regarding this initiative.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Academia (Universities and Science Councils)

- Conduct research, development and innovation initiatives on both medical cannabis and hemp.
- Facilitate human capital development in applied research, product development and commercialisation.

b. Business

- Investment in research development and innovation programmes.
- Adoption and use of new technologies.
- Participate in the commercialisation of new technologies.

c. Organised Labour

- Facilitate training programmes for workers regarding the application of new technologies in their daily operations.

d. Communities

- Lobby for the development of safe and efficient technologies and products in line with the needs of communities.
- Promote indigenous knowledge systems for inclusive development, benefit sharing and socioeconomic development.

e. Government

- Invest in research and technology development programmes.
- Promote the adoption and use of new technologies by all stakeholders.
- Development and implementation of education and training programmes regarding research and technology development.

7.4 PILLAR 4: PRODUCER SUPPORT SYSTEMS

Farmers are important in terms of ensuring that there is sustainable production of hemp and marijuana to cater for the needs of both domestic and export markets. The pillar will focus on mobilisation and supporting farmers to participate in the cannabis value chains. This also involve the inclusion of current "illegal" dagga growers into the formal system. The pillar will further focus on the development of small suppliers for the cannabis industry. The lead department will be Department of Agriculture, Land Reform and Rural Development supported by the Department of Small Business Development.

Key Activities:

The key interventions in terms of this pillar are:

a. Technical support

- Cannabis has been a prohibited commodity for many years. Therefore, many farmers are not familiar with many aspects of it. The farmers will need to be supported in terms of cultivar choices, cultivation practices, pest and disease control, harvesting and post-harvest practices. This type of support will be provided by agronomists in both government and private sector, dedicated extension officers, non-governmental organisations, etc. The support will also be in the form of development and distribution of production guidelines, posters, brochures and other information material.

b. Financial support

- There is a need for dedicated funding for farmers participating in the cannabis industry. Financial support may in forms of grant funding, loans, equity, blended funding, etc. Government, private sector, donor organisations and state-owned entities need to hold hands in terms of providing this type of support to farmers.

c. Zoning
- Areas where conditions are conducive for growing cannabis should be identified and zoned. These areas should preferably be in those areas where poverty and unemployment are high. The zoning will enable resource-poor growers to generate sufficient income and thereby becoming significant players in the cannabis value chains.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
- Provide support to farmers to participate in cannabis value chain.
- Provide out grower contracts to new and resource-poor farmers.

b. Organised Labour
- Facilitate training programmes for workers.

c. Government
- Provide targeted incentives and government support for small-holder cannabis growers.
- Develop training programmes for farmers to facilitate their participation in the cannabis value chain.

7.5 PILLAR 5: MARKET DEVELOPMENT

Market access is crucial for the development and growth of the cannabis sector. Improved market access for all farmers and manufacturers will contribute positively to the development of this sector. The pillar will also focus on developing new domestic and export markets for the South African cannabis industry. It is led by the DTIC and supported by DSBD and other relevant sector departments.

Key Activities:

These crucial intervention measures in terms of this pillar include the following:

a. Facilitate and support the development of domestic market for cannabis products.

b. Facilitate and coordinate the opening of export markets for South African cannabis products.

c. Facilitate public sector and private procurement of cannabis products from resource-poor farmers and manufacturers.

d. Facilitate the development of appropriate market support infrastructure like collection hubs, processing plants and storage facilities.

e. Development and implementation of user-friendly market information systems for cannabis products.

f. Provision of market information to all farmers and manufacturers.

g. Development and implementation of incentive programmes to support the participation of resource-poor suppliers in the local and export markets for cannabis products.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
   - Provide off-take agreements to new growers.
   - Source products from local farmers and manufacturers for both local and export markets.

b. Organised Labour
   - Facilitate the adoption of fair labour practices in retail and other related sectors of the value chain.

c. Communities
   - Lobby for affordable and safe cannabis products in local markets.

d. Government

- Create a conducive environment for the development of local markets for cannabis products.
- Facilitate the opening of new export markets for South African cannabis products.
- Provide grants and blended finance to facilitate the participation of new entrants in both local and export markets.

7.6 PILLAR 6: ENTERPRISE AND SUPPLIER DEVELOPMENT

Enterprise and supplier development are important in terms of ensuring sustainable growth and development of the cannabis industry. The indigenous dagga growers and sellers should be included in the cannabis value chain. The same also apply to new small-scale growers from other poverty-stricken areas of the country. Such growers and sellers should be grouped into primary and secondary cooperatives. These will enable small-scale growers and buyers to be able to sell locally grown cannabis legally to bigger licensed operations where it could then be processed for medicinal purposes. They will be able to do this freely without fear of arrest. The Department of Small Business Development will lead the pillar with support from Department of Trade, Industry and Competition.

Key Activities:

Key intervention measures in terms of this pillar are as follow:

a. Development of special incubation programmes for new suppliers.

b. Incorporation of cannabis development into existing incubation programmes developed by various government departments and state-owned entities.

c. Facilitating and supporting the development and signing of off-take agreements between growers of cannabis and the manufacturers.

d. Facilitating and supporting the development and signing of off-take agreements between manufacturers and retailers of cannabis products.

e. Providing advisory services to new and emerging suppliers in the cannabis industry.

f. Facilitating collaboration between relevant cannabis supplier development providers and emerging small-scale growers (value-chain development).

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
   - Facilitate the procurement of products from resource-poor farmers and manufacturers.
   - Provide technical and financial assistance to the development of new enterprises.

b. Labour
   - Lobby for fair labour practises in cannabis-based enterprises.

c. Government
   - Provide technical and financial support to the development of new enterprises.
   - Facilitate the inclusion of cannabis products from new entrants in public procurement programmes.
   - Facilitate the incorporation of cannabis in incubation programmes of SEDA.

7.7 PILLAR 7: MANUFACTURING AND PRODUCT DEVELOPMENT

The pillar will focus on development and supporting the growth and development of the manufacturing and product development capacity of the South African cannabis sector. The country will be in a good position to derive immensely in terms of job creation, economic development and poverty alleviation if the manufacturing sector is well developed. This sector cannot develop to its full potential if it is only focused to growing and selling the raw material to both the domestic and export market. This pillar will further focus on the development of suppliers for the cannabis industry. The Department of Trade, Industry and Competition will lead this pillar supported by DSI and DSBD.

Key Activities:

Key intervention measures in this regard are as follow:

a. Infrastructure development. There is a need for investments in establishment of manufacturing plants that will be used for producing food, medicine, beverages and a whole of other value-added products from raw material of both hemp and dagga. The investments will come from government, private sector, donors and state-owned entities.

b. Incentive programmes and other financial support from government departments, SOEs and financial institutions. There is a need to channel incentive programmes, grants, soft loans and blended finance to support growth and development of the cannabis industry in South Africa.

c. Coordinate existing product development facilities for agricultural produces for collaboration on cannabis development

d. Development and implementation of research programmes to develop new products from hemp and dagga.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
   - Investment in manufacturing and product development for cannabis.
   - Inclusion of new entrants in the supply of raw material for manufacturers.

   .

b. Organised Labour
   - Lobby for use of fair labour practices in the manufacturing and product development sectors.

c. Government
   - Provide incentives for manufacturing and product development.
   - Provide technical and financial support to manufacturers.
   - Create linkages between farmers and manufacturers.

7.8 PILLAR 8: EDUCATION AND TRAINING

The formal cannabis industry is relatively new in South Africa and consequently there is a lot of capacity development that needs to be done to ensure its establishment, growth and sustainability. Education and training are important in terms of supporting the development of the cannabis industry in South Africa. The pillar is focused on providing a framework on education and training matters in support of the cannabis industry. There is a need to provide both formal and informal training in terms of cannabis cultivation practices, manufacturing, product development, marketing and other related skills. This pillar will be led by the Department of Higher Education and Training with support of Department of Basic Education as well as the Department of Labour and Employment. Some of the invention measures under this pillar include the following:

a. Develop and implement formal and informal training programmes for farmers and Extension Officers on cannabis related matters.

b. Training and capacity building for potential manufacturers. There is a need to identify potential manufactures and place them under dedicated training programmes. This will be complemented by mentorship programmes.

c. Integration of cannabis related matters into the curricula of schools, colleges and universities.

d. Support cannabis education and training programmes through the appropriate Sector Education and Training Authorities (SETAs).

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business
   - Provide support to education and training programmes on cannabis.

b. Labour
   - Provide support to training programmes on cannabis.
   - Lobby for the inclusion of cannabis in training programmes of SETAs.

c. Government
   - Development and implementation of education and training programmes on cannabis.
   - Facilitate the inclusion of cannabis in curricula of schools, universities and other training institutions.

7.9 PILLAR 9: COMMUNICATION AND AWARENESS

Cannabis had been shrouded in controversy for many years. This is further compounded by misinformation and false news. There is a need for an effective mechanism of delivering the correct and justifiable message to all stakeholders and the general public. The pillar is focused on communicating a clear and unambiguous message about the cannabis industry and related matters to all stakeholders and the general public. The core messages will be around demystifying some of the negative perceptions about hemp, dagga and their products. These programmes, and messages, will be distributed through exhibitions, information days, website, emails, radio and television. This pillar will be coordinated by the Government Communication and Information System (GCIS) and led by respective lead departments for specific thematic areas.

Key Activities:

The pillar provides support to all other pillars. Some of the invention measures under this pillar include the following:

a. Consumer education and awareness on different uses of hemp, dagga and related products. To be led by Economic Cluster departments.

b. Educate small enterprises, farmers and communities about business opportunities in the cannabis value-chain. To be led by Economic Cluster departments.

c. Inform farmers, manufacturers, retailers, consumers and the general public of the niche market opportunities for cannabis. To be led by Economic Cluster departments.

d. Educate the public about the addictive nature of cannabis products and the negative health outcomes and dependency associated with the misuse. To be led by the Department of Social Development.

e. Promote compliance to regulatory framework and root out wrongdoers, including offences, penalties and regulations. To be led by law enforcement agencies.

f. Evidence
    - Implement evidence-informed public education campaigns, targeted at the general population but with an emphasis on youth, disabled and other vulnerable members of the society.

Stakeholder Commitments:

The stakeholders commit to the following deliverables:

a. Business

- Provide technical and financial support to information and awareness programmes targeted at consumers and the general public.

b. Labour

- Provide support to information and awareness programmes targeted at labour.

c. Communities

- Provide support to information and awareness programmes targeted at consumers and the general public.
- Mobilise communities to support the development of a sustainable cannabis industry in South Africa.

d. Government

- Development of information and awareness programmes on cannabis.
- Facilitate the dissemination of information and awareness programmes to majority of stakeholders, consumers and the general public through various media and other channels of communication.

8 IMPLEMENTATION PLAN

The implementation of various aspects on the Cannabis Master Plan will be done as illustrated in the table below:

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
1. Effective Regulatory Systems	Addressing the remaining restrictions on seed and other related matters in terms of the Medicines and Related Substances Act	Amended regulations	2021/2022	Health
	Amendment of schedules of the Drugs and Drug Trafficking Act as well as Sections 4 and 5	Amended regulations	2021/2022	Justice and Correctional Services
	Signing of the cannabis for Private Purposes Bill into law	Cannabis for Private Purposes Act	2022/2023	Justice and Correctional Services
	Development of a new policy and legislation for commercialisation of cannabis	Policy and legislation on cannabis	2021/ 2022	Trade, Industry and Competition
	Declaration of hemp as an agricultural crop	A new regulatory system for hemp	2020/ 2022	Agriculture, Land Reform and Rural Development
	Creation of enabling policy, legal, and regulatory environment for the inclusive economic participation of the previously disadvantaged community enterprises	Policy on increasing inclusivity and broad participation.	2021/ 2022	DSBD and DTIC
2. Sustainable Seed Systems	Establishment and implementation of registration system for all companies and organisations involved in breeding, multiplication and sale of cannabis seed	Consolidated and up-to-date database of all registered companies participating in the cannabis value chain.	2021/22	Agriculture, Land Reform and Rural Development– Supported by DSBD

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	Establishment of certification schemes for cannabis	Dedicated certification schemes on cannabis	2022/23	Agriculture, Land Reform and Rural Development
	Development and implementation of import and export protocols for cannabis seed	Import and export protocols for cannabis	2021/22	Agriculture, Land Reform and Rural Development
	Development and implementation multiplication and retail protocols for cannabis seed	Seed multiplication and retail protocols for cannabis	2021/22	Agriculture, Land Reform and Rural Development– Supported by DSBD
3. Research, Technology and Product Development	Pioneer the pro-poor and IK-based ideation or concept generation for interfacing of IK-based technology and grassroots innovation	Report on IK-Based Projects	2021/22	Science and Innovation
	Support IK-based (applied) research and discovery initiatives for new knowledge production and technology innovation in germplasm, agronomy, African Medicines, Cosmeceuticals, Nutraceuticals, Health Infusions and Hemp Products	Reports on Medical Cannabis and Hemp research	2021/22	Science and Innovation

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	Implement inclusive innovation programmes, clinical research and product development programmes for social and economic development	Report prototypes and clinical studies and agricultural trials	2021/22	Science and Innovation
	Enhance local technology transfer (incubation) and manufacturing processes for entrepreneurship and secondary economies (small and medium enterprise support)	Report on technologies transferred	2020/23	Science, Technology and Innovation
	Holistic Enterprise Development: Facilitate holistic and evidence-based marketing (branding) and enterprise development models for competitive industrialisation and commercialisation	Report on number of pilot enterprises supported	2021/23	Science, Technology and Innovation
	Conscious commercialisation: Promote sustainable and conscious commercialisation and beneficiation initiatives for the emergence of new high-end industries, thriving societies and improved quality of life	Report on pilot products commercialised	2021/24	Science, Technology and Innovation
4. Sustainable Producer Support Systems	Establishment and implementation of incubation programmes for new producers	Incubation programmes for new producers	2022/23	Agriculture, Land Reform and Rural Development
	Establishment and implementation of technical	Technical support	2021/22	Agriculture, Land Reform and Rural Development

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	support programmes for producers	programmes for Cannabis producers		
	Establishment and implementation of financial support programmes for producers	Financial support programmes for cannabis producers	2022/23	Agriculture, Land Reform and Rural Development
	Zoning of areas for primary production of dagga and hemp	National maps for areas where cannabis is produced	2021/22	Agriculture, Land Reform and Rural Development
	Small-Scale Agriculture production and processing training (Through existing platforms at Small Enterprise Development Agency)	Training programmes	Ongoing	Department of Small Business Development
5. Market Development	Facilitate the development of domestic market for cannabis products	Report on available domestic markets	2021/22	Trade, Industry and Competition
	Facilitate and coordinate the opening of export markets for South African cannabis products	Report on available export markets	2022/23	Trade, Industry and Competition
	Facilitate public and private sector procurement of cannabis products from resource-poor farmers and manufacturers	Procurement programmes	2021/22	Trade, Industry and Competition
	Facilitate the development of appropriate market support	Reports on available market infrastructure in	2022/23	Trade, Industry and Competition (DSBD to support through SEDA)

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	infrastructure like processing plants and storage facilities.	various provinces		
	Development and implementation of user-friendly market information systems for cannabis products	Operational market information systems	2022/23	Trade, Industry and Competition
	Provision of market information to all farmers and manufacturers	Market information	2022/23	Trade, Industry and Competition
	Development and implementation of incentive programmes to support the participation of resource poor suppliers in the local and export markets for cannabis products Reconfigure the dtic's incentive to speak to a broader policy of legalisation and industrialisation of cannabis	Incentive programmes for cannabis industry	2022/23	Trade, Industry and Competition (DSBD to support through Cannabis Support Plan)
	Facilitate the development of appropriate cannabis accreditation	National accreditation system for cannabis	2022/23	DTIC/SABS/SANAS/ NRCS
	Facilitation of market opportunities through the small enterprise sector-wide market access strategy/framework	Report on market opportunities	2021/22	Department of Small Business Development
6. Enterprise and Supplier Development	Development of special incubation programmes for new suppliers	Incubation programmes for new suppliers	2022/23	DSBD, Trade, Industry and Competition

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	Facilitating and supporting signing of off-take agreements between growers of cannabis and the manufacturers.	Report on off-take agreements facilitated.	2021/22	Trade, Industry and Competition
	Facilitating and supporting the development and signing of off-take agreements between manufacturers and retailers of cannabis products.	Report on off-take agreements facilitated.	2021/22	Trade, Industry and Competition
	Providing advisory services to new and emerging suppliers in the cannabis industry	Advisory services	2021/22	Trade, Industry and Competition
	Facilitate collaborations with supplier diversity institutions for the benefit of emerging cannabis suppliers	Report on collaboration	2021/22	Department of Small Business Development
	Incorporation into the existing Supplier Development platforms through existing SEDA incubations	Report on incorporation of new suppliers into existing supplier development platforms	2021/22	Department of Small Business Development
7. Manufacturing and Product Development	Facilitate and coordinate investments in establishment of manufacturing plants that will be used for producing food, medicine, beverages and a whole of other value-added products from raw material of both hemp and dagga.	Report on investments done in manufacturing facilities for cannabis	2022/23	Trade, industry and Competition

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
	Development and implementation of incentive programmes for development of new products from dagga and hemp.	Incentive programmes	2022/23	Trade, industry and Competition and Department of Small Business Development
	Development and implementation of training and mentorship programmes for potential and aspiring manufacturers of new products from hemp and dagga.	Training and mentorship programmes	2021/22	Employment and Labour (DSBD to complement the process through training programmes offered by SEDA)
	Development and implementation of research programmes to develop new products from hemp and dagga.	Research programmes on cannabis	2022/23	Science, Technology and Innovation
8. Education and Training	Development and implementation of education and capacity building programmes for farmers, manufacturers, retailers, and other stakeholders in the Cannabis value chain.	Education and capacity building programmes	2021/22	Government Communication and Information Systems
	Development of appropriate curricula for formal and informal training programmes offered by training institutions.	New curricula for formal and informal training programmes	2022/23	Higher Education, Science and Technology

PILLAR	INTERVENTIONS	OUTPUTS	TIME FRAMES	RESPONSIBLE DEPARTMENT/ ORGANISATION
9. Communication and Awareness	Development and implementation of information and awareness programmes on Cannabis related matters.	Information and awareness programmes	2021/22	GCIS
	Opportunity awareness education on cannabis value-chains for small enterprises and communities.	Opportunity awareness programmes	2021/22	DSBD (SEDA)

9. IMPLEMENTATION AND MONITORING STRUCTURES

Government and its social partners need to reach an agreement with regard to establishing mechanisms for joint governance, accountability and implementation and monitoring and evaluation of the Masterplan. This involves Executive the Oversight Committee, Programme Management Office, Master Plan Task Teams and the Provincial cannabis Committees as discussed below:

9.1 EXECUTIVE OVERSIGHT COMMITTEE

The objective is to provide high-level leadership and coordination of the Master Plan implementation and ensure and promote shared ownership and accountability for outcomes and commitments amongst the social partners.

The composition of the Executive Oversight Committee will be as follow:

a. Government: Ministers of DALRRD, DoH, DJCS, DTIC, DSI and DSBD.
b. Farmer associations
c. Manufacturers

d. Retailers

The duties and responsibilities of the Executive Oversight Committee are as follow:

a. Champion the vision, mission and implementation of the Master Plan

b. Provide high-level leadership, guidance and coordination of implementation

c. Monitor and evaluate the Master Plan implementation

d. Agree on Master Plan baselines and targets as well as and a baseline monitoring and evaluation framework.

e. Receive reports from and provide guidance to Task Teams

9.2 PROGRAMME MANAGEMENT OFFICE

The objective is to provide secretariat support to the Executive Oversight Committee and dedicated programme management of Master Plan implementation.

The duties and responsibilities of the Programme Management Office are:

a. Provide secretarial services to the Executive Oversight Committee

b. Provide programme management and coordination of Master Plan implementation

c. Develop, manage and coordinate programme implementation plans

d. Coordinate and drive Master Plan Task Teams and Provincial cannabis Committees.

9.3 MASTER PLAN TASK TEAMS

The Master Plan Task Teams will be responsible for supporting the implementation of various pillars of the Master Plan. They will be made up of representatives of sector departments, state owned entities, industry and other social partners. The teams will report to the Executive Oversight Committee.

9.4 PROVINCIAL CANNABIS COMMITEES

The Provincial cannabis Committees will be established in each province where there is production and manufacturing of this commodity. These structures will be composed of representatives of government and social partners in those provinces. The committees will be responsible for providing support to the growth and development of the cannabis sectors in those provinces.