

Implications of legalisation of cannabis cultivation in Ghana: a critical review

Jacob Mensah Agboli

Abstract

Purpose – Following the trend in the world over and on the African continent, the Parliament of Ghana passed a new law in 2020, the Narcotics Control Commission Act (Act 1019) that eased the legal restrictions on cannabis cultivation and use, subject to obtaining license from the relevant authority/authorities. This paper aims to examine the implications of Ghana's decision to legalise the cultivation of cannabis for industrial purposes for the production of fibre and for medicinal purposes.

Design/methodology/approach – The author adopted the qualitative analysis critical review methodology in sourcing information from peer-reviewed articles, coupled with the author's own professional knowledge, background and training, to critically analyse and review the reasons behind Ghana's decision to legalise cannabis cultivation and the implications such a major policy change/shift.

Findings – It was found that, while the law mentions industrial and medicinal purposes for the legalisation of cannabis, the real reason, at least in the immediate term, is mainly economic. This agrees with those of other African countries that have legalised cannabis cultivation but appears to contrast with those of Europe and America.

Research limitations/implications – This research is limited to Ghana and the few African countries that have legalised cannabis cultivation so far. The main reason for the legalisation (economic benefits) may also change in the future when the economics of scale turn in the favour of the country. Therefore, Ghana's case may not represent the case of all countries legalising cannabis cultivation.

Practical implications – The research implication of this paper is that it brings to the world the law on cannabis cultivation in Ghana. It provides a professional and scientific position paper on Ghana's drug law regime regarding cannabis, thus, serving as a useful reference literature to the academic and research community on the topic. More importantly, it discusses the implications of such major policy change from an objective perspective, unravelling the real reason behind the State's decision to legalise the cultivation of cannabis in Ghana.

Social implications – This paper will bring to the fore the other consequences of Ghana's cannabis cultivation legalisation policy change, which little attention has been devoted to so far.

Originality/value – This paper, apart from reference to other published texts on the topic, which have been duly acknowledged, represents the sole work of the author. It has not been produced anywhere or by anyone else either in Ghana or elsewhere.

Keywords Cannabis, Decriminalisation, Cultivation, Depenalisation, Legalisation, Tetrahydrocannabinol (THC)

Paper type General review

Jacob Mensah Agboli is based at the Department of Psychology, University of Ghana, Accra, Ghana and Department of Intelligence and Investigations, Narcotics Control Commission, Accra, Ghana.

Introduction

Drug policy reforms are globally widespread. Many of these reforms include the legalisation and decriminalisation of cannabis. Uruguay was the first country to legalise cannabis in 2013 (Queirolo, 2019). In 2017, Lesotho followed suit, becoming the first African country to legalise the growing of medicinal cannabis. In all, about 21 countries in Europe have legalised the medical use of cannabis while about 7 countries in Africa have done so. An equally similar number of countries in Asia and the Americas (both North and South) have legalised the medical use of cannabis, with many states in the USA following the example of these countries. Ghana legalised cannabis cultivation in 2020 when it passed the Narcotics Control Commission Act, 2020 (Act 1019).

Received 11 July 2023
Revised 5 September 2023
20 October 2023
31 October 2023
Accepted 31 October 2023

Legalisation of cannabis in many African countries (especially the anglophone countries) seems to follow similar trajectories. Their reasons are equally similar, if not the same. For example, in Lesotho, the Lesotho Highlands Water Project report in the mid-1990s found that illegal cultivation of cannabis covered about 10% of the arable land and accounted for 60% of the arable crop net revenue (Bloomer, 2019). Since then, the government has tried to legalise cannabis cultivation for purposes of revenue generation. Ultimately, the amendment of the Drugs of Abuse Act, 2008; the passage of the Drugs of Abuse (Cannabis) Regulations, 2018; and their amendment of 2019 legalised cannabis cultivation for medical purposes.

In the case of Malawi, the Government commissioned two businesses to carry out scientific studies on hemp for both industrial and medical purposes, seven years before its legalisation. The findings from these studies, coupled with advocacies by the Malawi Hemp Association led to the legalisation. Similarly, in Zimbabwe, many farmers opposed the colonial governments 1960s and 1970s promotion of cotton because cannabis was more profitable, though illegally cultivated. Farmers in a region without access to modern health-care facilities attempted in vain to legalise cannabis in 2014 for traditional medical purposes (Duvall, 2019). Eventually, the Medicinal Cannabis Industry Act of 2018 legalised the cultivation, processing and use of medicinal cannabis in Zimbabwe. The Act paved the way for the licensing of individuals and businesses to engage in the legal cannabis market, while cannabis use for recreational purposes remains prohibited.

The Table 1 below summarises the African countries that have legalised cannabis and their reasons.

The purpose of this paper is to examine the Ghanaian context regarding cannabis legalisation. Using the practitioner qualitative critical review, the author used Web-sourced literature to evaluate the reasons for the legalisation of cannabis in Ghana and other African countries, compared with those of Europe, the USA and Canada. The paper is divided into five parts. Part 1 summarises the meaning of the terminologies of decriminalisation, legalisation and diversion. Part 2 discusses the reasons for legalisation of cannabis in Africa, compared with those of Europe and America, whereas Part 3 discusses the history of cannabis regulation in Ghana and provisions of Act 1019 in relation to cannabis cultivation, giving reasons for Ghana's decision to legalise cannabis. Part 4 discusses the implications of Ghana's legalisation of cannabis cultivation for industrial and medicinal purposes whereas the final part contains the conclusion and recommendations.

Conceptualisation of cannabis decriminalisation and legalisation

Legalisation, decriminalisation, depenalisation and diversion among others, are terminologies commonly used in discussions regarding the lawful or unlawful cultivation and use of

Table 1 African countries that legalise cannabis and their legal status

<i>African country</i>	<i>Legal status</i>
Malawi	Legalised officially for industrial use, medical use, growing, selling and exporting of cannabis. Recreational use is prohibited
Zambia	Legalised officially for export and medicinal purposes. Recreational use is prohibited
South Africa	Medical and recreational use of cannabis are legal (officially)
Zimbabwe	Legalised officially for medical use and not recreational use
South Africa	<i>Private cultivation for medical and recreational use of cannabis are legalised (officially)</i>
Ghana	Legalised for medical and industrial purposes but illegal for recreational use
Morocco	Legal for medical and industrial purposes but prohibited for recreational use (unofficial yet)
Uganda	Legalised solely for export purposes
Rwanda	Legalised medical cannabis for medical use and export

Source: Table 1 is adapted from Adebisi and Olaoye (2022)

cannabis in the literature. Although there exist similarities among these terminologies, they differ significantly. [Table 2](#) below summarises the meaning of these terminologies.

Flowing from [Table 2](#), decriminalisation and legalisation could be said to share much in common, to the extent that they both involve the process of making legal what was illegal. According to [Owusu et al. \(2021\)](#), to legalise cannabis means to allow for its production under license for commercial and research purposes. In this approach, *Cannabis sativa* L cultivated as industrial hemp can be produced and its related products extracted by a company under a license. The license issuing authority strictly monitors the production and supply chain.

Comparison of reasons for legalisation/decriminalisation of cannabis in Africa and the world

It appears that African countries have largely legalised cannabis cultivation mainly for economic reasons while their counterparts in Europe and America have done so more for medicinal and recreational reasons. Evidence shows that African countries legalised cannabis production because of the multibillion-dollar cannabis sector emerging, which is creating jobs and contributing considerably to gross domestic product. As a result, police resources have been redirected to other important crimes, and criminals' grip over the trade has loosened ([Mensah and Adu-Gyamfi, 2019](#); [Dragone et al., 2019](#)). According to a study by [Adebisi and Olaoye \(2022\)](#), it is only until recently that a variety of industrial, medical and economic justifications have been cited for cannabis legalisation in Africa. Despite the fact that there is growing interest in cannabis use for medical purposes throughout Africa, the main reason for its legalisation appears to be economic. For instance, in South Africa, the cannabis industry was anticipated to generate 130,000 new jobs by 2022. Adding recreational and medical usage, Africa's legal market is estimated to reach at least \$7.1bn by 2023 ([Bloomberg, 2022](#)). By 2023, it was estimated that Ghana would earn \$0.38m from the medical marijuana industry and \$326m from the recreational marijuana sector ([Prohibition Partners, 2023](#)).

After Morocco legalised cannabis cultivation in May 2021, it has been reported that, officially, the aim is not only to "gain access to the global legal cannabis market", but also to "improve farmers' incomes and protect them from drug trafficking networks" ([The Africa Report, 2021](#)). According to the prime minister of the country from 2012 to 2017, as reported by [The Africa Report \(2021\)](#), cannabis sales accounted for 80% of the economic revenue in the Rif region in

Table 2 Summary of definitions of key terminologies

Terminology	Definition(s)	References
Decriminalisation	Decriminalisation is the process of removing criminal penalties from a behaviour, item or act. Cannabis would still be illegal if it were decriminalised, but no one would be prosecuted for possessing less than a certain amount. There would be a spectrum of sanctions, including no sanctions at all, civil fines, drug education and drug treatment	Svrakic et al. (2012) ; NAADAC; UNODC (2015)
Legalisation	Legalisation of cannabis is the process of removing all legal prohibitions against it. Legalisation removes all restrictions on usage and ownership. Cannabis is readily sold to the public, much like tobacco and alcohol. It could be <i>de facto</i> (by fact and events) or <i>de jure</i> (by law). "Legalisation provides an economic dimension of regulated cannabis cultivation, supply and taxation system" (p. 82).	Svrakic et al. (2012) ; NAADAC (2023); Mensah and Adu-Gyamfi (2019)
Depenalisation Diversion	<i>De facto</i> reduction/relaxation in existing criminal sanctions Diversionary programmes are ostensibly intended to steer participants away from legal repercussions toward social, therapeutic or educational resources	Stevens et al. (2022) Fischer et al. (2022) , Wheeldon and Heidt (2022) ; Stevens et al. (2021)

Note: NAADAC stands for National Association for Alcoholism and Drug Abuse Counsellors
Source: By authors

2016. The prime minister added that “a recent US report estimated that cannabis revenue in Morocco amount to \$23bn annually. If only one of these billions was reserved for Al Hoceima, it would become like Monaco” ([The Africa Report, 2021](#)). Morocco exported 36,000 tonnes of cannabis to Europe in 2017 for a value of €8bn (US\$8.84bn) (hashish). [Bloomberg \(2022\)](#) noted that Morocco made an estimated €325m (\$346m) in 2020 against a street value of €8.1bn for hashish alone, according to data from the Interior Ministry of Morocco.

In Zambia, the Library of Parliament reported that the Industrial Hemp Act, 2021, and the Cannabis Act, 2021, were both passed by Zambia based on the necessity to strengthen foreign exchange sources. According to this source, Zambia’s main motivation stems from a huge fiscal imbalance and an increasing debt load ([Library of Congress, 2021](#); [Reuters, 2019](#)).

Lesotho currently charges M 500,000 Lesotho Maloti (US\$30,000) for license to produce, supply, export and transport medical cannabis and cannabis products ([Uwakonye, 2020](#)). In all, about ten companies hold license to cultivate and process cannabis in Lesotho ([Africa News, 2020](#)) with an initial 10-year term for each license ([Bloomer, 2019](#)).

Malawi’s case is not different from those of Morocco and Zambia. In 2020, when the country legalised the growing, sale and exportation of cannabis, the Minister for Agriculture is quoted as saying “Legalisation of this crop will contribute to economic growth as it will contribute in the diversification of the economy and boost the country’s exports, especially at this time when tobacco exports are dwindling” ([Africa News, 2020](#)).

In the case of Ghana, though Section 43(1) of the Narcotic Control Commission Act, 2020 (Act 1019), mentioned medicinal and industrial purposes as the reasons for cannabis legalisation, the real reason appears to be economic. Indeed, the memorandum to the Bill mentioned economic reasons (foreign exchange and taxation) as among the key reasons for the decision. In his comment on the said Section 43, the Speaker of Ghana’s Parliament noted that “Canada uses it (cannabis) a lot to generate revenue and we had a lot of businessmen who wanted to invest in Ghana because this one is legal and could be controlled, it is only used for pharmaceuticals and you will earn a lot of money” ([Parliament of Ghana, 2023](#); [3news.com, 2023](#)). Likewise, in a debate on the floor of Parliament, the Minister for the Interior stated that “to [therefore] say that Section 43 is unconstitutional, was in my humble opinion a grievous error. However, because we need to be in tandem with the international movement, and also because we consider this to be a public health issue and benefit of industrial as well as economic value, this [amendment] is necessary [...]” ([Parliament of Ghana, 2023](#)).

African countries also make the point that, even when the cultivation of cannabis remained illegal, it is being cultivated nonetheless and the farmers are heavily cashing in on the commodity at the expense of the state. As [Carrier and Klantschnig \(2018\)](#) observed, cannabis is still widely used and provides many farmers with a means of subsistence in Africa, despite the legal restrictions that have been placed on its cultivation and use during the course of the 20th century. Thus, legalisation becomes inevitable to exact the necessary taxes and foreign exchange.

The case of South Africa is however unique, as the provisions of the Drugs Act and the Medicine Act in question were declared illegal in the case of *Minister of Justice and Constitutional Development v Prince [2018] ZACC 30*, because “the right to privacy permits an adult person to consume, cultivate, or possess cannabis in private for his or her own usage” ([Lubaale and Mavundla, 2019](#)).

For their European and American counterparts, the main reasons appear to be medicinal and recreational, though the economic reasons cannot be ruled out entirely. Evidence from the 29 states in the USA that have legalised cannabis, Canada and many European countries reveals that the reasons are to maximise the medicinal value of the plant and its health benefits. For example, according to [de Jong \(2009\)](#), the Dutch Office of Medicinal Cannabis has been regulating the legal cultivation and distribution of medical cannabis in the Netherlands since 2003. In fact, the Netherlands became the first country in the world to legalise cannabis for sale

as a prescription medication at pharmacies for the treatment of people with cancer, HIV and multiple sclerosis. Provided the hemp is used to produce fibre or seeds for fibre, it is lawful to grow, import and sell industrial hemp in the Netherlands. European regulations stipulate that the cannabis variety must be included in the database of plant varieties and that the tetrahydrocannabinol (THC) content cannot be higher than 0.2%. Regarding the cannabidiol (CBD) level, there are no specifications ([Cannavigia, 2022](#)). The case of Portugal and the UK is not different. Both countries have legalised medical cannabis since 2018. It must be prescribed by a doctor and is subject to restrictions. It is especially useful for the treatment of some malignancies and chronic pain in those for whom standard therapies are ineffective.

For use in the UK, two cannabis-based medications currently hold marketing authorisations. For the treatment of spasticity in multiple sclerosis, Sativex has a license. Children with Lennox–Gastaut syndrome, Dravet syndrome and tuberous sclerosis complex can use Epidyolex to treat their seizures. However, concerns regarding these prescriptions have been raised by patient groups, families and senior practitioners, who have also urged for more research and randomised controlled trials to assess the advantages and disadvantages of these medications ([UK Parliament, 2023](#)).

In the USA, cannabis use is prohibited by federal law. Nonetheless, to treat symptoms including pain, nausea and other medical conditions, several states have permitted its use. In these states, the term “medical marijuana” refers to cannabis sativa plant products that are used to treat symptoms brought on by particular illnesses.

Though African countries that have legalised cannabis also cite medicinal purposes as one of the reasons, no African country has so far taken the steps to make cannabis and its derivative products currently available for medical use, either as a prescription-only medication or over-the-counter medication. From the foregoing, it is clear that the purpose for which African countries have legalised cannabis cultivation is economic. Though public health concerns were mentioned in the laws of these countries, these are only on paper. Deeply underlying such laws are the economic benefits of foreign exchange and revenue generation, perhaps, because these countries are largely lower middle-income countries with huge balance of payment deficits and hoping to turn the economics of scale in their favour with income from cannabis cultivation. The countries of Europe and America, on the contrary, are developed first-world countries and thus more concerned about the health and safety of their citizens, seeking safer ways of cannabis use that maximise the potential of the plant.

Other reasons for legalising cannabis

Legalisation of cannabis has been found to promote human rights, as it offers better opportunities for states to protect human rights interests ([Aditya and Al-Fatih, 2022](#); [van Kempen and Fedorova, 2018](#)) and reduced stigmatisation of persons with substance use disorders ([Reid, 2020](#)). Legalising cannabis has also been found to lower property crime rates ([Donovan, 2021](#)). Furthermore, there exists a vicious cycle described in the literature, where residents of areas with high rates of substance use/abuse suffer trauma and then turn to addictive substances to deal with the negative psychological impacts of that trauma ([Mokwena, 2019](#)).

It follows that, although countries are embracing the wave of legalisation, they are also careful to fashion out a custom-made policy that takes care of their sociocultural context. As [Unlu et al. \(2020, p. 4\)](#) put it:

[...] countries have developed models according to their priorities, social and administrative settings. Each model seems to be unique; [...] Since the way the issue has emerged in each country has varied, each design focuses on particular needs, which has led to different results. Nevertheless, while policy expectations define the means, the context mainly shapes the ends. Thus, the considerable contextual variation between countries complicates policy adaptation and comparison, which brings challenges and criticism.

History of cannabis regulation in Ghana

Historically, ex-servicemen who served in Second World War are believed to have introduced cannabis to Ghana (Bernstein, 1999; Mensah and Adu-Gyamfi, 2019). Meanwhile, criminalisation of cannabis in Ghana is not a recent phenomenon (Chouvy, 2023; Duvall, 2015; Mills, 2013). Noticing the havoc wrecked on the lives of the ex-servicemen and their allies, the state took steps to regulate cannabis in all forms by passing the Pharmacy and Drugs Act 1961 (Act 64), which among others, criminalised the possession, cultivation, use and trafficking in narcotic drugs. This law was passed partly in fulfilment of Ghana's obligations under the 1961 Single Convention on Narcotic Drugs. Following the promulgation of the 1988 United Nations (UN) Convention on Narcotic Drugs and Psychotropic Substances, Ghana replaced Act 64 with the Narcotics Drugs (Sanctions, Enforcement and Control) Act, 1990 (PNDCL 236) to prescribe harsher punishment for narcotic-related offences. Part I of PNDCL 236 prohibited the importation, exportation, possession, cultivation, manufacture, supply, use and administration of any narcotic drug without lawful authority. Under the First Schedule of PNDCL 236, cannabis includes cannabis resin and extracts and tinctures of cannabis.

This law (PNDCL 236) also, for the first time, sets up the Narcotics Control Board, a specialised agency, to enforce the provisions of PNDCL 236. Thence, PNDCL 236 remained the regulatory regime for cannabis control in Ghana until 2020 when Parliament passed Act 1019 to replace PNDCL 236 and significantly change the law relating to cultivation, possession and use of cannabis for medical and industrial purposes.

Provisions of the new Act 1019 relating to cannabis cultivation and use

For a start, unless a person obtains permission from the Minister of Health, cannabis cultivation, possession and use remain criminalised in Ghana, whatever the purpose. This was the case even under PNDCL 236. In this regard, a person who without license is found in possession of cannabis for use or for trafficking is liable on summary conviction to a fine of between 200 and 25,000 penalty units. In the alternative, such a person risks imprisonment of between 15 months and 25 years or to both the fine and imprisonment. It is necessary to state that a penalty unit in Ghana is GHC 12 (approximately US\$1.2) and that all terms of imprisonment go with hard labour unless the court states otherwise.

The controversial provision of Act 1019 relating to cannabis is Section 43 titled, "Special provision relating to cannabis". This section provides among others that the Minister of Interior, upon the recommendation of the Narcotics Control Commission (NCC), may grant a license for the cultivation of cannabis that has not more than 0.3% THC content *on a dry weight basis* for industrial purposes for obtaining fibre or seed or for medicinal purposes. To clarify issues, Section 43(2) provides that "for the avoidance of doubt, a license granted under Subsection (1) shall not be for the cultivation of cannabis for recreational use" (p. 19).

By the provisions of Section 43, cultivation of cannabis of 0.3% THC is legalised subject to obtaining license from the Interior Minister. Research by Agyepong (2019) revealed that the THC content measured for fresh samples of illegally cultivated cannabis in Ghana were $(6.88 \pm 0.55)\%$, $(4.49 \pm 0.36)\%$ and $(5.46 \pm 0.44)\%$, respectively for Ashanti, Eastern and Volta Regions. Furthermore, THC contents of $[(0.93 \pm 0.07) - (15.14 \pm 1.22)]\%$ were found in tests conducted on 30 samples selected from exhibits available at the Ghana Police Service's Forensic Science Laboratory, which were cannabis plant materials seized by Police Officers across Ghana. Furthermore, Quansah Amissah (2022) noted that Ghana's local cannabis strains have high THC to CBD ratios, indicating that the government should import hemp seeds given that the alternative would involve extensive study to lower the THC to CBD ratio of the native cannabis strains.

These figures (those found by Agyepong and confirmed by Quansah Amissah, 2022) are far in excess of the legally approved limit. Therefore, apart from the fact that those engaged in the cultivation of these cannabis plants are engaged in criminality because they are doing so without license, they are equally liable under the law for cultivating cannabis with higher THC content

than that legally approved. The Interior Minister through the NCC has not issued license to anyone to cultivate cannabis of whichever variety or THC content yet, because the Legislative Instrument (LI) to be passed to stipulate the modalities for applying for license is yet to be passed by Parliament. Also, the NCC has yet to set up the forensic laboratory required under Section 107 of Act 1019 for the testing of cannabis samples and seedlings to ensure that they are of 0.3% THC content or less. Therefore, anyone who is currently cultivating cannabis in Ghana, even if the THC content is actually 0.3% or less, is committing an offence under Act 1019.

Before Act 1019, cultivation of cannabis was absolutely prohibited *de facto*. Act 1019 came to provide a leeway by permitting the cultivation of cannabis of THC 0.3% for industrial and medical purposes. The industrial purpose, it is said, is for the production of jute bags. The legislative intent is simply that, apart from responding to and/or following the wave of activities worldwide and continentally, [Owusu et al. \(2021\)](#) noted that industrial hemp is used in a variety of sectors, including health, building, fashion, energy generation and manufacturing. Industrial hemp is also a low-impact crop that may be rotated with other crops, albeit because of the current state of technology, some industrial hemp uses may not be practical in Ghana right now. In Ghana, for example, using industrial hemp as a biofuel or in buildings is presently not practical. Nonetheless, the country may grow hemp as a raw material for export and produce certain semi-finished products to support the local economy.

[Unlu et al. \(2020\)](#) noted that scientific evidence supporting cannabinoids in the cannabis plant's medicinal effects has emerged, attracting attention. Cannabinoids, in addition to their herbal forms, have acquired market shares in recent decades as a result of medical cannabis rules.

Despite all these benefits derived from cannabis which informed the country's decision to legalise its cultivation, the Supreme Court of Ghana in the case of *Ezuame Mannan v. Attorney General [2022] DLSC 11608* declared Section 43 as unconstitutional and therefore null and void. In its judgement, the majority of the Supreme Court stated that Parliament did not have the power to insert into the Bill brought before it, Section 43 which was not part of the original Bill. The majority reasoned that because Section 43 of Act 1019 was unlawfully inserted into the Bill at the last minute by the Parliamentary Select Committee on Defence and Interior and not subjected to public fora and extensive debate by the Members of Parliament, the insertion was unconstitutional, null and void.

On review, the Supreme Court affirmed its previous decision. However, the two decisions of the Supreme Court did not attack Section 43 in substance. It merely declared the procedure of its insertion unconstitutional. Subsequently therefore, the government through Parliament, repassed the said Section 43. This means that the only remaining hurdle for the full operationalisation of Section 43 for Ghana to start reaping the economic benefits of the cannabis plant is the LI to be laid before Parliament and passed. Considering the urgency with which the said Section 43 was repassed, it is fair to say that the LI would be laid and passed in record time.

Hitherto, Ghana's reluctance to legalise cannabis cultivation over the years has mainly been because of the numerous public health concerns associated with cannabis use and abuse in the country. [Mensah and Adu-Gyamfi \(2019\)](#) in their study identified factors such as cannabis being a gateway to hard drugs, and its long-term impact on young and adolescent brains, inducing functional and neuroanatomical changes (its neuropsychiatric effects) among others as the reasons for Ghana's reluctance to legalise the drug. Meanwhile, medical and economic research have confirmed the valuable nature of cannabis.

Although the country has yet to issue license to anyone to grow cannabis, this process will commence soon, considering the commitment of the government to that effect.

Implications of Ghana's policy change on cannabis cultivation and use

Although Ghana's policy change on cannabis cultivation and use portends great beneficial implications for the country and its citizens, it also comes with several negative

consequences and challenges. For start, many countries have legalised cannabis with the goal of destroying the black market, reducing drug-related gang violence and fatalities, raising tax income and enhancing general quality and safety (Mollner, 2022). As various key figures (the Minister for the Interior, Speaker of Parliament, etc.) have mentioned, Ghana stands to derive direct economic benefits from the legalisation of cannabis cultivation. Ghana stands to derive millions of dollars in foreign exchange from the cultivation and export of cannabis for industrial and medicinal purposes. According to the Minister for the Interior, Ghana is estimated to make approximately \$3bn annually from the export of cannabis to Europe and America. In this regard, cannabis is subject to excise taxes and other levies, which are imposed on the commodity by the government to generate revenue (Riley *et al.*, 2019). Indeed, this is the main reason behind the legalisation.

Secondly, there are the expected large-scale industries and a series of industrial developments to accommodate the legalisation. In this regard, factories and/or industries are expected to spring up to take advantage of the legalisation and transform the grown cannabis plant into consumer goods such as medications, foods and beverages. This would, in turn, create myriads of jobs in the value chain. Evidence from countries that have legalised cannabis show that the legalisation has resulted in significant consumption-driven economic development plans, aimed at influencing local spending patterns to influence industry and employment creation (Doussard, 2019).

Medicinally, Ghana stands to benefit from several efficacious medications to be manufactured from cannabis, a large quantity of which medications may be produced locally. For example, Odiaka *et al.* (2022) reported that *Cannabis sativa* has been used to treat a variety of conditions, including rheumatism, epilepsy, asthma, skin burns, discomfort, difficulty during child labour, postpartum haemorrhage and gastrointestinal activities. *Despite the many uses of cannabis mentioned by Odiaka et al. (2022), the scientific evidence for efficacy in many conditions (e.g. asthma, skin burns) is lacking* (National Academies of Sciences, Engineering, and Medicine, 2017). Generally speaking, THC, CBD and combinations of THC and CBD are among the cannabinoids found in cannabis-based products intended for medical use (Freeman *et al.*, 2019), examples, Epidyolex, Marinol, Cesamet and Syndros.

These benefits notwithstanding, Ghana's cannabis legalisation poses serious negative consequences for the country. First of all, clinicians around the world are concerned about the potential for addiction and other negative effects that cannabis can have (Adebisi and Olaoye, 2022; Levinsohn and Hill, 2020). Though Section 43(2) of Act 1019 specifically stated that the legalisation of cannabis is not for recreational purposes, the potential for cultivation and abuse of cannabis for recreational purposes as a result of its legalisation for medicinal and industrial purposes is high, at least, in the immediate to short term. As observed in South Africa by Mokwena (2019), the legalisation of cannabis has a variety of serious negative implications, including a predicted rise in usage and the accompanying detrimental effects on the physical, emotional and social well-being of communities. The Washington State Institute of Public Policy (2019) found that, in Washington, there is still a sizable quantity of illegal cannabis cultivation and distribution, despite its legalisation in 2013. Drug use in Ghana and its associated negative consequences have been on the rise, with Ghana being unable to control the situation. According to research, 1.25 million Ghanaians struggled with drug usage, with cannabis being the most commonly abused drug along with cocaine, heroin, methamphetamines and other synthetic opioids including tramadol and codeine (Cadri *et al.*, 2021). Already, according to reports, the estimated user base in Ghana is larger than the 3.8% global average, ranging from 8% to 21.5% (Mensah and Adu-Gyamfi, 2019). Additional demand for cannabis will increase the demand for regulation, which is unlikely to be satisfied or efficiently implemented without new resources (Mokwena, 2019). It is further the case that the legalisation of cannabis will result in increased availability, more social acceptance and possibly cheaper pricing, leading to increasing demand and usage, which will bring social and health concerns that will manifest both immediately and over time. *The effect of the legalisation would be that the recreational cannabis that is currently being illegally cultivated*

may be mistaken for the legal cannabis, leading to a rise in use in the immediate and short term. The distinction between legal and illegal cannabis is not easily discernible to user. Thus, users may be consuming recreational cannabis under the cover of legalised cannabis.

At the same time, food security may suffer, at least, in the immediate to short term. As was observed by [Kolo et al. \(2022\)](#) in their research on the effect of the illegal cultivation of *Cannabis sativa* in Nigeria, cannabis cultivation represents one agricultural practice that may be depleting plant nutrients in wetland soils in the humid tropics. Cannabis is continuously grown in humid tropical lowlands, compacting the soil and draining its nutrients, with the exception of accessible P, whose status is relatively high. To these authors, the practice endangers both ecological sustainability and food security. Similar may be the case in Ghana. Firstly, there is the likelihood of some farmers still growing illegal cannabis either alone or inter-cropped with legal cannabis and other crops. Alternatively, some farmers may hide under the guise of legal growers to cultivate illegal cannabis. The end result is that the state may not receive the necessary and expected tax returns and foreign exchange that it anticipates from the legalisation. Meanwhile, many food crop farmers may be drawn away from their food crop cultivation to the cultivation of cannabis, thus creating food security concerns. The case of illegal mining in Ghana resulting in less availability of land for food crop cultivation, a lack of basic staple foods, an increase in food prices and a rise in the consumption of ultra-processed foods ([Nyantakyi-Frimpong et al., 2023](#)), may be exacerbated with the legalisation of cannabis cultivation in Ghana.

Ghana does not appear to have the necessary structures in place to control cannabis legalisation for industrial and medicinal purposes. For example, Act 1019 mandates the NCC to set up a forensic laboratory for testing the various varieties of cannabis cultivated in Ghana to ensure that they are of the 0.3% THC concentration on a *dry weight* basis among others. As of October 2023, the Commission is yet to set up that laboratory, with no sign of doing so any time soon. NCC would also need to recruit more professionals such as agronomists, chemists, forensic scientists, lawyers and pharmacists, among others, to test the cannabis cultivated and fully enforce the law. With the current constraints on the national budget in general and the NCC, this may suffer greatly. The consequence is that it would be difficult, if not impossible, for Ghana to fully implement the legalisation of cannabis, monitor its implementation and ensure compliance with the requirements of Articles 23 and 28 of the 1961 Single Convention. A further consequence is that some people could be growing unlicensed varieties of cannabis, trafficking it and making money at the expense of the state while severely jeopardising the lives of citizens, as some of the illegal cannabis would find their way into the market for recreational use. Also, Certifications for Good Manufacturing Practices (GMP) and Good Agricultural Practices are essential for medicinal cannabis businesses with global aspirations ([Uwakonye, 2020](#)). A drug's quality, safety and effectiveness are ensured by a defined system of norms and regulations (GMP). It is audited and certified by regulatory organisations, and includes every part of the production process. It is the benchmark for ensuring global quality compliance. It is unclear how Ghana intends to fulfil these requirements, should cannabis medications be produced here and which regulatory authority (Food and Drugs Authority, Ghana Standards Authority or NCC) would be responsible for these certifications and whether these institutions have the requisite personnel and equipment to do so.

The legalisation of cannabis in Ghana appears to raise more questions than answers. For example, it is not clear what the meaning of the 0.3% THC on a dry weight basis is. It is unclear whether the selling of products with 0.3% THC would be legal under the current legal regime in Ghana. It is also unclear whether the cultivated cannabis would be strictly for export or for processing and manufacture of products domestically. Where it is for processing and manufacture of products locally, it is not clear what forms these products would be sold (dry herb, oils or edibles) and from where (stores or pharmacies). Would access for consumers be restricted to "medicinal uses" (e.g. prescription required) or all uses? The law, for example, is silent on the minimum age at which a person can use medical cannabis as in the case of the

Cannabis Act of Canada which sets the minimum age at 18 ([Rubin-Kahana et al., 2022](#)). It is said that the LI to be passed would clarify and answer these questions. However, this does not appear to be the case. Best practice, the structures should have been put in place before rolling out the legalisation. It is not surprising therefore that three years after its passage, the country is unable to roll out the full implementation of Section 43.

The spiral effect to be experienced in Ghana in terms of the rise in cannabis use and its attendant health and social problems could be overwhelming, considering the current circumstances prevailing. For instance, although Act 1019 establishes a National Rehabilitation Fund to be used to cater for persons with substance use disorders (SUD) and also mandates the NCC to set up a national drug rehabilitation centre, none of these has been done so far. The situation is that drug addiction treatment is currently done at private facilities which charge fees that the average Ghanaian (drug user) cannot afford. With the legalisation, the number of persons with SUD is likely to increase, at least in the immediate term. The private facilities cannot handle the expected increased number of cases.

At the same time, although the Commission on Narcotic Drugs since December 2020 moved cannabis and cannabis resin from Schedule IV of the 1961 Convention to Schedule I, allowing State parties to cultivate and use cannabis for medical purposes under certain conditions, Ghana's law was passed before this rescheduling of cannabis was done. Furthermore, the limitations imposed by Article 28 of this Convention have not been met by Ghana. By the combined effect of Articles 23 and 28 of the 1961 Single Convention, Ghana is enjoined to establish a national cannabis agency, provide estimates of the national requirements for cannabis for medical purposes and ensure that medicinal cannabinoids are used in accordance with evidence on their safety and effectiveness and under medical supervision. However, many of these have not been done. To this extent, Ghana and her African colleague countries may be in breach of their obligations under this Convention and other international narcotic control conventions to which they are signatories. Although a review of how cannabis is categorised under the relevant international drug conventions has been commenced by the World Health Organization ([Brewer-Taylor, 2018](#)), the changes have not yet been made. Ghanaians may thus risk suffering criminal sanctions associated with cannabis export and use in countries where the importation, exportation, possession and use of cannabis and its derivative remain criminal.

There is equally the fear that small growers and indigenous farmers would be crowded out of the market by big multi-national companies. As noted earlier, for example, the cost of a license in Lesotho is the equivalent of US\$30,000. If a similar regime is implemented in Ghana, the average Ghanaian farmer cannot afford it. As observed by [Uwakonye \(2020\)](#), the exorbitant license fee charged by the Lesotho Government has forced small-scale growers to continue operating in the illegal market. Ghana risks taking this path as well.

Finally, other peripheral effects could result from the cannabis legalisation. There could be negative effects on road safety ([González-Sala et al., 2023](#)), facilitation of the introduction of new formulations of cannabis (edible, vaporised) with potentially higher potencies ([Hopfer, 2014](#)) and may changing social mores and attitudes about the risks associated with cannabis usage ([Budney and Borodovsky, 2017](#)).

Conclusion and recommendations

This paper discusses the implications of cannabis legalisation in Ghana, drawing analogies from other African countries, Europe and America. The paper notes that Ghana has only legalised cannabis cultivation for medical and industrial purposes while use remains criminal. This appears to be the case in many African countries that have legalised cannabis cultivation, with their prime motivation being the economic gains in terms of foreign exchange to be derived from cannabis export into European and American markets rather than processing the cannabis for its health benefits and medicinal use.

It is recommended that the NCC should take steps, within the shortest possible time, to fully implement the provisions of Act 1019 regarding cannabis use and cultivation. The negative implications for cannabis legalisation such as the likely rise in use and its attendant health and social issues currently appear to far outweigh the economic benefits to be derived, which is the primary focus of the central government. Ghana must learn from the examples of South Africa and other countries in this regard.

In addition, NCC must institute stringent monitoring and evaluation procedures to ensure that licensed persons comply with the conditions stipulated in the law and their license, because the likelihood of abuse is extremely high. The government must resource the NCC in this regard. Merely passing the Act, although progressive and commendable, is not sufficient.

Also, other (African) countries seeking to emulate the example of Ghana must first carry out a comprehensive review of their laws and pass a law that considers the sociocultural milieu of the country. Economic gains must not be the overriding consideration in cannabis legalisation.

To complete the process of permitting the cultivation of cannabis for industrial and medical purposes in Ghana, it is now up to the NCC to lay an LI in Parliament through the Minister for the Interior that would set out the modalities and procedure for applying for a license to cultivate the said cannabis and related matters. Legalising cannabis cultivation for both commercial and medical purposes would align Ghana with a global trend that is currently most apparent in Africa. In other countries on the continent, initiatives to adopt the same policy are gaining momentum. However, Ghana must not only seek to economically benefit from cannabis and follow in the footsteps of other countries at the expense of the health and safety of its citizens. As noted by [Owusu et al. \(2021\)](#), Act 1019 may enable Ghana to gain from the current cannabis market. However, to decrease unlawful production and the spiral effect of increased consumption, policymakers should put in place a registration system that benefits local farmers and investors, while stringently regulating. The NCC should be resourced to oversee cannabis development research and production.

References

- 3news.com (2023), "Other countries are making money from cannabis but Ghana is losing out", available at: <https://3news.com/other-countries-are-making-money-from-cannabis-but-ghana-is-losing-out-speaker-bagbin/>
- Adebisi, Y.A. and Olaoye, Q.D. (2022), "Medical use of cannabis in Africa: the pharmacists' perspective", *INNOVATIONS in Pharmacy*, Vol. 13 No. 1, pp. 10-24926, doi: [10.24926/iip.v13i1.4430](https://doi.org/10.24926/iip.v13i1.4430).
- Aditya, Z.F. and Al-Fatih, S. (2022), "The legalization of medical marijuana: a human rights perspective", *Human Rights in the Global South (HRGS)*, Vol. 1 No. 2, pp. 115-127, doi: [10.56784/hrgs.v1i2.36](https://doi.org/10.56784/hrgs.v1i2.36).
- Africa News (2020), "Malawi becomes latest African country to embrace cannabis", available at: www.africanews.com/2020/02/28/african-countries-embrace-cannabis-zambia-south-africa-zimbabwe-lesotho/
- Agyepong, M. (2019), "Determination of the contents of three major cannabinoids in cannabis samples found in Ghana", available at: <http://ugspace.ug.edu.gh/handle/123456789/33068>
- Bernstein, H. (1999), "Ghana's drug economy: some preliminary data", *Review of Africa Political Economy*, Vol. 79, pp. 13-32, doi: [10.1080/03056249908704358](https://doi.org/10.1080/03056249908704358).
- Bloomberg (2022), "World's biggest hashish exporter is struggling to go legal", available at: www.bloomberg.com/news/features/2022-12-16/world-s-biggest-hashish-exporter-morocco-is-struggling-to-go-legal-with-cannabis
- Bloomer, J. (2019), "Turning cannabis into cash: agrarian change and Lesotho's evolving experience", *EchoGéo*, Vol. 48 No. 48, pp. 1-21, doi: [10.4000/echogeo.17612](https://doi.org/10.4000/echogeo.17612).
- Brewer-Taylor, D.R. (2018), "Canada, cannabis legalization and uncertainty around the United Nations drug control conventions", *Addiction: Society for the Study of Addiction*, Vol. 113, pp. 1224-1230, doi: [10.1111/add.14141](https://doi.org/10.1111/add.14141).
- Budney, A.J. and Borodovsky, J.T. (2017), "The potential impact of cannabis legalization on the development of cannabis use disorders", *Preventive Medicine*, Vol. 104, pp. 31-36, doi: [10.1016/j.ypmed.2017.06.034](https://doi.org/10.1016/j.ypmed.2017.06.034).

- Cadri, A., Nagumsi, B.A.A., Twi-Yeboah, A., Yeboah, L.D., Adomah-Afari, A., Ane-Loglo, M.G. and Aboagye, R. G. (2021), "Facilitators and barriers to health seeking among people who use drugs in the Sunyani municipality of Ghana: an exploratory study", *BioMed Research International*, Vol. 2021, pp. 1-11, doi: [10.1155/2021/2868953](https://doi.org/10.1155/2021/2868953).
- Cannavigia (2022), "Cannabis country report of the Netherlands-how to get a cannabis license [free guide]", available at: <https://cannavigia.com/cannabis-country-report-netherlands-how-to-get-a-cannabis-license#:~:text=The%20use%20of%20medicinal%20cannabis,for%20personal%20use%20is%20tolerated>
- Carrier, N. and Klantschnig, G. (2018), "Quasilegality: Khat, cannabis and Africa's drug laws", *Third World Quarterly*, Vol. 39 No. 2, pp. 350-365, doi: [10.1080/01436597.2017.1368383](https://doi.org/10.1080/01436597.2017.1368383).
- Chouvy, P. (2023), "Why the concept of terroir matters for drug cannabis production", *GeoJournal*, Vol. 88 No. 1, doi: [10.1007/s10708-022-10591-x](https://doi.org/10.1007/s10708-022-10591-x).
- de Jong, F.A. (2009), "Medicinale cannabis in Nederland: op weg naar een verantwoord gebruik [medicinal use of cannabis in the Netherlands: towards a responsible pattern of use]", *Nederlands Tijdschrift Voor Geneeskunde*, Vol. 153, p. B23.
- Donovan, P. (2021), "Does decriminalisation and the legalisation of medical marijuana affect crime rates? A panel data analysis of the new England states", available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://digitalcommons.bryant.edu/cgi/viewcontent.cgi?article=1033&context=honors_economics
- Doussard, M. (2019), "The other green jobs: legal marijuana and the promise of consumption-driven economic development", *Journal of Planning Education and Research*, Vol. 39 No. 1, pp. 79-92, doi: [10.1177/0739456X17719498](https://doi.org/10.1177/0739456X17719498).
- Dragone, D., Prarolo, G., Vanin, P. and Zanella, G. (2019), "Crime and the legalization of recreational marijuana", *Journal of Economic Behavior & Organization*, Vol. 159, pp. 488-501.
- Duvall, C.S. (2015), *Cannabis*, Reaktion Books, London.
- Duvall, C.S. (2019), "A brief agricultural history of cannabis in Africa: from pre-history to canna-colony", *EchoGéo*, Vol. 48 No. 48, pp. 1-26, doi: [10.4000/echogeo.17599](https://doi.org/10.4000/echogeo.17599).
- Fischer, B., Boyd, N. and Brochu, S. (2022), "Proposals for decriminalization of illicit drug use: considering a combination of déjà-vu, diversion and devil-with-many-details for health-oriented policy reform", *The Canadian Journal of Psychiatry*, Vol. 67 No. 1, pp. 13-15, doi: [10.1177/07067437211019656](https://doi.org/10.1177/07067437211019656).
- Freeman, T.P., Hindocha, C., Green, S.F. and Bloomfield, A.P. (2019), "Medicinal use of cannabis-based products and cannabinoids", *BMJ*, Vol. 365, pp. 1-7, doi: [10.1136/bmj.l1141](https://doi.org/10.1136/bmj.l1141).
- González-Sala, F., Tortosa-Pérez, M., Peñaranda-Ortega, M. and Tortosa, F. (2023), "Effects of cannabis legalization on road safety: a literature review", *International Journal of Environmental Research and Public Health*, Vol. 20 No. 5, p. 4655, doi: [10.3390/ijerph20054655](https://doi.org/10.3390/ijerph20054655).
- Hopfer, C. (2014), "Implications of marijuana legalization for adolescent substance use", *Substance Abuse*, Vol. 35 No. 4, pp. 331-335, doi: [10.1080/08897077.2014.943386](https://doi.org/10.1080/08897077.2014.943386).
- Kolo, J., Ukabiala, M.E., Osakwe, U.C., Parah, J.B., Nyamapfene, K., Obalum, S.E., Hassan, A.M., Nnabude, P.C. and Igwe, C.E. (2022), "Overlooked influence of Indian hemp (*Cannabis sativa*) cultivation on soil physicochemical fertility of humid tropical agroecosystems: lowland soils", *West African Journal of Applied Ecology*, Vol. 30 No. 1, pp. 68-81.
- Levinsohn, E.A. and Hill, K.P. (2020), "Clinical uses of cannabis and cannabinoids in the United States", *Journal of the Neurological Sciences*, Vol. 411, p. 116717, doi: [10.1016/j.jns.2020.116717](https://doi.org/10.1016/j.jns.2020.116717).
- Library of Congress (2021), "Zambia: Cannabis Act and Industrial Hemp act enacted", available at: www.loc.gov/item/global-legal-monitor/2021-07-09/zambia-cannabis-act-and-industrial-hemp-act-enacted/
- Lubaale, E.C. and Mavundla, S.D. (2019), "Decriminalisation of cannabis for personal use in South Africa", *African Human Rights Law Journal*, Vol. 19 No. 2, pp. 819-842, doi: [10.17159/1996-2096/2019/v19n2a13](https://doi.org/10.17159/1996-2096/2019/v19n2a13).
- Mensah, K.B. and Adu-Gyamfi, P.K.T. (2019), "To legalise cannabis in Ghana or not to legalise? Reviewing the pharmacological evidence", *Archives of Pharmacy and Pharmaceutical Sciences*, Vol. 3 No. 1, pp. 82-88, doi: [10.29328/journal.apps.1001018](https://doi.org/10.29328/journal.apps.1001018).
- Mills, J.H. (2013), *Cannabis Nation: Control and Consumption in Britain, 1928-2008*, Oxford University Press, Britain, p. 44.
- Mokwena, K. (2019), "Social and public health implications of the legalisation of recreational cannabis: a literature review", *African Journal of Primary Health Care & Family Medicine*, Vol. 11 No. 1, pp. e1-e6, doi: [10.4102/phcfm.v11i1.2136](https://doi.org/10.4102/phcfm.v11i1.2136).

- Mollner, J. (2022), "Global impacts of legalization and decriminalization of marijuana and cannabis", *Journal of Toxicology and Risk Assessment*, Vol. 8 No. 1, pp. 1-14, doi: [10.23937/2572-4061.1510046](https://doi.org/10.23937/2572-4061.1510046).
- National Academies of Sciences, Engineering, and Medicine (2017), *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research*, The National Academies Press, Washington, DC, doi: [10.17226/24625](https://doi.org/10.17226/24625).
- Nyantakyi-Frimpong, H., Christian, A.K., Ganle, J. and Aryeetey, R. (2023), "'Now we've all turned to eating processed foods': a photovoice study of the food and nutrition security implications of 'galamsey' in Ghana", *African Journal of Food, Agriculture, Nutrition and Development*, Vol. 23 No. 116, pp. 22200-22220, doi: [10.18697/ajfand.116.22855](https://doi.org/10.18697/ajfand.116.22855).
- Odieka, A.E., Obuzor, G.U., Oyedepi, O.O., Gondwe, M., Hosu, Y.S. and Oyedepi, A.O. (2022), "The medicinal natural products of *Cannabis sativa* Linn.: a review", *Molecules (Basel, Switzerland)*, Vol. 27 No. 5, p. 1689, doi: [10.3390/molecules27051689](https://doi.org/10.3390/molecules27051689).
- Owusu, N.O., Arthur, B. and Aboagye, E.M. (2021), "Industrial hemp as an agricultural crop in Ghana", *Journal of Cannabis Research*, Vol. 3 No. 1, pp. 1-8, doi: [10.1186/s42238-021-00066-0](https://doi.org/10.1186/s42238-021-00066-0).
- Parliament of Ghana (2023), "Order paper for the twentieth sitting of the second meeting of parliament", available at: [www.parliament.gh/epanel/docs/pb/ORD.%20PAPER-12%20July%202023%20\(Wed\).pdf#viewer.action=download](http://www.parliament.gh/epanel/docs/pb/ORD.%20PAPER-12%20July%202023%20(Wed).pdf#viewer.action=download)
- Prohibition Partners (2023), "African cannabis market overview", available at: <https://prohibitionpartners.com/reports/african-cannabis-market-overview/>
- Quansah Amisshah, R. (2022), "Ghana's preparedness to exploit the medicinal value of industrial hemp", *Journal of Cannabis Research*, Vol. 4 No. 58, pp. 1-6, doi: [10.1186/s42238-022-00167-4](https://doi.org/10.1186/s42238-022-00167-4).
- Reid, M.A. (2020), "A qualitative review of cannabis stigmas at the twilight of prohibition", *Journal of Cannabis Research*, Vol. 2 No. 1, pp. 1-12, doi: [10.1186/s42238-020-00056-8](https://doi.org/10.1186/s42238-020-00056-8).
- Reuters (2019), "Zambia approves cannabis export to boost economy", available at: www.reuters.com/article/us-zambia-cannabis-idUSKBN1YK1XU
- Riley, S., Vellios, N. and van Walbeek, C. (2019), "An economic analysis of the demand for cannabis: some results from South Africa", *Drugs: Education, Prevention and Policy*, Vol. 27 No. 2, pp. 123-130, doi: [10.1080/09687637.2019.1581139](https://doi.org/10.1080/09687637.2019.1581139).
- Rubin-Kahana, D.S., Crepault, J., Matheson, J. and Le Foll, B. (2022), "The impact of cannabis legalisation for recreational purposes on youth: a narrative review of the Canadian experience", *Frontiers in Psychiatry*, Vol. 13, pp. 1-15, doi: [10.3389/fpsy.2022.984485](https://doi.org/10.3389/fpsy.2022.984485).
- Stevens, A., Hughes, C., Hulme, S. and Cassidy, R. (2021), "Classifying alternative approaches for simple drug possession: a two-level taxonomy", *Northern Kentucky Law Review*, Vol. 48 No. 2, pp. 346-347.
- Stevens, A., Hughes, C.E., Hulme, S. and Cassidy, R. (2022), "Depenalization, diversion and decriminalization: a realist review and programme theory of alternatives to criminalization for simple drug possession", *European Journal of Criminology*, Vol. 19 No. 1, pp. 29-54, doi: [10.1177/1477370819887514](https://doi.org/10.1177/1477370819887514).
- Svrakic, D.M., Lustman, P.J., Mallya, A., Lynn, T.A., Finney, R. and Svrakic, N.M. (2012), "Legalization, decriminalization & medicinal use of cannabis: a scientific and public health perspective", *Missouri Medicine*, Vol. 109 No. 2, pp. 90-98.
- The Africa Report (2021), "Morocco to legalise cannabis for medical and industrial use", available at: www.theafricareport.com/74949/morocco-to-legalise-cannabis-for-medical-and-industrial-use/
- UK Parliament (2023), "Medical use of cannabis", available at: <https://commonslibrary.parliament.uk/research-briefings/cbp-8355/>
- Unlu, A., Tammi, T. and Hakkarainen, P. (2020), "Drug decriminalization policy literature review: models, implementation and outcomes", *Finnish Institute for Health and Welfare Report*, Vol. 9, pp. 1-92, available at: chrome-extension://efaidnbnmnmbpcjpcglclefindmkaj/https://www.julkari.fi/bitstream/handle/10024/140116/URN_ISBN_978-952-343-504-9.pdf
- UNODC (2015), "Approaches to decriminalising drug use & possession", available at: www.unodc.org/documents/ungass2016/Contributions/Civil/DrugPolicyAlliance/DPA_Fact_Sheet_Approaches_to_Decriminalization_Feb2015_1.pdf
- Uwakonye, D. (2020), "Strengthening capacity of youth in support of emerging agricultural industries in Africa: Lesotho's cannabis industry the role of higher education in its human resource development",

available at: <chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://ecommons.cornell.edu/server/api/core/bitstreams/a093a444-7412-4bb6-b568-948a40e12ddd/content>

van Kempen, P.H. and Fedorova, M. (2018), "Regulated legalization of cannabis through positive human rights obligations and inter se treaty modification", *International Community Law Review*, Vol. 20 No. 5, pp. 493-526, doi: [10.1163/18719732-12341386](https://doi.org/10.1163/18719732-12341386).

Wheeldon, J. and Heidt, J. (2022), "Cannabis, coerced care, and a rights-based approach to community support", *Health and Human Rights*, Vol. 24 No. 2, pp. 115-119.

Further reading

Citinewsroom.com (2023), "Supreme court's ruling on cannabis cultivation a grievous error", available at: <https://citinewsroom.com/2023/07/supreme-courts-ruling-on-cannabis-cultivation-a-grievous-error-ambrose-dery/>

Government of Ghana (2020), *Narcotics Control Commission Act, 2020 (Act 1019)*, Ghana Publishing, Accra.

Hill, K.P. (2015), "Medical marijuana for treatment of chronic pain and other medical and psychiatric problems: a clinical review", *JAMA*, Vol. 313 No. 24, pp. 2474-2483.

Hughes, C., Stevens, A., Hulme, S. and Cassidy, R. (2019), "Models for the decriminalization, depenalisation and diversion of illicit drug possession: an international realist review", *Paper presented at the International Society for the Study of Drug Policy Conference*, available at: <https://harmreductioneurasia.org/wp-content/uploads/2019/07/Hughes-et-al-ISSDP-2019-Models-for-the-decriminalisation-depenalisation-and-diversion-of-illicit-drug-possession-FINAL.pdf>

Koppel, B.S., Brust, J.C., Fife, T., Bronstein, J. and Youssof, S. (2014), "Systematic review: efficacy and safety of medical marijuana in selected neurologic disorders. Report of the guideline development subcommittee of the American academy of neurology", *Neurology*, Vol. 82 No. 17, pp. 1556-1563.

MacCoun, R. and Reuter, P. (2001), "Evaluating alternative cannabis regimes", *British Journal of Psychiatry*, Vol. 178 No. 2, pp. 123-28.

Moffitt, T.E., Meier, M.H., Caspi, A. and Poulton, R. (2013), "Reply to Rogeberg and Daly: no evidence that socioeconomic status or personality differences confound the association between cannabis use and IQ decline", *Proceedings of the National Academy of Sciences of the United States of America*.

New Frontier (2019), "Morocco, Europe's biggest cannabis supplier", available at: <https://newfrontierdata.com/cannabis-insights/morocco-europes-biggest-cannabis-supplier/>

Queirolo, R., Rossel, C., Álvarez, E. and Repetto, L. (2019), "Why Uruguay legalised marijuana? The open window of public insecurity", *Addiction (Abingdon, England)*, Vol. 114 No. 7, pp. 1313-1321, doi: [10.1111/add.14523](https://doi.org/10.1111/add.14523).

Reuter, P. and MacCoun, R.J. (1995), *Assessing the Legalization Debate in Policies and Strategies to Combat Drugs in Europe*, in Estievenart, G. (Ed.), Kluwer, Amsterdam, pp. 39-49.

Rogeberg, O. (2013), "Correlations between cannabis use and IQ change in the Dunedin cohort are consistent with confounding from socioeconomic status", *Proceedings of the National Academy of Sciences of the United States of America*.

SAMHSA (2014), "Workplace issues related to the decriminalization/legalization of marijuana", available at: www.samhsa.gov/sites/default/files/galvin-marijuana-update-dtab-sept-2014.pdf

Washington State Institute of Public Policy (2019), "Suppressing illicit cannabis markets after state marijuana legalisation", available at: chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.wsipp.wa.gov/ReportFile/1708/Wsipp_Suppressing-Illicit-Cannabis-Markets-After-State-Marijuana-Legalization_Report.pdf

Wilkinson, S.T. (2013), "Medical and recreational marijuana: commentary and review of the literature", *Missouri Medicine*, Vol. 110 No. 6, pp. 524-528.

Corresponding author

Jacob Mensah Agboli can be contacted at: jacob.agboli@ncc.gov.gh

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com