



## Legalization of Cannabis in Nepal: Critical Aspects and Considerations

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**Received:** December 06, 2024

**Published:** December 23, 2024

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### Abstract

Legalization of cannabis for both medicinal and recreational purposes is rapidly expanding worldwide. Cannabis has become a key economic contributor in countries where it is legalized, as evidenced by the substantial tax revenue generated by the industry. Despite the longstanding human-cannabis relationship, Nepal has been slow in utilizing this valuable plant's potential. While ancient texts mention its medicinal values, the country has hesitated to recognize its economic significance. The stigma around cannabis being a scheduled drug further hindered its exploration.

In contrast, many Western universities have studied cannabis, emphasizing its medicinal value, particularly in treating conditions such as diabetes, pain, and depression. Active research into plant secondary metabolites, especially cannabinoids like THC, CBD, and CBG, continues to uncover their medicinal properties. Nepal currently spends a significant portion of its economy on costly imported medicines, a burden that could be reduced by reviving a cannabis-based medicinal system. Legalizing cannabis could enable Nepal to become a center for cultivation, commerce, medicine, and research, significantly boosting its economy.

With the growing global trend towards cannabis legalization and the recent UN decision to reschedule it, Nepal has an opportunity to consider legalization or formulate a policy for its regulated use. International legal frameworks are evolving, potentially removing barriers that previously hindered Nepal's legalization efforts. However, careful analysis of comprehensive data from countries that have already legalized cannabis is crucial in formulating an effective policy. The varied success of cannabis legalization in different countries emphasizes the need for policies specifically designed to suit Nepal's unique context.

**Keywords:** Nepal; Cannabis

### Introduction

In recent years, the global cannabis landscape has undergone a significant transformation, with numerous countries legalizing the plant for medicinal and recreational purposes. Notable examples include Canada, Uruguay, Thailand, and various states in the United States. This legalization trend has gained momentum, particularly in Asian countries, over the last couple of years. The economic impact of cannabis legalization has been remarkable, evident in the substantial contributions it has made to the economies of these countries.

For instance, in 2021, legalized cannabis for adult use in the United States collectively generated a staggering \$3.7 billion in tax revenue from the cannabis industry [9]. California, a prominent state in the US, witnessed legal cannabis sales reaching \$5.3 billion in the same year [10]. These figures unequivocally demonstrate the significant role the cannabis industry plays in driving economic growth.

Despite cannabis having a longstanding association with human history, Nepal seems to have been slower in capitalizing on the potential of this valuable plant. Ancient texts, including the Vedas and other eastern civilization books, have acknowledged the medicinal properties of cannabis, but the country has struggled to translate and incorporate this ancient knowledge effectively [2]. For a considerable period, there has been reluctance in Nepal to acknowledge the plant's economic importance and explore other related aspects, primarily due to the stigma associated with its classification as a scheduled drug since the 1970s.

Conversely, several universities in the West have conducted research programs that yielded conclusive results highlighting the medicinal significance of the chemical compounds produced by cannabis. The secondary metabolites of the cannabis plant, particularly cannabinoids, have shown promising potential in treating various diseases such as diabetes, pain, and depression [7,8]. Specific compounds like Tetrahydrocannabinol (THC) and Cannabidiol

(CBD) have gained particular attention for their medicinal properties [4].

In Nepal, a considerable portion of the economy is spent on purchasing expensive medicines from pharmaceutical companies around the world. Reviving a cannabis-based medicinal system could provide an opportunity for the country to reduce reliance on foreign pharmaceuticals and potentially boost its economy. Furthermore, as cannabis can be exported as raw or finished products, Nepal could see rapid economic growth in a short period, especially with advancements in crossbreeding to produce desired chemical constituents in the plant. While wild types of cannabis are now rare to find, Nepal is believed to have landraces that hold importance for medicinal research.

Given the increasing number of countries embracing cannabis legalization and the recent UN decision to reschedule it, Nepal now faces a unique opportunity to consider legalization or at least draft a policy for cannabis. Changes in international legal frameworks may remove previous policy hurdles that hindered Nepal from legalizing the plant in the past.

However, it is essential to approach this matter with caution and conduct a thorough examination of comprehensive data from countries that have already legalized cannabis. Each nation’s policy needs to be studied, and a tailored approach should be developed for Nepal, considering its unique socio-economic and cultural factors. It is also crucial to recognize that not all countries that have legalized cannabis have experienced unequivocal success. Therefore, the formulation of a well-thought-out policy is imperative for Nepal to harness the potential benefits of cannabis legalization while mitigating any potential risks or challenges.

The global trend of cannabis legalization presents a significant opportunity for Nepal to reconsider its approach to this valuable plant. With careful consideration, evidence-based policy development, and public dialogue, Nepal can potentially embrace the cannabis industry and unlock opportunities in farming, business, medicine, and research, ultimately fostering prosperity for the nation and its people. The time seems ideal for Nepal to take a proactive stance on cannabis legalization and stay in step with the evolving global cannabis landscape.

**Stakeholders of Cannabis business**

The legal cannabis industry impacts many parts of society and offers both medical and financial benefits to various groups (Figure 1). Creating a fair policy for this industry is important because

it needs to address the needs of everyone involved, including consumers, growers, government agencies, and dispensaries. The industry provides benefits such as generating revenue and creating jobs, making it an important part of the economy. With cannabis legalization, job opportunities could grow rapidly, especially helping recent graduates and others looking for work.

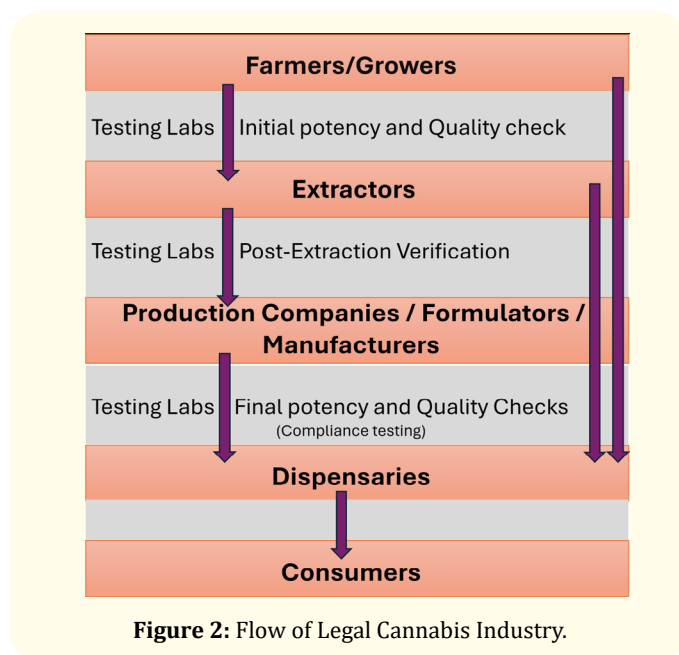
**Dynamics of the Legal Cannabis industry**



**Figure 1:** Stakeholders of the legal cannabis Industries.

The journey of a cannabis product from cultivation to consumer involves multiple essential processes, as illustrated in Figure 2. This includes intermediate testing, crucial for research and development purposes, which fosters innovation and advancements in cannabis-based medicines and therapeutic applications. Subsequently, the final cannabis product undergoes rigorous compliance testing to ensure it meets stringent safety, quality, and regulatory standards before reaching the consumer.

**Policy Considerations for the legalization of Cannabis by the**



**Figure 2:** Flow of Legal Cannabis Industry.

### government entities

To effectively manage the diverse components of the cannabis industry, the government or regulatory body must adopt a balanced approach. Striking the right equilibrium is essential; firm regulations must be put in place to safeguard public health, prevent abuse, and ensure consistent product quality. At the same time, it is crucial to avoid excessive regulations that could impose unnecessary burdens on businesses, potentially leading to financial hardships or collapse. Listed and discussed below are some of the important policies that are to be considered by the government for the legalization of cannabis in Nepal.

### Individual/Micro versus corporate businesses

The cannabis industry's immense economic significance has drawn businesses of all scales. However, there is a valid concern that large corporate entities could monopolize the legal market, potentially marginalizing individual entrepreneurs, micro-businesses, and small-scale farmers. To ensure a fair and equitable industry, it is essential that the policy being drafted or finalized includes a well-defined distinction between small, medium, and large businesses, along with measures to protect and support the interests of smaller enterprises.

Individuals and micro-businesses contribute vital diversity and innovation to the cannabis industry, playing a crucial role in its growth. They represent the entrepreneurial spirit that drives the market forward. However, the aggressive expansion of corporate giants poses a threat to the survival and prosperity of smaller players. Concurrently, Acknowledging the Significance of Large Corporations in the National Economy Demands a Balanced Approach to Their Promotion.

### Taxation

Taxation is a crucial aspect of the cannabis industry, given its status as a high-value cash crop with significant potential to contribute to the general market's cash flow. The tax revenue generated from various components of the legal cannabis industry is expected to be substantial. Therefore, acknowledging the role of large corporations in the national economy necessitates a balanced approach to their promotion.

It is essential to recognize the varying needs and capacities of different industry players. For instance, small-scale or community-based cannabis businesses may require support through lower taxation to foster their growth compared to larger corporate enter-

prises. A nuanced taxation policy that considers these differences can create an environment conducive to the overall development of the cannabis industry in Nepal.

### Technology update

The cannabis industry and cannabis science are continuously evolving, with advancements and updates in science and technology occurring every year. For countries like Nepal, it is essential to accelerate their technology upgrades to keep pace with these developments. Embracing recent and sophisticated techniques and technology can significantly lower the cost of operations and enhance efficiency within the industry.

Areas that particularly require timely technology updates include:

- **Vertical Farming:** Implementing vertical farming methods can revolutionize cannabis cultivation by maximizing space and resource utilization. This approach can lead to higher yields, improved quality, and reduced environmental impact.
- **High Throughput Extraction and Manufacturing Facilities:** Upgrading extraction and manufacturing facilities with high-throughput equipment can increase productivity, enabling the processing of larger quantities of cannabis in less time.
- **Research and Testing Laboratories:** Equipping research and testing laboratories with state-of-the-art technology allows for more accurate and comprehensive analysis of cannabis products. This ensures product quality, safety, and compliance with regulatory standards.

Investing in modern technology not only boosts the cannabis industry's productivity but also facilitates research and development, leading to potential breakthroughs in cannabis-based medicines and other applications. Moreover, staying updated with the latest technology can help Nepal establish a competitive advantage in the global cannabis market.

Working with international partners, universities, and research institutions can be valuable for achieving these technological advancements. By exchanging knowledge and expertise, Nepal can rapidly integrate cutting-edge practices into its cannabis industry.

### Domestic vs international market

Policy makers need to be well-informed about the existing dynamics of the cannabis market, both domestically and internationally. As Nepal progresses toward cannabis legalization, it aims to export raw and processed cannabis products to European and North

American markets. However, these target markets have already established or are developing strict quality control standards. To ensure the success of Nepal's cannabis exports, it is essential to meet and exceed international quality standards. This necessitates careful consideration of product quality, safety, and consistency throughout the entire cannabis supply chain. Implementing robust quality control measures will be crucial to gaining the trust of international markets and establishing a positive reputation for Nepalese cannabis products.

Adhering to international standards will also enhance the competitiveness of Nepalese cannabis in the global market. By producing high-quality products that meet or exceed stringent criteria, Nepal can position itself as a reliable and reputable supplier, opening doors for lucrative trade opportunities.

### Research and development

The regulation of the cannabis industry should make a clear distinction between commercial businesses and research and development (R&D) entities. The policy should actively encourage and support both commercial ventures and research initiatives simultaneously. Staying up to date with cutting-edge advancements in cannabis science and technology is essential for the industry's growth.

In Nepal, there is a need to profile the cannabinoids content of different cannabis strains thoroughly. As of now, we lack precise knowledge about whether the cannabis found in Nepal differs from varieties found in other regions of the world. It is believed that many unique cannabis landraces still exist in the mountains of Nepal, representing valuable genetic diversity and potential medicinal properties.

By defining clear guidelines and incentives for R&D endeavors, the policy can stimulate discoveries and innovations in cannabis research. Emphasizing the importance of ongoing scientific exploration will not only contribute to advancements in medicinal applications but also open doors for novel commercial opportunities.

To achieve these objectives, collaboration between the government, academia, private sector, and local communities is essential. Engaging in systematic research and analysis of Nepal's cannabis strains can help in identifying and preserving valuable landraces and their unique characteristics.

### Defining medicinal and recreational cannabis

The distinction between medicinal and recreational cannabis remains an ongoing topic of discussion. Generally, cannabis strains with higher CBD and lower THC content are regarded as medicinal, while those with high THC and low CBD are considered recreational [6]. However, this classification can be conflicting as research has shown that cannabis with higher THC content also holds medicinal importance [3].

Nepal, with its long history of cannabis use, may need to establish its own definition of recreational versus medicinal cannabis, considering its unique cultural and medicinal practices. The country has a rich variety of cannabis strains, and thus, a clear classification based on these strains is essential.

Additionally, cannabis is further divided into marijuana and hemp based on their THC/CBD content [1]. To regulate and harness the potential of these diverse strains effectively, Nepal must formulate a comprehensive classification system that considers the specific characteristics and traditional uses of each strain.

### Licensing

The licensing of cannabis businesses will be a critical and complex aspect following legalization. Establishing a dedicated licensing body, defining clear criteria for obtaining licenses, determining the duration of licenses, and enforcing regulations are pivotal considerations in the policy-making process. Proper licensing is essential to avoid potential adverse impacts on the entire industry, and robust regulation is necessary to prevent misuse.

A comprehensive licensing framework must cover every entity within the cannabis industry. This includes growers, manufacturers, distributors, retailers, testing laboratories, and any other relevant stakeholders. Each licensing applicant should be permitted to obtain only one type of license, or in cases where multiple licenses are sought, they should pertain to non-conflicting activities, thereby promoting ethical operations. For instance, a company or individual granted a farming license should not be granted a testing license to avoid conflicts of interest and maintain transparency.

The licensing process should prioritize transparency, fairness, and accountability. Applicants must meet specific criteria, such as adhering to safety standards, environmental regulations, and compliance with legal requirements. Background checks and financial evaluations may also be conducted to ensure the credibility and capability of the applicants.

The duration of licenses is a crucial aspect to consider. Short-term licenses may encourage competition and allow for flexibility, while longer-term licenses may provide stability for businesses to invest and grow. The policy should strike a balance between providing opportunities for new entrants and supporting the sustainable development of established businesses.

The licensing body must have the authority to monitor and enforce compliance rigorously. Strict penalties should be imposed for any violations, ensuring that businesses adhere to the regulations and operate with integrity. Regular inspections, audits, and reviews can help maintain industry standards and safeguard consumer safety.

Collaboration between the licensing body and other relevant government agencies is vital to streamline processes, share information, and coordinate efforts. Additionally, involving industry stakeholders in the policy-making process through consultations and feedback can result in a more effective and inclusive licensing framework.

**Patenting**

Nepal’s rich biodiversity of cannabis landraces underscores the need for a well-defined and precise patenting policy. In regions like the far western areas, as well as other parts of the country, tribal and local populations have played a pivotal role in conserving and cultivating specific cannabis strains for generations [5]. To ensure equitable distribution of benefits, these tribes, communities, and individual farmers must be rightfully acknowledged and provided with the shares they naturally deserve.

Implementing a patenting system for cannabis strains, as well as traditional and ancient cultivation technologies, will protect the intellectual property rights of these local populations. By patent-

ing these resources, Nepal can safeguard the knowledge and contributions of the indigenous communities, ensuring that they receive fair recognition and compensation for their valuable efforts.

The patenting policy should be designed to protect the traditional knowledge and practices associated with cannabis cultivation. Special provisions and safeguards must be included to prevent the misappropriation of indigenous knowledge by external entities. This will empower local populations to retain ownership over their cultural heritage and its application in the cannabis industry.

Collaboration with tribal and local communities is essential throughout the patenting process. By involving them in consultations and decision-making, Nepal can foster mutual respect, address concerns, and uphold the principles of cultural and intellectual property rights.

Furthermore, the patenting policy should extend support to local populations, assisting them in navigating the patent application process and ensuring they receive fair economic benefits from the commercialization of their cannabis strains.

**Administrative framework**

A well-designed administrative framework for the regulation of cannabis in Nepal is indispensable. This framework must empower the government with comprehensive control over the cannabis industry. The creation of the Cannabis Control Division or Cannabis Control Bureau, as proposed herein, would ensure effective regulation and oversight. The central idea here is to establish a dedicated and largely independent governmental body tasked exclusively with regulating and overseeing the cannabis industry within Nepal. By structuring the Bureau into various sections and committees (Figure 3), Nepal can achieve its objectives of responsible and

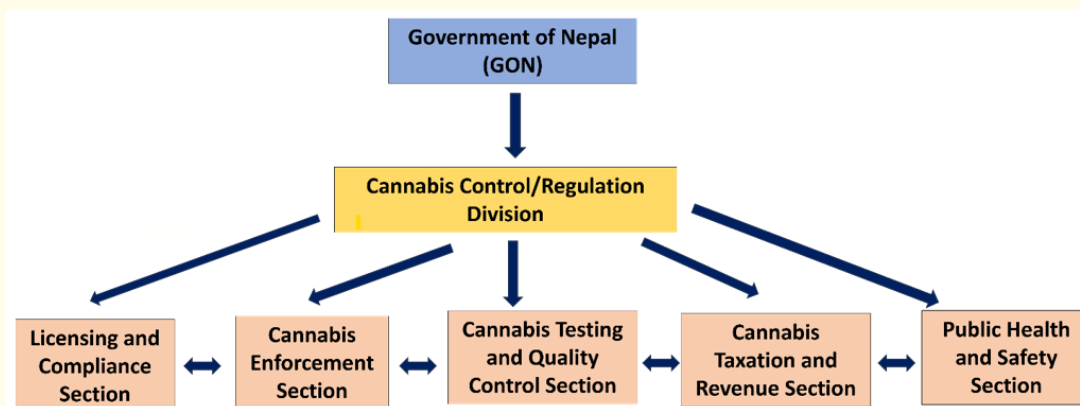


Figure 3: Recommended administrative framework for the regulation/control of Cannabis in Nepal.

safe cannabis regulation, contributing positively to public health and revenue generation.

### Discussion and Conclusion

In conclusion, the legalization of cannabis in Nepal represents a significant paradigm shift from prohibition to a well-regulated industry. It's important to correct the misconception that legalization means unrestricted cannabis cultivation and use. In reality, legalization involves strict regulations that oversee every aspect of the cannabis industry, from cultivation to distribution.

Crafting a robust regulatory policy is of utmost importance to effectively navigate the complexities of the cannabis market within the country and ensure compliance with international trade laws. A comprehensive approach is required to address various components of the industry, including licensing, quality control, safety standards, and taxation.

The lack of awareness regarding the safe and proper use of cannabis is a challenge that must be actively addressed after legalization. To promote responsible consumption, the Nepalese government should establish a specialized committee to study the challenges, opportunities, and objectives of cannabis legalization. This committee should prioritize technological advancements, scientific research, and public education to foster informed decision-making among consumers.

The policy-making process should be transparent and inclusive, engaging stakeholders from various sectors, including academia, industry, and civil society. By involving experts with knowledge of global and national cannabis scenarios, the committee can formulate a comprehensive and forward-thinking policy.

A significant policy gap in Nepal's agro-economy lies in the lack of certification as per international standards, which is particularly critical for cannabis exports. To access global markets and compete internationally, Nepal must ensure that its cannabis products meet stringent quality standards. By establishing and adhering to internationally recognized certifications, Nepal can enhance its reputation as a reliable supplier of high-quality cannabis products, attracting foreign investment and promoting economic growth.

Drawing from the wisdom of Ayurveda, which views cannabis as a valuable gift to humanity, Nepal has an opportunity to harness the full potential of this plant. By implementing a well-crafted regulatory policy, the country can stimulate its economy, create new employment opportunities, and improve overall prosperity while respecting traditional practices and preserving cultural heritage.

In conclusion, the path to a successful cannabis industry lies in careful regulation, informed decision-making, and responsible practices. By seizing this opportunity with diligence, Nepal can embrace the benefits of cannabis legalization and contribute positively to the global cannabis landscape.

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