**Medical Cannabis Cultivation and Rural Livelihoods in Bela-Bela, Berea, Lesotho.**

**BY**

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**A Research Dissertation Submitted to the Department of Development Studies in Partial Fulfillment of the Requirements of Master of Art in Development Studies.**

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## DECLARATION

I hereby declare that this dissertation presents original work which has never been submitted by anyone. The dissertation complies with the institutions' requirements which are inclusive of plagiarism and the length which regulate submission of Master of Arts in Development Studies. I confirm that the dissertation has been checked through Turnitin module and every author's work presented in this has been acknowledged. I further declare that my report has been viewed by my supervisor who addressed every concern that has been raised by it.

Supervisor……. Signature……..

Date…….. Date……..

## DEDICATION

I dedicate this dissertation to my family for their unwavering support, love and prayers throughout my Masters journey. This dissertation is also devoted to my twin sister, Ts′epang Lenkoe, thank you for your continuous words of encouragement that kept me going during the trying times. Your participation does not go unnoticed. This work is also dedicated to the National University of Lesotho for giving me memories I never want to forget. Last but not least, I want to thank myself for not quitting and striving to complete my thesis.

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## Abbreviations and Acronyms

| | |
|---|---|
| THC | Tetrahydrocannabinol |
| FDA | Food and Drug Administration |
| CBD | Cannabidiol |
| COVID-19 | Coronavirus Disease |
| SAHPRA | South African Health Products Regulatory Authority |
| GMP | Good Manufacturing Practice |
| LGBTQ | Lesbian, Gay, Bisexual, Transgender and Queer |
| FDG | Focus Group Discussion |
| CSR | Cooperate Social Responsibility |
| TRC | Transformation Resource Centre |

## Abstract

Traditional marijuana cultivators have been largely affected by cannabis legalization. The main issue is centered on the fact that legalisation of medicinal marijuana in Lesotho came with raised expectations that it would create opportunities for small illegal growers to enter the legal market and benefit from it. However, In Lesotho illegal marijuana growers have continued to be marginalised and the widespread growth linkages that were anticipated have not accrued. This dissertation presents the study findings on the impacts of medical cannabis cultivation on rural livelihoods in Bela-Bela.

The research employs a qualitative approach, incorporating data collected through surveys, interviews and field observations. The study concludes that due to a lack of other options for employment, traditional marijuana producers in Bela-Bela mostly rely on the production of cannabis. These local growers have not reaped significant benefits from the medical cannabis operation, despite it creating some jobs. Rather, it has brought about economic challenges such as land loss and insufficient payment, which has made their food and economic security worse.

The community's experiences and opinions regarding the Verve Dynamics project were investigated through the use of the qualitative research method in this study. Additionally, the study collected data using primary and secondary sources. The data collection approaches employed in this study included face-to-face interviews, focus groups, and interview schedules with open-ended questions. The researcher was able to choose and sample the 24 study participants in order to represent Bela-Bela community with its distinct clusters by using stratified and purposive sampling approaches.

## Table of Contents

# CHAPTER ONE

# THE PROBLEM AND ITS SETTING

## 1.0 Introduction

Medical cannabis cultivation has gained an important attention in the past few years because of its potential therapeutic advantages. Lesotho is one of the first countries in Africa to legalize medical cannabis cultivation. There have however, been questions over the extent to which the benefits of legalization of medical cannabis have indeed trickled down to local communities.

Anecdotal evidence seems to suggest that the much advocated benefits to legalization and commercialization of medical cannabis are not accruing to local communities as would be anticipated. The objective of this research is therefore to explain the medical cannabis industry's implications on the social and cultural structures of rural communities. To achieve this goal, this research proposes to comprise (i) a literature review which comprise chapter 2; (ii) a discussion of the research methods will comprise chapter 3; (iii) analysis and interpretation of the data from the field work will comprise chapter 4 and finally chapter 5 will present the conclusions based on the findings.

## 1.1 Background

Marijuana is a generic term that is used to describe three species of cannabis comprising *cannabis sativa, cannabis ruderalis,* and *cannabis indica* (Schilling, et al, 2020). Cannabis species all contain chemicals called phytocannaboids and are able to interbreed (ibid). The various types of cannabis comprise one of the world's most commonly used illegal drugs, consumed at least once by an estimated 4% of the world's population in 2019 (UNODC, 2021). It has nonetheless also been utilized as an industrial material, food, as well as millennia medicine (Nutt, 2022). Recent years have experienced great shifts in cannabis regulation, and by 2021, almost 48 countries had legalized medical cannabis to some degree (New Frontier data, 2021). The World Health Organization review shows that in December 2020, the United Nations Commission on Narcotic Drugs rescheduled cannabis, moving it from schedule list of the most

dangerous drugs with no therapeutic value (United Nations, 2020), since it is highly used for treatment of a range of medical conditions.

Medical cannabis market is highly regulated and often requires companies to go through a lengthy process to be able to launch market and sell products (Oniwe, 2021). Thus only a few clinically tested medical cannabis products are currently found on the market. Medical cannabis is stronger prospect in many countries and the global market is expected to reach USD 49 billion by 2028 from USD9 billion in 2020 (Oniwe, 2021). Medical cannabis cultivation and used has been legalized in developing countries in South and Central America, Asia and the middle East, as well as North America and Europe.

Lesotho became the first African country to practice legal medicinal cannabis for research purposes and cultivation in 2017. The Lesotho cannabis industry is rapidly growing since the country has become a leading procedure of medical cannabis in Africa since Lesotho has a rich cannabis culture (WeGrow, 2022). Uwakunye (2020) argues that it is presently experiencing an influx of foreign direct investment within the industry, and the issuing of licenses was meant to develop the agribusiness of small-holder farmers, but rather, small-scale farmers seem to be excluded in the cannabis industry due to some policy and regulations governing the cannabis industry. Thus the industry remains in control of foreign companies which have no linkages with local domestic entreprenuers (Gobbi, 2022).

Agriculture plays an important role in Lesothos's economy. Lesotho is one of the poorest countries in Southern Africa, with about 57% of its population living below poverty line. Close to 70% of its population lives in rural areas and depends on agriculture for their livelihood (World Bank, 2019). Most farmers practice subsistence farming of cereals, where the country has no competitive advantage because of agro climatic conditions, very limited farm size together with lack of mechanization.

### 1.2 Statement of the Problem

The legalization of medical marijuana in Lesotho offers a unique chance to investigate the possible effects on rural communities' means of subsistence. The emergence of a legal cannabis market has sparked expectations for economic revival in Lesotho, one of the least developed nations in the world where a significant proportion of the populace lives in poverty (Lesotho

National Human Development Report, 2015). Rural communities, which experience high rates of unemployment and poverty, could gain from more employment options and revenue streams. It is unclear, though, how much the medicinal cannabis sector has actually improved rural livelihoods.

Notwithstanding the projected advantages, a number of important obstacles may hinder the medicinal cannabis sector from having an advantageous impact on rural communities (Thetsane, 2024). Due to systemic problems like nepotism and insufficient support systems, many small-scale producers who previously depended on the illegal cultivation and trade for their livelihoods are now shut out of the legal market (ibid). This marginalization begs important concerns about who really gains from the legal cannabis industry and whether it can provide a lasting solution to the urgent economic difficulties that Lesotho's rural communities are facing. Therefore, in order to comprehend the medical cannabis industry's entire impact on these communities' livelihoods, it is essential to explain how it affects them, both positively and negatively.

## 1.3 Statement of Purpose

The purpose of this study is to explain how the medical cannabis industry impacts the livelihoods of rural communities in Lesotho.

### 1.4 Objectives

- To understand the importance and risks of illegal cultivation of illegal cannabis in the livelihoods of farmers in the area of Bela-Bela.
- To find out the expectations of illegal cannabis producers when the production of medicinal marijuana was legalised.
- To explain how legalization of cannabis has affected the production of illegal cannabis in Bela-Bela, with a focus on the economic benefits and drawbacks that illegal producers have faced since legalization
- To use the establishment of the Verve Dynamic project which produces medicinal cannabis in the Bela-Bela area as a case study to understand the cost and benefits of such a project to the illegal cannabis producers.

- To explore what recommendations can be made on how the legalization of cannabis can benefit farmers in the area of Bela-Bela.

## 1.5 Research Questions

- What roles does the cultivation of illegal cannabis play in the livelihoods of farmers in the area of Bela- Bela?
- What were the expectations of illegal cannabis producers when Lesotho legalised marijuana production?
- To what extent did the legalisation of cannabis benefit or disadvantage illegal cannabis production?
- What have been the dynamics of interaction between legal and illegal marijuana producers in the area of Bela-Bela?
- What are the key recommendations that can be made to help illegal cannabis producers to improve their livelihoods from cannabis production?

## 1.6 Significance of the Study

Acknowledging the influx of various marijuana farming companies in the country, it was considered significant too investigate how the medical cannabis industry impacts the social and cultural structures of local communities in Lesotho. The study will fill the literature gap on livelihoods of people who are involved in the medical cannabis industry and also recommend policies for the improvement of livelihoods of those who are affected by the cannabis industry, and also recommend for future research on sustainable livelihoods approach in cannabis industry context. The study intends to inform the government's decision-making bodies and suggest remedial solutions where necessary like policy and regulatory area, monitoring and evaluation, as well as project assessment impact by stakeholders.

## 1.7 Assumptions of the Study

- The medical cannabis legalization in Lesotho has impacted people's livelihoods
- There is lack of knowledge on how the cannabis industry impacts the social and cultural structures of rural communities
- The political economy of agriculture is the right framework to explain the implications of cannabis cultivation on rural communities' livelihoods
- The research findings will be applicable to other contexts.

## 1.8 Limitations of the Study

One of the limitations of the study is that it was difficult for the researcher to get hold of some participants, especially the project employees since they go to work very early, and they knock off late. By the time they get home, it is very dark since the study was conducted in winter. They also go to work on weekends, so this made it difficult for the researcher to schedule interviews with them. Furthermore, these employees were not comfortable with being recorded during the interviews due to fear of being victimized regardless of the researcher assuring them that every participant remains anonymous.

Some traditional marijuana cultivators refused to be interviewed and denied that they cultivate marijuana with the fear that the researcher might be a government official who is spying on them. However, those who agreed to be interviewed were also not comfortable with being recorded, and the researcher had to take notes during interviews, which is quite difficult and may leave out some important information.

One other limitation was that the researcher was not allowed to go to the project facilities, and this limited the number of project stakeholders that the researcher had intended to interview. The project coordinator served as the company representative who was interviewed about everything regarding the project. This may have caused the study to miss some important findings, thus compromising the study's reliability and validity.

## 1.9 Delimitations of the Study

The study's focus is on the medical cannabis production project at Bela-Bela. This study focuses on the impacts of the project on the social and cultural structures of Bela-Bela community, and it intends to provide information on how the project contributed to the household' livelihoods based on asserts and capitals of the community.

## 1.10 Research Structure

This study will have six chapters; chapter one is an introduction of the study, while chapter two provides a review of existing literature of the topic, and also presents conceptual framework from which different key terms used in the study are explained. The theoretical framework presents theories on which the study is to be based and how they will be applied. The third chapter provides the research methodology; it explains the research methods to be used and clarifies the research design, data collection tools, data analysis, together with some limitations and ethical considerations of the study. Chapter four will summarize research findings derived from data analysis according to the research objectives and chapter five will discuss research findings based on literature review and theoretical frame work. Chapter six provides the study conclusions as well as recommendations.

## 1.11 Definition of Key Terms

- Medical Cannabis: Medical cannabis is a herbal medication intended to cure a particular symptom or illness. It is made from plants in the genus Cannabis.
- Cannabis: is a raw drug (leaves, dried flower buds, or chemicals like THC) obtained from the cannabis plant, sometimes referred to by other names such as marijuana or weed.
- Rural livelihoods: a collection of tasks that include obtaining water, food, fuel, medicine, shelter, clothes, and the ability to purchase the aforementioned necessities while working alone or in a group and utilizing resources (material and human) to meet one's own and one's household's needs in a dignified and sustainable manner.
- Bela-Bela Community: A rural community in Berea district in Lesotho.
- Cultivation: refers to planting and harvesting of plants or crops.

## 1.12 Chapter Summary

This chapter provides the introductory part of the study by providing details of the significance of the cannabis industry in promoting development in the rural areas. It also provides the background on different ways in which the cannabis cultivation has contributed to development internationally and in African countries. It goes further to provide the objectives and aims of the study as to what the study seeks to achieve. Moreover, this chapter provides justification of why the study is worth taking, and lastly, gives the scope the study is intending to cover, together with how the study is structured.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.0 Introduction

Cannabis cultivation in the Southern African state of Lesotho has emerged as a key livelihood strategy through which small-holder farmers generate income from their limited agricultural resources (UNAIDS, 2006). Lesotho became the first African country to legalize and start the exploration of medical cannabis (Mungai, 2018). The objective of this chapter is to review the literature on medical cannabis cultivation and its impact on the social and cultural structures of rural communities in Lesotho. To achieve this objective, this chapter is subdivided in to six parts. The first part looks at an overview of the theory of explaining the cannabis industry's impact on livelihoods of the affected population, and a particular focus will be on the political economy of agriculture framework.

The second part looks at the critical debates around legalization of marijuana cultivation, including a presentation of the distinction between medical cannabis and recreational cannabis, while the third section of this chapter looks at the discussion of the anticipated linkages between cannabis production and rural livelihoods. The fourth section looks at patterns of cannabis production in Sub Saharan Africa as well as identification of key issues being raised around (i) legalization of cannabis in Sub Saharan Africa and (ii) experiences around whether development linkages are evolving with local communities. The fifth part looks at the review of literature in the subject of cannabis and development in Lesotho. Finally the last part of this chapter comprises conclusions and identification of major research gaps with pointer on which particular gaps the research intends to address.

## 2.1 Theoretical Framework

### Political Economy of Agriculture Framework

The Political Economy of Agriculture Framework studies how economic and political factors influence agricultural outcomes, policies, and practices. In order to comprehend the intricate relationships between social relations, governmental policies, economic structures, and resource

use, it combines insights from political economy and agricultural studies (Utting & Harris, 2023).

This framework comprises four key components which are (i) Economic Structures, (ii) Political Policy and context, (iii) Social relations and Power and (v) livelihoods and resource use (Pereira, 2023). The economic structure encompasses the ways in which agribusiness, market dynamics, and the effects of economic policies on agricultural distribution and productivity are examples of how economic systems and structures affect agriculture (ibid).

According to Davis (2024), political policy and context is the comprehension of how laws, rules, and political environments influence agricultural practices. Subsidies for agriculture, trade laws, land tenure regulations, and other regulatory frameworks fall under this category.

Williams (2024) stated that power dynamics and social relations in agriculture examine the interactions, particularly power struggles, between various social groupings. It looks at how these dynamics affect decisions and outcomes in the farming industry. Livelihoods and resource usage focuses on how agricultural methods impact people's lives, especially in rural areas; how households make resource allocation such as land and labour to cannabis production as compared to other agricultural activities. It also takes into account the management and utilization of resources, including matters pertaining to input availability, water use, and land ownership (Pereira, 2023).

Utting and Harris (2023) highlighted that the limitations of the political economy of agriculture framework are that because of its comprehensiveness, the framework might be difficult to use and evaluate. Sophisticated approaches and copious amounts of data may be needed to integrate the economic, political, social, and environmental components.

It may be difficult to obtain accurate and thorough data on political, economic, and social aspects, particularly in developing nations for some stake holders. The political prejudices of those utilizing the framework may have an impact on how power dynamics and policy implications are interpreted (Bates, 2023). Micro-level elements that also significantly influence agricultural results but are at the individual or small community level, such decision-making by individuals and behaviours, might be missed (ibid).

The relevance of political economy of agriculture in explaining medical cannabis cultivation and rural livelihoods is that it examines how illegal cannabis production affects the earnings of farmers and the stability of the local economy in Bela-Bela and examines the impact of legalization on these economic factors. It looks at farmers' expectations both before and after cannabis was legalized, taking into account how changing policies have affected their means of subsistence.

It looks into power dynamics, disputes, and cooperation between producers of cannabis, both legal and illicit and recognizes how these factors affect farmers' lives and the cannabis market. The study provides a multifaceted analysis of the effects of cannabis cultivation on rural livelihoods by integrating the Political Economy of Agriculture framework. This allows for a deeper understanding of the interactions between political, social, and economic factors within the context of Lesotho's cannabis industry.

## 2.2 Literature Review

### 2.2.1 Critical Debates Around Cannabis Legalization

Cannabis legalization is a contentious and multifaceted issue which is currently a topic of significant debate. Different groups of people view cannabis differently depending on who they are. Botanists view marijuana as cannabis sativa *l* plant which drags down its ancestry to the first quintile of the Holocene Epoch, while chemists view it as an origin of tetrahydrocannabinol (THC). International affairs students view it as the third regulatory recreational drug used globally, while to a judge, it is a schedule I administered substance whose possession, cultivation and distribution has been a federal and state crime (Kevin, 2018). Hence various studies have studied all these issues, and strong arguments have been raised for and against cannabis legalization. The debate is centred around three issues which are (i) whether cannabis or cannaboids possess a legal medical use, (ii), is cannabis physically or psychologically dangerous?, and (iii), whether cannabis is physically or psychologically addictive (Kevin, 2018).

Legalization of cannabis is surrounded by extensive regimes that are characterized by least four features which are: types of organizations which are permitted to supply the drug (these may include private companies, government monopoly, public authorities, non-profit organizations, and socially responsible businesses which are not focused on entirely on maximizing profits. The

second feature is the rules used to regulate operations of such organizations, thirdly, nature of products being distributed, and their price. According to Farrelly, et al (2023), arguments for recreational cannabis legalization involve enhancing regulatory administration over product issuing, reducing arranged crime, lessening burden and inequality in the criminal justice system, as well as creating economic benefits like tax revenues together with commercial activity. Marijuana legalization can also help improve regulate potency and marijuana products' quality.

Grim (2018) highlights that reform advocates indicate that cannabis possesses licit medical advantages for chemotherapy, vomiting and induced nausea treatment, enhanced appetite and promoting weight loss linked with HIV/AIDS as well as alleviating among other legal medical uses. This cannabis is much safe as compared to other drugs prescribed by physicians, since there have not been any reported deaths regarding cannabis overdose. As a matter of social policy, criminal justice system should not prohibit cannabis use at a cost society considers acceptable (Grim, 2018). Antagonistic enforcement of cannabis regulation has not and will not prevent the supply of easily cultivated cannabis which may be grown almost anywhere for which users have an ongoing demand on a widespread basis. "Continued pursuit of contemporary drug enforcement policy will not only waste the criminal justice system's scarce resources, but also aggravates further the disproportionate effect that cannabis laws have on racial and ethnic minorities" (Kevin, 2018: 39-42).

Lastly, free societies often allow individuals to make informed decisions, thus societies should let every adult to make decisions on whether and how to consume cannabis (ibid). Furthermore, cannabis decriminalization, if done properly, may help eliminate most of the crucial complaints imposed against a zealous prohibition and legalization of small-scale cannabis allows adequate economies of scale for competing efficiently with black market. Legalization of large scale commercial cannabis can in the long run extremely lower production costs and encourages growth of comprehensive THC- based products, and make strong interest groups. Advocates for cannabis legalization therefore indicate that permitting legal cannabis production and its products is a logical public health strategy for protecting users from harmful health effects through ensuring compatible dosage and monitoring of THC in cannabis products (Elsevier, 2021).

Arguments that are against cannabis legalization have been raised by the Food and Drug Administration (FDA), drug enforcement administration, American Medical Association, and the

American cancer society. It is highlighted that cannabis is not safe and effective for medical purposes for two reasons: (i), there is not enough evidence that it has esteemed medical advantages, and approved pharmacists cannot also deliver. These opponents of cannabis legalization argue that medical cannabis is a trick since everyone can get a recommendation for cannabis use. Thus cannabis legalization cannot banish cannabis black market since state taxation will increase the legal price above what black market offers and in part because recreational cannabis rules do not allow sales to minors.

They further argue that legal cannabis, whether recreational or medical leads to increased highway mobility and mortality since THC reduces driving ability. “Legalized cannabis use also banishes leverage which may be used for compelling physical dependent users to seek treatment while also weakening the nations’ capabilities to prevent or decrease physical, social and financial harms wreaked on communities by other illicit drug use” (Grim, 2018: 102-111). Elsevier (2021) also adds that with legal cannabis use, adults also have a high risk of developing psychosis and schizophrenia with prolonged use. Furthermore, cannabis is linked with unfavorable effects on cardiovascular health and is suggested to possess carcinogenic or genotoxic properties (ibid).

### 2.2.2 Differences Between Medical and Recreational Cannabis

Cannabis has THC which is a chemical which causes psychoactive effects (also known as feeling high), that affects a person’s mood and behavior. It also has CBD which is a chemical that blocks and lowers THC effects on the brain. Thus the main difference between recreational and medical cannabis is that the former has higher THC content while the latter generally contains high CBD content and less THC content. Recreational cannabis is mainly for personal use while medical cannabis is used for medical purposes and therapy, also authorized by health care professionals for the treatment and management of illness (Aliso, 2019). Furthermore, medical cannabis can only be acquired through federally licensed retailers alongside authorization by healthcare professionals, and it can only be cultivated by authorized users (ibid). Medical cannabis can only be acquired through federally licensed retailers alongside authorization by healthcare professionals, and it can only be cultivated by authorized users.

### 2.2.3 Cannabis and Development

The UNODC report (2022), highlights that most of the rural households in Sub-Saharan Africa grow cannabis in large quantities for sustaining their livelihoods. For case, The UNODC's latest crop monitoring survey shows that in 2019, Nigeria's cannabis cultivation was around 8,900 hectors in six states included in the survey (out of 36 states ) (ibid). Hence illegal cannabis cultivation provides a significant economic sustenance for the multitude of small farmers together with rural workers globally. Kelly (2020) also adds that cannabis cultivation has been significant to the restoration sector in rural areas; it became a financial tool for funding communities' non-profit making organizations.

Cannabis cultivation also provides a possible direction for rural entrepreneurialism, thus balancing the "digging out" of middle class jobs in numerous rural areas that is linked with rural brain drain and youth migrating for opportunities in metropolitan areas (Kelly, 2020). Technology transfer is another way in which medical cannabis production contributes to rural economic development. According to Gobbi et al (2022), in the cannabis industry, knowledge and technology transfer do not only refer to equipment, but also refers to a very broader range of elements which comprise whole systems together with their constituent parts. These are inclusive of know-how, goods and services, equipment as well as organizational and managerial procedures (Gobbi et al, 2022).

Creation of business opportunities for local people is another linkage between medical cannabis production and rural livelihoods. Local farmers and community members are given a chance to produce and sell their agricultural produce to the company and its employees. Attracting more business to enhance economic activities is important for both development and growth of rural communities (Abate, 2020). This initiative is sustainable since the products are used for feeding project staff, hence it is a great opportunity for local people to produce and sell. For meeting the demand, community members and local farmers may practice share cropping that would make it easy for producing through the sharing of production costs and profits as well.

However, cannabis cultivation also has some drawbacks on the rural livelihoods. "Green rush" growers, which are described as large-scale cannabis cultivation projects have led to divisions

among small-holder traditional cannabis growers in rural areas, thus rejecting the restoration movement culture of some rural areas (Kelly, 2020). As a result, “cannabis cultivation is regarded as disrupting and competing with the restoration sector in terms of labour markets, resources, land use, as well as cultural norms as it embodies capitalistic logic and cultural milie many back-to-the landers had tried to escape” (ibid, p 11- 17).

People who grow illegal cannabis in rural areas make smaller amounts of profit compared to those in cities, hence the show fewer signs of wealth (Kepe, 2003). This is because the legal frameworks prohibit illegal cannabis growers to transport, store, and sell their harvest in cities where selling prices are high, thus cannabis growers from rural areas are prepared to get small cash if someone else is ready to risk storing and transporting to city markets. This means illegal cannabis growers with no means of transportation and those who are willing to risk taking their harvest to city markets have to accept low values and sell in the village (Kepe, 2003).

There is cannabis culture and history in rural areas which might be sensitive to environmental disturbance. Since cannabis is mostly grown in mountainous areas and forested watersheds, it needs a lot of water per plant during growing season, hence during low flow time, cannabis irrigation inquiry may be way higher than the amount of water in streams, thus threatening the aquatic life. For case, Gabriel (2019) argues that in Mendocino, California, streams normally run dry in summers since cannabis growers divert water. This finding is consistent with other researches showing production intruding on endangered or threatened species' habitats (Butsic, 2018; Wartenberg et al., 2021). This water usage is specifically concerning for groundwater-reliant and/or drought-prone communities.

Cannabis production adds to the ecological damage. Very much Like different types of agribusiness, clinical pot creation tasks might get existing plant life for extension free from cultivating, possibly bringing about deforestation, backwoods discontinuity, wetland misfortune, soil disintegration, and effects on delicate environments (Butsic, 2018,Wartenberg et al., 2021). An elevated review of in excess of 4000 creation tasks in Humboldt Province, California, uncovered that above 60% were more than 500 meters from created streets, recommending an outstanding scene discontinuity (Kovasi et al, 2021). Deforestation and land clearing may likewise wreck huge carbon sinks (Plants et al., 2022).

Illegal cannabis is usually grown in public as well as tribal lands for hiding it from law enforcement, and such places are natural wild life habitats. These cultivation areas also impede with damaged habitats' restoration. Kelly (2020) adds that cannabis plants have got evaporative organic amalgamation which may generate dangerous pollutants. If this is the case, there is higher probability that given certain circumstances, cannabis cultivation may impact the ozone. Cannabis generates volatile organic compounds known as terpenes, which form ozone-degrading aerosols when combined with nitrogen oxide together with sunlight (ibid).

Tasks not associated with a solid power source can utilize loud generators that can unfavorably influence occupants and natural life (Owens, 2019), as well as requiring multiple times the carbon dioxide of matrix energized activity. Vaughan et al (2021) contend that albeit no research has explicitly tended to what weed smell means for human wellbeing, general occupants have detailed cerebral pains, asthma, and respiratory issues.

### 2.2.4 Patterns of Cannabis Production in Sub-Saharan Africa

Cannabis cultivation history in Africa is marked by four stages; phase one was marked with small-scale cannabis production for meeting customs needs, while the second phase involved cannabis cultivation as a cash crop and was also linked with establishing and expanding migrant labour system together with cash economy expansion in to rural areas (Blomer, 2019). However, in this phase cannabis production was only concerned with meeting the region's demand, particularly in South Africa. The third phase began in 1990s, and involved establishing production both within and outside of the region and the fourth phase is the most recent one, that witnessed legalization of medical cannabis production and exportation, with Lesotho leading the way (ibid).

The UNODC report (2007) that cannabis cultivation levels are higher in African continent across the world. In 2005, about 10,500 tons of cannabis was reported to have been produced in Sub-Saharan Africa. Between 1995 and 2005, a total of 19 of 53 African states had reported cannabis cultivation in their territories. The report further shows that the global cannabis production estimates were about 42000 metric tons around 2005, of which Africa alone contributed 10, 500 metric tons and further analysis highlight that cannabis cultivation is done in at least 43 African

countries. Cannabis herb seizures by African authorities are second to the ones created by authorities in the northern America.

47 tons of cannabis was confiscated in a joint operation between the South African Police Service (SAPS) and the Lesotho Mounted Police Service (LMPS) in July 2006, according to the INCB's 2006 annual report (INCB, 2007, p. 38). More recently, border officials found 3.5 tons of cannabis in a truck owned by Manthabiseng Phohleli, the deputy minister of health, during a cannabis smuggling operation (Mokhethi and Ntaote, 2018).

Currently, the New Frontier Data estimates highlight that the global market value of both legal and illegal cannabis accounted for $344.4 billion USD around 2018, of which the African continent accounted for $37.7 billion USD, which is 11percent of the global market value (New Frontier Data, 2019). Cannabis commercialization in Su-Saharan Africa is still in the early stages, with Lesotho being the leading African country. Lesotho legalized medical cannabis production in 2017, and already has significant funding from foreign companies (Gopaldas, 2020). However, due to the crop's short growth process, together with the comparatively moderate infrastructure needed to grow and process, means other Sub-Saharan African countries must quickly catch up. The main obstacle for African nations will be the rate of allowing legalization and business issues like capital, intellectual property together with scientific resources needed for improving resulting products (Gopaldas, 2020).

In many Sub-Saharan African countries, illegal cannabis cultivation is the main source of income among impoverished rural areas. The United Nations report highlights that about 38,000 tons of cannabis are cultivated across African countries annually (Owakunye, 2020). In spite of Africa's capability as the main exporter, cannabis cultivation remains illegal in many Sub-Saharan African countries with Lesotho, South Africa, Zambia, Zimbabwe, Malawi and Uganda as the exceptions since they have legalized medical cannabis cultivation (ibid).

One of the main key issues that have been raised around legalization of cannabis in Sub-Saharan Africa is the possible health impacts of cannabis. It is argued that legalizing cannabis production increases it usage in the region. A study by Freund (2022) shows that cannabis has been used for preventing and treating COVID-19 .This is because it blocks the virus from entering body cells. The study further highlights that cannabis acid (cannabigerolic acid and cannabidiolic acid) bind

protein, thus preventing virus from entering the cell (Freund, 2022). McMillian (2023) also adds that cannabis is used as a treatment for some health conditions such as epilepsy and multiple sclerosis; it may also lower anxiety symptoms together with chronic pain.

Cannabis with high CBD also enhances peaceful sleep during chronic pain, and helps in tighten muscles in patients with multiple sclerosis that affects spinal cord and brain (ibid).Furthermore, CBD oil reduces seizures by 39 % among children who have dravet syndrome, which is an infrequent form of epilepsy; it may also be used to treat opioid addiction. THC and some cannabinoids destroy and reduce development some cancer cells that include cancer cells in a petri dish, but these anticancer effects are dependent on cancer type and drug dosage (McMillian, 2023).

However, cannabis also has some negative health impacts; it may increase the risk of heart attack. Cannabis strains with THC may raise blood pressure and heart rate, reducing the blood's capacity of carrying oxygen, thus increasing the heart attack and stroke rate if cannabis with high THC content is taken often. This may also cause some heart diseases such as arrhythmia, cardiac arrest, and cardiomyopathy. Furthermore, THC vaping products cause lung damage since cannabis smoke irritates the lungs together with the throat, increasing the risk of critical lung problems like asthma, bronchitis and emphysema (Freund, 2022). Intoxicating cannabis may also result in mild to moderate cognitive impairments since it has an effect on decision making skills and concentration problems. Hence this might result in declined educational attainment in youths (Freund, 2022).

One other key issue raised around cannabis legalization in Sub-Saharan Africa is that it has potential impacts on traditional or rural communities and their cultural practices. Before legalizing cannabis in Africa, there used to be a stigma that resulted in discrimination and marginalization against people who used it, they were either labeled "addicts" or "delinquents", but since the legalization of cannabis, its usage has become a norm in societies and it is now associated with legality, legitimacy and safety (Hassen & Cappe, 2023). People can now openly and publicly discuss it medical and recreational use, thus creating much informed and honest conversations regarding different cannabis uses and its potential risks. Hence legalization of cannabis reduces the feeling of isolation and shame among its users (Hassen &Cappe, 2023).

Cannabis legalization also affects traditional beliefs, knowledge, as well as health and wellness. For case, legal cultivation may affect rural communities that may have traditional healing practices involving cannabis use; there may be a decline in the use of such traditional healing practices since people may want to shift to the modern or scientific methods. Additionally, cannabis legalization may also result in revival of interests relating to traditional practices and knowledge if rural communities may see cannabis legalization as a means of legitimizing traditional practices and making them more attainable (Hassen &Cappe, 2023).

However, it is kind of difficult to say how legalizing cannabis impacts traditional practices since it depends on several factors such as how legalization is implemented, community's cultural and history context.

### 2.2.5 Lesotho Cannabis and Development

African cannabis report (2020) shows that Lesotho is the first country in the African continent to legalize cannabis commercial cultivation for both scientific and medical use in 2017, with South Africa, Swaziland and Zimbabwe following suit. Cannabis is grown everywhere in the country, thus it has long been regarded as a significant part of the agricultural economy. However, the government acknowledges the negative impacts of enforced strict regulations in spite of non-medical use being de-facto illegal in the country (African Cannabis Report, 2020).

Cannabis legalization and production has attracted agricultural foreign direct investment. According to Panchia (2022, p 49), "The climate, relatively low labour, electricity costs together with regulatory freedom made the country a big target for innovative medical cannabis startups". The MG health was the first foreign company to invest in the cannabis industry in 2018, with another licensed Canadian company (Canopy growth) and Verve Dynamics following suit after the legalization of commercial cannabis cultivation (Panchia, 2022).

Cannabis production has created job opportunities in Lesotho.For case, Toai, (2022), argues that the MG Health cannabis production at Ha Marakabei employed about 173 local people out of 291 company employees. As a result, the company created more than 59% of employment opportunities to the local people at Ha Marakabei area. This leads to the development of local communities since people who are employed provide for their family basic needs such as health

care services and education among others. Furthermore, the job creation also increases the cash flow within the project areas, thus boosting the local economy (Toai, 2022).

Employees in the medical cannabis production projects learn how to carry out new tasks by doing them, they are provided with training workshops. Investors offer internships to some students from the National University of Lesotho, Lerotholi polytechnique and different South African Universities. Those interns are then recruited by the companies which trained them. Employees in the cannabis industry also acquire new skills and knowledge through considering best practices and lessons learned from past experiences and also through reading documentations and manuals (Stiglitz, 2017).

One other development opportunity provided by medical cannabis production is the improvement of local infrastructure. The MG Health cannabis production company at Ha Marakabei maintained a road to the chief's office for easy access to services for the community. The survey carried out by Toai in 2022 revealed that there has also been water supply maintenance since the company installed about 52 square meters pipe for water supply to the community which had a problem with pipe line connection. As for the neighboring communities, around Ha Marakabei, the company assisted them with new solar pump machine which replaced the old dysfunctional one.

Moreover, about 72 pit latrines were constructed and installed for the household of Moreneng village (Toai, 2022). Medical cannabis production also improves local income sustainability. The medical cannabis production in Lesotho offer support together with improved local income by making sure they are consistent on providing income to local employees for as long as the project is active. Toai (2022) indicates that local employees are paid for every service they render to the company, thus the income provision has significantly changed people's lives and their welfare due to the constant cash flow in the communities.

However, cannabis cultivation has some drawbacks that may somehow hinder development in Lesotho. The high cost of medical cannabis cultivation license which is 500,000 Maluti is prohibiting local farmers from participating in the cannabis industry. Only the elite, multinational and foreign investors benefit from the legislation which was introduced as a mechanism for spreading economic gains for many people. The 2019 African cannabis report revealed that

Lesotho's cannabis industry was projected to be worth about $29m by 2023, yet the local farmers who cannot afford licenses are left out of the growing industry (Mbuyisa, 2023).

Furthermore, the commercial cannabis companies have not yet formed partnerships with communities. New commercial companies with foreign investors continue to move into Lesotho, creating production plants in rural areas. In 2020, Morama holdings started operations at Ohala Matebele in Letsatsing, in the north-east. When the company, it was praised for giving a 20% shareholding of the company to Basotho nationals. However, chief of the Letsatsing area was not impressed that the shareholders in Morama are not local people from the nearby communities, but are people from the capital city, Maseru (Mbuyisa, 2023).

Bloomer (2019) argues that currently, the cannabis industry has not delivered the prosperity it promised. "While the nascent licit medical marijuana industry may well provide job opportunities and some benefits to some individuals, the general changes taking place seem to be far more related to long-standing process of capital accumulation, together with elite capture of land, labour, as well as value chains and its current form is unlikely to deliver lasting economic change to the majority of the population" (Bloomer, 2019: 48). Furthermore, Gobbi (2022) indicates that clearly the medical marijuana industry does not generate many new jobs, even though they are jobs that offer relatively descent working conditions, and this low job creation potential is due to value chains, which are inclusive of small-holder informal growers who are not part of the emerging industry.

Furthermore, from the export-led industrialization, the cannabis industry seemed to be full of promises due to assistance of foreign investors in accessing the profit-making markets of America together with Europe (Gobbi, 2022). However, with the current state, the main problem is that the cannabis industry continues to be control of foreign investor' companies which have no linkages with national producers, thus the industry export may secure few jobs and certain revenue amount, as well as the host country's foreign exchange, however, they provide less to the country's economic growth, where better skills and potential are key (Gobbi, 2022).

### 2.2.6 Cannabis Regulation

In South Africa, legal medical cannabis cultivation requires a license from South African Health Products Regulatory Authority (SAHPRA), below section 22c of medicine act, together with a

permit issued by the health Director General, below section 22A of medicines act. These licenses include manufacturing, active pharmaceutical ingredient extraction, as well as exporting and distribution (SAHPRA, 2020). Bowman (2023) also adds that license holders are also required to meet complex and extensive requirements that are in alignment with international good agricultural and collection practice (GMP) standards. These requirements are inclusive of (1) Tight security facility for preventing unauthorized access, contamination and cross pollination, (2) extensive internal security and hygiene measures, which include access control systems and CCTV systems. (3) Registration of used seeds, cultivation area, details of all products and packaging and (4) secure storage systems and end-to-end cannabis transport and finally submitting analytical tests for quality control and safety (Bowman, 2023).

Cannabis producers are also required to get export permits domestically through SAHPRA. Thus these requirements make medical cannabis cultivation expensive and difficult since acquiring a license requires vital access to patient capital. The application fee is R25,000, while the investment needed for green field amounts to tens of million rands (Bowman, 2023). The investment is also high-risk considering various regulatory together with uncertainties of market access focusing medical cannabis manufacturers.

The study conducted by Uwakunye (2020) highlights that Lesotho medical cannabis was firstly regulated in 2008 under the drugs of abuse act which ensured availability of particular drugs for medical and scientific purposes. This law helped in the establishment of Lesotho cannabis framework detailing who is allowed to prescribe medical cannabis and under what circumstances (ibid). Blooemr (2019) also adds that after legalization of medical cannabis cultivation in 2017, the new law was implemented under the cannabis drug of abuse regulations act of 2018. The license cost is approximately thirty thousand Euros and licenses are acquired through the Lesotho Narcotics Board (Phakela, 2018).

The licensing requirements that medical cannabis producers are required to meet include certified identity documents of all directors and a valid police clearance certificate, proof of right on any operating land, capital adequacy proof and funds registered in a Lesotho bank account, off-take agreement or intent letter of license’s market, security arrangement plan, and environment impact assessment plan among others (Uwakunye, 2020).

According to recent studies, written agreements and community engagement are important. Effective community participation and open communication are essential for cannabis projects to succeed, according to a report by Kritzinger (2021), particularly in areas like Lesotho where local stakeholder involvement and land rights are major concerns. Reasonable compensation and clear legal guidelines are necessary for medical cannabis projects to be legitimate, according to a 2023 report published by the Lesotho Medical Cannabis Association (LMCA).

Cannabis legalization in Lesotho has had some positive impacts on illegal marijuana cultivation. Growing consumer demand for cannabis products is one of the benefits of illegal cannabis production in Lesotho. The demand for cannabis products has increased as a result of legalization, both for medical and possibly recreational purposes (Roberts & Adams, 2024). This increased demand may occasionally result in more competition, and illicit manufacturers may continue to service places with restricted legal access or establish niche markets (ibid).

Second, illicit manufacturers may profit from a brief price increase if legal manufacturing is unable to satisfy all demand or if legal products are more expensive. But as the legal sector grows, this impact frequently decreases (Roberts & Adams, 2024). At first, pricing distortions may result from the legalization of cannabis. Illegal producers may discover short-term advantages if the legal cannabis industry is unable to satisfy all market demands or if the cost of legal cannabis increases. On the other hand, as illicit output increases, illicit market prices tend to decrease (Lewis, 2024).

However, the complex requirements together with high licensing costs of medical cannabis cultivation are creating barriers to entry for local businesses and farmers, thus making it hard for them to engage in the legal cannabis industry. Gobbi (2022: 166-167) argues that “the cannabis industry remains in control of foreign companies which have no linkages with domestic entrepreneurs; hence this limits the local economy, where improved knowledge and capabilities are key”. This may result in local farmers and businesses continuing to participate in illegal activities and black market instead of trying to meet the government’s regulations for legal cultivation.

Illegal farmers now face competition as the legal cannabis market grows. The controlled market that exists for legal producers might provide more steady opportunities and better prices than the

black market (McGregor, 2023). The profitability of the illegal cannabis industry may decline as a result of this competition. A legal cannabis market is frequently accompanied by stepped-up law enforcement initiatives to target illicit growing. This may result in stricter laws targeting illicit growers, making it harder for them to operate covertly (ibid).

Akil and Thompson (2024) highlighted that legalization may cause current illicit supply systems to break up. Growing legal cannabis production may have an impact on the market for illicit cannabis, which may result in a decline in illicit production. According to a research by the Lesotho Development Fund (2023), if there is no official mechanism in place to enforce agreements between medical cannabis companies and other stakeholders, unmet promises in developing industries like medicinal cannabis can cause disputes and discontent.

Building on the existing literature, the study reveals important socioeconomic issues stemming from conflicts over land, promised jobs, and financial contributions. Traditional marijuana growers, who have always made their living from the product, are now navigating a market characterized by escalating rivalry and insufficient assistance from the recently implemented medical cannabis industry. The shift from recreational to medicinal cannabis has frequently resulted in local farmers losing their land and receiving inadequate payment, worsening their dire financial predicament. For local farmers, promises of economic benefits and job creation have mostly not materialized, underscoring a significant deficiency in financial contributions that could have aided in the community's growth. Rather than building resilience, the project has made farmers more vulnerable to already-existing risks, both financially and legally.

In addition, the medicinal cannabis industry has widened societal divisions in the local area. Although it has created some economic opportunities, societal cohesiveness and trust have suffered as a result. Tensions within the community have arisen due to differences in the distribution of financial rewards, specifically between small-holder farmers and large-scale producers. The analysis shows that there is a substantial gap between community expectations and project outcomes, despite the initial claims of job creation and skill development not living up to expectations. This is due in part to the absence of financially inclusive practices.

## 2. 3 Conclusion

Data presented in the chapter highlights that illegal cannabis has long been as a medical drug and for recreational use internationally and within the Sub-Saharan African region. Cannabis legalization has led to several significant impacts in the Sub-Saharan African region, including Lesotho; it has led to increase in economic development through job creation, increased tax revenues, increased exports and participation in competitive international markets, increased tax revenues and improved infrastructure among others.

However, it has also had some drawbacks and the main key issues raised around cannabis legalization in Su-Saharan Africa include its negative impacts on human health, environmental degradation and shift in social and cultural structures of rural communities. The strict cannabis regulations also pose a development challenge among local growers. The existing literature provides these aforementioned valuable insights about the impact of cannabis legalization and production on rural livelihoods; however, there are still some research gaps that need to be addressed. One of the existing research gaps to be addressed in this study is the knowledge gap about the socioeconomic effects of cannabis legalization on Bela-Bela's illicit cannabis producers, particularly how the change to legal status impacts their expectations, livelihoods, and relationships with legal producers. The study seeks to examine the complex dynamics of this shift and offer insights into the advantages and difficulties that former illicit producers face—issues that have not received enough attention in the literature to date.

# CHAPTER 3

# METHODOLOGY

## 3.0 Introduction

This chapter provides a discussion of the research methodology used in this study. It provides a discussion of the research design, data collection methods to be used, the study population and sampling. It also discusses data analysis,, ethical considerations, as well as the limitations of the study, then the chapter summary will close the chapter.

## 3.1 Research Methodology

This study intends to use the qualitative approach, which subscribes to interpretivism. A qualitative research is a type of research that provides findings which are not derived by statistical procedures or other means of qualification. According to Flick (2014), qualitative research involves analyzing subjective meaning or the social production of issues, events, or practices thorough the collection of non-standardized data and analyzing texts and images rather than number and statistics. Interpretivism is originally rooted in the fact that methods used to understanding knowledge related to human and social sciences cannot be the same as its usage in physical sciences because human interprets their world and then acts based on such interpretation (Hammersley, 2013).

Qualitative research approach is all about recording, analyzing as well as ascertaining a web of connection which supports related subjects, it creates excess raw data, regardless of whether it has been acquired through statistical means or otherwise (McCombes, 2019). Leedy and Ormrod (2016) identified some of the advantages of qualitative research as follows: it helps the researcher to obtain initial perceptions about what has previously been a less-studied phenomenon. It may also reveal complex, multilayered nature of particular relationships, settings, systems or processes. Furthermore, it may help in developing new ideas or theoretical overview relating to a phenomenon, and may also help the researcher in uncovering main hurdles or enigmas existing in a phenomenon (Leedy &Ormrod, 2016). Lastly, it provides away through

which the researcher may determine how effective certain policies, practices and innovations are (ibid).

The main difference between qualitative and quantitative research is that the former concerns itself with subjective phenomena which cannot be numerically measured while the latter is concerned with numerical and subjective data. Qualitative research is a vast and complex area of methodology which concerns itself with analyzing how people interpret their experiences and the world in which they live (Trochim, et al, 2016), while quantitative research concerns itself with systematically collecting and analyzing numerical data for identifying trends, patterns and relationships through the use of statistical and mathematical tools.

The study intends to unpack the foundation of the study problem that results in knowledge gap about the socioeconomic effects of cannabis legalization on Bela-Bela's illicit cannabis producers, particularly how the change to legal status impacts their expectations, livelihoods, and relationships with legal producers. The study seeks to examine the complex dynamics of this shift and offer insights into the advantages and difficulties that former illicit producers face—issues that have not received enough attention in the literature to date. This has caused the researcher to examine the impact of cannabis production in local communities around Bela-Bela.

### 3.2 Research Design

This section discusses the main research design used when conducting this study. Research design is an overall approach which a researcher chooses to apply in a study to carry out data collection, data analysis and interpretation of findings (Leedy & Ormrod, 2016). Thakur (2021) also adds that it is the blueprint for data collection, measurement, and data analysis which the researcher follows to present logical findings. With this definition, this study followed a qualitative research design. The researcher was interested in collecting rich data by interviewing a sample of 23 respondents on their personal experiences and perceptions, knowledge about medical cannabis production, and livelihoods in Bela-Bela. The study explored how medical cannabis production affects livelihoods in rural communities, and the main goal of using qualitative research design was generally to collect data, explain how the medical cannabis impacts rural livelihoods in Lesotho. This involved interviewing the project stakeholders and some community members including community leaders.

The researcher used semi-structured interviews, focus group discussions, observations and document analysis for data collection. A well-structured interview guide for all the study participants was prepared by the researcher following the best possible exploration of the research questions. Semi-structured interviews were then conducted by the researcher for engaging with the study's respondents. Hence the employed research design helped the researcher to collect rich data capturing how medical cannabis production impacts rural livelihoods in Lesotho. This was done through capturing a wide description of the respondent's personal experiences, perceptions, feelings and actions concerning medical cannabis production.

### 3.3 Research Approach

A research design is described as a way of answering a set of questions; it is a framework which involves methods, procedures of collecting, analyzing and interpreting data (Bouchrika, 2023). This means a research design explains how the researcher intends to explain the main research problem and is hence part of the research proposal. The main purpose of the research design is to enable the data to clearly address the research problem with as much accuracy and objectivity as much as possible (ibid).

The study intends to use a phenomenological research design. This design involves systematic steps in procedures of analyzing data, and includes identification of a study phenomenon, interviewing the study participants, identification of common themes and publication of the research work. The phenomenological research design is more effective in describing rather than explaining subjective realities, beliefs, insights and motivation by revealing research participants clearly (Qutoshi, 2018). The interpretation element enables the study to be more interesting and meaningful to understand social structure, policies and practices from the personal viewpoint of the actors visible clearly in the study (ibid). Phenomenological research design like any other qualitative research uses various methods that include interviews, observations, action research and focus group meetings.

A phenomenological research helps in broadening the researcher's understanding of a complex phenomenon under study, behavior and communication relevant to the field. It is a powerful way of understanding subjective experience and gaining insights around participants' actions and

motivations, and might contribute to development of new theories, changes in policies or responses ( Neubaver, Witkop & Varpio, 2019).

However, some of the limitations of a phenomenological research are that participants might not be able to well express themselves because of language barriers cognition, age or any other factors (ibid). Data collection and analysis may be time consuming and laborious and results interpretation requires the researcher not to be bias, and lastly, phenomenogical research does not produce easily generalizable data ( Neubaver, Witkop & Varpio, 2019).

### 3.4 Study Area Selection

This study is to be conducted at Bela-Bela, which is located in Berea. Berea is one of Lesotho's districts in the northern region. Its capital town is Teya-Teyaneng and it comprises a total population of approximately 300,000 residents, covering an area of about 2 222 square meters (UNDP, Lesotho District Profile, 2018). The communities in Bela-Bela area depend mostly on subsistence farming for survival. The communities grow various grain crops like beans, peas, maize, as well as sorghum among others to feed their families. Like other rural communities, small-holder farmers within Bela-Bela communities also depend on livestock rearing as another means of income through the sale of wool and mohair.

### 3.5 Population and Sampling Techniques

#### (a) Population

The study population is a subset of the targeted population from which a sample is drawn. This target population possesses certain characteristics which are of the interest to the researcher, and is a representation of the bigger population from which a sample is drawn (Thomas, 2023). The study population is explained according to the research objectives and specific attributions under investigation (ibid). Majid (2018) adds that it is important that the researcher maintains objectivity while dealing with study population, a researcher must draw a sample with the aim of generalizing the study outcomes from a sample of target population, rather than studying the whole population.

For the purpose of this research, the study population includes local employees of the cannabis cultivation project (Verve Dynamics), community leaders, management of the cannabis project, local community members, local farmers, local chiefs and a councilor.

**(b) Snowball Sampling**

Sampling is a process that involves a selection of statistically representative sample of individuals drawn from the study's target population (Majid, 2018). Sampling is a significant tool for cutting to size, a population of interest whilst ensuring inclusiveness together with representativeness of the bigger target population. A sample of respondents in a study is drawn from different clusters of different categories for ensuring representation; hence everyone who forms part of the target study population is sampled (Majid, 2018).

Snowball sampling which is a non-probability sampling technique refers to a sampling design that involves identifying few initial participants who meet the eligibility criteria and asking them to refer others they know who also fit the requirements. These referrals made by initial participants increase the sample size, thereby creating a chain like structure. This sampling technique enables the researcher to reach out to individuals who may be hard to locate through the traditional sampling methods.

The advantage of using snowball sampling is that it produces in-depth and detailed data from the study participants with common experiences or characteristics. The researcher may obtain deep insights into a specific group's attitudes, behaviors, and perspectives because referrals are made within a network of individuals who share common experiences. However, one of the drawbacks of this approach is that there is lack of precise knowledge whether or not the sample is accurate for the study target population. Targeting only a few selected participants may not always indicate the actual trends within the result group (Khandare et al, 2014).

**(c) Population Selection**

A sample of 24 respondents was selected from a target population which comprises local chiefs, a councilor, local farmers, project representatives, local project employees, local community members, and street vendors working by the project facilities. The respondents are selected for

gathering comprehensive information from which the conclusion is to be drawn. The study intends to use snowball sampling technique for dividing the study population in to sub-populations for ensuring that every cluster of the society is well represented.

### 3.6 Data Collection Techniques

There are two main approaches used to collect data for research and analysis, these are the primary and secondary data collection methods. The study uses two sets of data which are primary data collection and secondary data collection methods. Primary data is collected from the study's respondents while secondary data is collected from written scholarly materials. Simplilearn (2023) shows that data collection is a process that involves collection and evaluation of information from various sources to get answers to research problems, for answering question, evaluating results, as well as forecasting trends together with probabilities. It is a vital stage of every research analysis and decision making. During the process of data collection, a researcher should identify types of data, data sources, together with methods that are being utilized (Simplilearn, 2023).

For primary data collection, the data collection technique used in this study is face-to-face interviews. The study uses focus groups together with semi-structured interviews.

#### (a) Semi-Structured and In-depth Interviews

Semi structured interviews is a method of data collection that involves asking the study participants open-ended questions, allowing the researcher to obtain deeper understanding of the participant's beliefs and feelings on a particular topic (Bird, 2016). In-depth interview is also a qualitative method of data collection used to acquire specific information from people about their feelings, opinions,experiences,andviewpoints.

With the use of this method, the researcher thoroughly examines complicated issues and obtains insightful knowledge that may not be possible with surveys or other structured questionnaires (George, 2023). They are helpful since they enable the researcher to gain reliable data together with unexpected insights from deeper user feedback.

George (2023) describes an interview as a qualitative research method that depends on asking questions as a means of data collection. They involve two or more people, including the

interviewer. Interviewers enable the researcher to acquire rich information, as well as drawing much detailed consensus, and observe non-verbal cues, off-the-cuff reactions together with emotional responses.

Data collection is done through face to face interviews which help in reading nonverbal responses, it is also collected through focus groups, which is mostly efficient and cost efficient to the researcher. An interview guide is defined Bird (2016) as a list of the high level topic that the researcher intends to cover in their interview with the high level questions they wish to answer under every topic. The researcher provided an interview guide that helped in structuring how to conduct her participants' interviews, it also helped the researcher to know what questions to ask and in what order to ensure a participant's experience which is the same for all participants. Nonetheless, the drawbacks of using interviews are that they can be time-consuming, small sample size may result in the suffering of validity and reliability (George, 2023).

Every interview was recorded to gather relevant data thoroughly, correctly, and systematically. A field journal was used for taking notes, photographs, and audio recorder (Kabir, 2016). An audio recorder was significant in conducting this qualitative study since it enhanced verbatim recording and a smooth capturing of the conversation flow between the study participants and the researcher.

**(b) Focus Groups**

A focus group is a qualitative research method used in collecting data from a group of people in a facilitated group discussion. The researcher leads such a group discussion of participants who have been chosen regarding a particular demographic criterion like gender, age or life-style. Open-ended questions are being asked about a phenomenon under study, where participants are allowed to share their feelings, experiences and opinions with the group (Jain, 2023). The researcher used two focus groups of specifically selected individuals. The first group comprised eight participants being 2 farmers, 2 community members, 2 local employees, and 2 illegal marijuana cultivators. The second focus group discussion constituted 5 illegal marijuana cultivators from Bela-Bela.

Barret and Twycross (2018) argue that the fact that multiple people discuss the same issue together may lead to enhanced level of debate, with moderators often able to step back and lets

the focus group engage in to a free flowing discussion. This gives the researcher an opportunity to collect rich data from a particular population about a specific area of interest. On the other hand, focus group discussion provide more relaxing environment for participants as compared to one-on-one interviews, they feel more comfortable to express their views when they are shared by others in their group (Barret &Twycross, 2018).

**(c) Observations**

Is a method of data collection that involves watching behavior, events, as well as taking notes on physical characteristics in a natural setting. It also requires a careful attention to participants' activities. Observations provide an enormous amount of data to be captured and analyzed, and one approach which helps to collect and analyze is them is digitally recording observations to allow repeated viewing (Barret & Twycross, 2018). Observations may either be overt or covert, where overt observations means that the study participants are aware that they are being observed, and covert observations means that the study participants are not aware that they are being observed (CDC, 2018). The researcher used overt observation, which helped in building trust with the study's participants and ensured that they are comfortable with the researcher's presence.

For the purpose of this research, observations were done through field work in May at Bela-Bela. The researcher became acquainted with the surroundings in order to understand how the environment and cultural dynamics could affect behavior (Ankit, 2023). Understanding the background improved the interpretation of the data and allowed for deeper insights into the information gathered. Additionally, the researcher used structured observation techniques, including coding systems or checklists, to help keep things focused and guarantee that no crucial facts were missed (ibid). Along with observing and documenting verbal and nonverbal signs, the researcher also took notes on the frequency, duration, and context of activities that were noticed.

However, one of the drawbacks of using overt observations is that it may be difficult for the researcher to keep objectivity and avoid influencing the behavior of the participants (CDC, 2018).

**(d) Document Analysis**

Is a qualitative research method that involves reviewing and evaluation of both printed and electronic documents, it involves examination and interpretation of data to uncover meaning, obtain understanding and derive a conclusion. For document analysis, the researcher used government reports, internal reports from the cannabis project, and statements from the local community members to gain some patterns and themes relevant to the study's research question. These types of documents are found in libraries, newspaper articles, institutional files, government publications, academic journals, market research reports, as well as any other existent data sets (Hassan, 2024).

### 3.7 Data Analysis and Presentation Procedure

For the purpose of this research, thematic data analysis was used because of the qualitative nature of the research. Thematic data analysis is a method used in analyzing qualitative data. It involves reading through a data set like interviews, and identification of patterns in meaning across data to acquire meaning (Dawadi, 2020). Thematic data analysis fits well with qualitative studies that attempt to explore complex research issues, thus it is flexible since it may be included in any epistemological approach (ibid). Its approach makes the analysis more valid due to its accessibility, flexibility and transparency.

There are two ways of doing thematic data analysis, which are deductive and inductive approaches. The former may be employed as a starting point, allowing data analysis relating to the themes which were derived through literature review made for the study. The latter involves coding data without trying to fit themes in to pre-existing coding frame (Dawadi, 2020).

However, one of the limitations of thematic data analysis is that its methodology is not well reported though it has been largely utilized in qualitative studies.

The qualitative data for this research was acquired through semi-structured interviews, which were audio-recorded to ensure correct depiction of participants' responses. All of the recordings were verbatim transcribed after the interviews. The participants' rich and complex language was preserved during the transcription process in order to enable a thorough analysis of their viewpoints and experiences. The finalized transcripts functioned as the main source material for further analysis (Aisha, 2022).

The transcriptions were finalized, and then the coding procedure started. The researcher meticulously coded the textual data using ATLAS.ti in order to find important trends and insights. The coding framework included deductive as well as inductive methods. While deductive coding was directed by the study objectives along with relevant literature, inductive coding enabled themes to naturally arise from the data. The data was able to be thoroughly explored due to the thorough coding process, which prepared the way for a detailed analysis.

Direct quotes from participants have been used to illustrate each finding, giving their experiences a voice and enhancing the narrative as a whole. This presentation style makes sure the reader can easily understand and be interested in the insights extracted from the data.

### 3.8 Ethical Considerations

There are four main ethical considerations that a researcher should always observe, and they comprise (i) protection from harm; (ii) voluntary and informed participation; (iii) right to privacy; and (vi) professional honesty (Leedy et al, 2021).

#### (a)Protection from Harm

Protection from harm comprises an undertaking by the researcher to protect all participants in the study from all forms of personal harm such as physical, emotional or spiritual harm. The researcher has to pay special attention to vulnerable populations who may not be entirely in control of their decision making, such groups comprise children, prisoners, and people with impaired cognitive capacity, the elderly, lesbian, gay, bisexual, transgender and queer (LGBTQ), sex workers, migrant workers and ethnic minorities (Trochim et al, 2016).

The question of vulnerability will often be determined by the specific context. Protection from harm entails beneficence in which the researcher(s) are required to undertake assessments prior to the study of the risks and benefits of the study to the participants in the study (Trochim et al, 2016). These assessments should help the researchers to undertake a study that maximizes the benefits of participation whist minimising the risks to the participants (ibid).

All potential harms that might be encountered by the study participants were considered by the researcher, thus the participants were made aware of all forms of personal harm prior to the study, giving them permission to leave the study anytime they start feeling uncomfortable, with no feeling of obligation to carry on.

**(b)Voluntary and Informed participation**

Voluntary and informed participation comprise an undertaking by the researcher that the participants are fully informed on the nature of the study and be given an option on whether they would like to participate in the study or not on a completely voluntary basis. It gives the participants choice and control, and also offers them autonomy, creates trust and engagement in the study. Informed consent ensures that the study participants are aware of the research that they are engaging in, they know the purpose, benefits, risks, as well as funding behind the study (Siegle, 2023).

The right to decide on whether to participate in the study, or not, also entails the right of the participant to withdraw from the study at any particular point when they so wish (Leedy, 2021). As argued by Trochim et al (2016) informed consent has three major dimensions that must be met comprising information, comprehension, and voluntary participation. The process of participation in a research study is preceded by a request by the researcher to the participant to participate in the study.

Participants were given a consent form which had the researcher and the researcher's supervisor"s contact details. The participants were also made aware of the study duration, methods and means by which the study is to be conducted, the benefits, alternatives to participation, protection of privacy, information regarding their rights and the right to withdraw from the study at any given point in time together with the possible harm (such as victimization) that may be caused by their participation in the study (Trochim et al, 2016). Participants were also assured that all the information shared between them and the researcher while conducting interviews remains between the researcher and the supervisor.

**(c)Right to Privacy**

Right to Privacy entails an undertaking by the researcher to protect the integrity and dignity of the participant by ensuring that the research report presents information in such a way that the readers of the report do not become aware of how a particular respondent responded or behaved in the research except through the written permission of the participant for that to happen (Leedy, et al, 2021). Bos (2020) adds that this principle entails an obligation on the researcher's part for ensuring that usage of data collected from participants respects the dignity and autonomy of study participants, and does not violate any individuals' or communities' interests. The researcher observes that the study participants remain anonymous by default, and the researcher does not obtain any private data unless there is a valid reason to do so (ibid).

One of the common ways in which the right to privacy is ensured in research is through anonymity. According to Trochim et al, (2016) anonymity means that there is no personally identifying information in a data set. That is, there is no way that an individual can be identified from the information stored in a researcher's files.

**(d)Professional Honesty**

Professional honesty is important in protecting the integrity of any research undertaking since it maintains scientific excellence, trustworthiness, lawfulness and keeps the trust of the public (Institute of Medicine National Research Council of the National Academies, 2002). The lack of professional honesty may undermine the integrity of the institution and the individual who has not abided with the rules of professional honesty (ibid).

Some of the most common forms of research misconduct that must be avoided by the researcher include fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results (Trochim et al, 2016).

- **Fabrication** involves making up data or results, and recording them.

- **Falsification** involves manipulation of research materials, equipment or processes, or changing or excluding data or results to an extent that the research is not correctly represented in the research record.
- **Plagiarism** is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

### 3.9 Credibility and Trustworthiness of the Study

Credibility in qualitative research is about internal validity. It is the extent to which the research accurately and truthfully presents the participant's experience or the phenomenon that is being studied (Cypres, 2017). The trustworthiness of a qualitative research rests on four major considerations comprising credibility, transferability, dependability and conformability.

#### (a) Credibility

Qualitative research's credibility may be assured in various ways which are inclusive of data collection for ensuring that data is relevant. This could be done through investigator, participants' validation, member checks and strict procedures for gathering data. Norman and James (2020: 19) argue that "credibility is a construction on the part of the reporter and the subsequent readers". Study credibility can be promoted through triangulation, which involves the usage of various sources of information obtained from the filed for repeatedly establishing identifiable patterns. Obtaining similar findings repeatedly through different data sources is dissimilar phenomenon compared to replicability in an *apriori* study (Norman& James, 2020).

For this study's credibility, various research method which have been proven to be credible for qualitative research have been used, these include focus groups, interviews, and observations. By keeping the study's objective throughout the research process, credibility was promoted.

#### (b) Transferability

Transferability refers to the extent to which the research findings may be applicable or transferable to similar situations. It addresses the applicability of the findings to similar contexts or individuals not to broader contexts. It may be attained through a thick description of research

findings from various data collection methods (Norman &James, 2020). The study employed purposive sampling for gathering a wide range of data from the participants so as to ensure transferability.

**(c) Dependability**

Dependability represents how good the study methodology was set up for verification by other researchers. For a study to be dependable, it is defined by steps and processes so that it can easily be repeated by other researchers, and in so doing, consistent findings should be acquired. For this study's dependability, a complete illustration of the research methodology was provided by the researcher for proving that the methodology undertaken by the study is relevant.

Dependability is more or less the same with reliability in qualitative research and it can be guaranteed through strict data collection techniques and procedures and analysis that are well documented. An inquiry audit using an outside source assures the study's dependability, hence for assuring this study's dependability, the supervisor and the department assisted as the outside reviewers.

**(d) Conformability**

Conformability in a qualitative research is when the gathered information only reflect the respondent's view, with no subjective or biased views of the researcher reporting the study's findings (Pract, 2018). This requires the researcher to take an objective reading of what they have seen and heard while conducting the research, putting aside all prior expectations, prejudices and stereotypes that may influence their interpretation.

The researcher used audit trails for recoding data analysis from beginning to the end, detailing how themes have been obtained, how sub-themes have been grouped, and how conclusions about relevant insights have been derived. This helped in maintaining the researcher's bias since it provides that findings are only based on the respondent's views (ibid)

### 3.10 Limitations of the Study

It may be too costly for the researcher to travel to the rural areas in Bela-Bela to collect data. Some respondents who are part of the study population may not be willing to participate due to fear of victimization, particularly the project employees. Since the cannabis production project is located in the foot hills by the river side, bad weather conditions like rain may hinder the researcher from getting to the project premises due to overflowing river.

### 3.11 Chapter Summary

This chapter discussed the research design, research approach, data collection methods which include primary and secondary data collection methods. It further discussed the study population and how it is sampled to ensure that every cluster of the society is represented, as well as how data collected is to be analyzed using both thematic analysis and content analysis. Limitations of the study as well as ethical considerations were also discussed in this chapter.

# CHAPTER 4

# DATA PRESENTATION AND ANALYSIS

## 4.0 INTRDUCTION

This chapter presents data obtained from the field work at Bela-Bela area from between May and June 2024. Due to the qualitative nature of this research, thematic analysis has been employed in the study for data presentation. The study's main themes have been drawn in accordance with the research objectives, while the subthemes have been drawn from the study's research questions. The data collected from the field was firstly codes, while at the same maintaining anonymity and confidentiality when research findings were being presented. The first part of the data presentation entails a brief description of Verve Dynamics Incorporated project and a description of households in Bela-Bela community. The second part provides a structure of the main themes and subthemes that have been drawn from the data analysis, while the third part provides demographic profiles of the study participants. The fourth part entails a detailed presentation, analysis and discussion of themes using the generated codes and categories throughout the analysis, then the conclusion will follow.

## 4.1 Description of the Study Area

This study was conducted in the area of Bela Bela where Verve Dynamics Incorporated, a medicinal marijuana producing company located its activities. Bela Bela comprises a cluster of rural villages under the Principal Chief of Kueneng and Mapoteng in the District of Berea. Most of the villages of Bela-Bela are located in the lowlands of Lesotho.

## 4.2 Verve Dynamics Incorporated

Verve Dynamic incorporated is a manufacturer of highly purified botanical extracts that produces cannabidiol (CBD) for medical uses and it capitalizes on Lesotho to be at the forefront of African nations in exploring business opportunities for cannabis. It was officially opened on the 2$^{nd}$ August 2019 in the area of Bela-Bela in the district of Berea. According to Mohono (2019), its co-founder and main local business partner Sam Matekane indicated that the project is meant to boost development, create many job opportunities for Bela-Bela community and the

entire country. This statement raised the expectations of community members in relation to accelerated development in their area as well as creation of higher incomes.

The company's goal is to provide pharmaceutical phytomedicines, cosmeceuticals and neutraceuticals produced in Lesotho using organic products sourced in Lesotho, harvested and cultivated by Basotho for local and international markets. The company believes in reduction of chemicals consumed and used on skin and increasing the amount of greatness from nature in our everyday lives (Kajane, 2021).

Verve Dynamics Incorporated (pty) Ltd specializes in innovative and proprietary extraction technologies for the Herbal Medicines and Phytopharmaceutical ingredients market. The company strives to integrate collective expertise and professionalism into the development of high quality extracts, distillates, and isolates too match clients' needs. The company specializes in cannabis flower extract, pelargonium sidoides extract, phytochemicals, THC, CBD, Botanical extracts, Natural Medicine, and Herbal Medicine.

### 4.3 The Participants

The demographic profiles of the main study participants who were interviewed is presented in this section. The study's main informants were the local farmers whose fields have been used vy the project, the traditional marijuana cultivators, community members, local project employees, the project coordinator, local chief, and the councilor. These participants were interviewed to understand their personal experiences and perceptions regarding the implementation of the medical cannabis project.

**Table 1: Demographic Profiles of Participants**

| Respondent Code | Status | Age Range | Sex | Place |
|---|---|---|---|---|
| ProC1 | Project coordinator | | Female | Bela-Bela |
| LC1 | Local chief | 42- | Male | Bela-Bela |
| CC1 | Community Councilor | 49-60 | Male | Bela-Bela |
| LC2 | Local chief | 45-55 | Female | Bela-Bela |
| FGD P1 | Famer | 35-40 | Male | Bela-Bela |
| FGD P2 | Farmer | 38-46 | Male | Bela-Bela |
| FGD P3 | Community Member | 24-28 | Male | Bela-Bela |
| FGD P4 | Community Member | 31-39 | Female | Bela-Bela |
| FGD P5 | Local Employee | 30-37 | Female | Bela-Bela |
| FGD P6 | Local Employee | 42-48 | Female | Bela-Bela |
| FGD P7 | Marijuana Cultivator | 29-33 | Male | Bela-Bela |
| FGD P8 | Marijuana Cultivator | 40-50 | Male | Bela-Bela |
| MC1 | Marijuana cultivator | 29 | Male | Bela-Bela |
| MC2 | Marijuana cultivator | 26 | Male | Bela-Bela |
| MC3 | Marijuana cultivator | 34 | Male | Bela-Bela |
| MC4 | Marijuana cultivator | 49 | Male | Bela-Bela |
| MC5 | Marijuana cultivator | 38 | Male | Bela-Bela |
| F1 | Farmer | 42 | Female | Bela-Bela |
| F2 | Farmer | 52 | Male | Bela-Bela |
| F3 | Farmer | 45 | Male | Bela-Bela |
| F4 | Farmer | 36 | Male | Bela-Bela |
| Pro E 1 | Project Employee | 35 | Female | Bela-Bela |
| Pro E2 | Project employee | 33 | Male | Bela-Bela |
| Pro E3 | Project Employee | 28 | Female | Bela-Bela |
| CM LO1 | Community Member | 43 | Female | Bela-Bela |
| CM2 | Community Member | 28 | Female | Bela-Bela |
| CM3 | Community Member | 31 | Male | Bela-Bela |
| CM LO4 | Community Member | 50 | Male | Bela-Bela |
| CM5 | Community Member | 40 | Female | Bela-Bela |
| CM6 | Community Member | 26 | Female | Bela-Bela |

**Source: interview data 2024**

Various clusters of community members in Bela-Bela took part as the main study participants from which the data was collected. Their demographic profiles entailed their status, participant's

code, sex and their place. The ages of the participants ranged from 20 years to 60 years. A total of 30 participants were interviewed of whom were 12 women and 18 men.

Among the study participants, there were two local chiefs; a male and a female and a community councilor whose age group ranged from 42 to 55, 45 to 55 and 49 to 60. Farmers who took part in this research study are those whose fields were used by the project and small-holder farmers whose fields were not used. Table 1 above indicates that the farmers' age range in the study is 35 to 65, and only one farmer is a female aged 42, while majority of them are males.

The study also employed a focus group discussion as shown in Table 1 for the purpose of rich data collection. This FGD was led by the researcher whilst allowing the participants to engage in a free debate. The FGD participants included the local employees, farmers, community members, together with the traditional marijuana cultivators. Three of the FGD participants were females, with their age ranging from 30 to 48, while the other five were males with the age range of 24 to 50. Six community members from Bela-Bela were also interviewed; four of them being females and two being males and their age range is 26 to 50. Two of these community members participated in a FGD; one was a female and the other was a male.

**Table 2: Traditional Marijuana Cultivators FGD**

| Respondent Code | Status | Sex | Place |
|---|---|---|---|
| FGD P1 | Marijuana cultivator | Male | Bela-Bela |
| FGD P2 | Marijuana Cultivator | Male | Bela-Bela |
| FGD P3 | Marijuana Cultivator | Male | Bela-Bela |
| FGD P4 | Marijuana Cultivator | Male | Bela-Bela |
| FGD P5 | Marijuana Cultivator | Male | Bela-Bela |

**Source: data analysis 2024, own construction**

The study's objectives were

- To understand the importance and risks of illegal cultivation of illegal cannabis in the livelihoods of farmers in the area of Bela-Bela.
- To find out the expectations of illegal cannabis producers when the production of medicinal marijuana was legalised.
- To find out the costs and benefits of the legislation of marijuana to illegal cannabis producers in the area of Bela-Bela.

### 4.4 The Cultivation of Illegal Marijuana

The cultivation of marijuana: who cultivates illegal marijuana and why do they cultivate it? To understand the local farmers' knowledge and experiences on this category, traditional marijuana cultivators were interviewed about their farming practices. The following responses are from four traditional marijuana cultivators from Bela-Bela.

*"Primary cultivators of marijuana in Bela-Bela are men, and marijuana is planted throughout the year except in winter and harvested when the buds have fully developed"* (MC 3)

*"Our produce is sold locally and outside Bela-Bela, including South Africa and only a small quantity is sold locally; the rest of the produce is sold in South Africa which is our main market. Marijuana is sold in small packages like matchboxes in Bela-Bela, but in South Africa it is sold in large quantities. For marijuana that is sold in small quantities like matchbox, the prices are set by the seller, but for large quantities, the buyer is the one who negotiates the prices. Our sales are in cash only in South Africa, but we sometimes sell on credit in Bela-Bela to some customers that we trust"* (MC1)

*"We cultivate marijuana in our gardens"*(P1).

*"I cultivate my marijuana in my garden so that I can keep an eye on my plants on a daily basis"* (P3).

The findings of this research indicate that the main growers of marijuana are primarily men who can be classified into three main categories comprising those who cultivate for the international

market in terms of exporting to South Africa; then there are those who produce for local markets; and finally there are those who produce for own consumption.

The producers of illegal marijuana were also asked as to what other livelihood activities that they engage in. Their responses were as follows:

*"I have some fields and I cultivate different grains and vegetables which I sometimes sell if I have harvested a lot of them"* (LF 1).

*"I only grow grains in my field because they mostly rely on rain fall for irrigation, but if it is not sufficient I use water from the dams"* (LF 3).

The responses indicated that marijuana producers also engaged in the production of other crops but mainly on a subsistence basis as food primarily for household consumption rather than the market.

### 4.4.1 Land on which Marijuana is Cultivated

Traditional marijuana cultivators were asked about how much land each grower has dedicated to marijuana production. The following narratives were provided by participants in a focus group discussion,

*"I have three big plots in my garden which I have dedicated for cultivating marijuana".* FGD P3

*"It depends on the amount of land that each has in their garden, I have dedicated all the space in my garden for marijuana cultivation, and it is quite bigger and enables me to make a good harvest"* (P1).

*"My friend and I cultivate our marijuana in the mountains because we do not have enough space in our gardens. So we go there often to check on the plants and to make sure it is not being stolen"* (P2).

### 4.4.2 Number of Harvests Per Year

The study found that the number of harvests done by the growers each year varies depending on the seasons each grower is comfortable to cultivate due to weather conditions. The participants stated that: *"we make 2 to 3 harvests per year because we do not cultivate during winter, the*

*cold weather and morning dew destroys the plants, resulting in low quality and poor harvest"* (P2).

P4 aslo added that *"I often make 3 harvests per year".*

*"Even though marijuana can be cultivated throughout the year, I only make two harvests a year"* (P3).

However, the growers highlighted that the climate change has reduced the production of illegal marijuana. The participants shared the following insights on the climate change and illegal marijuana production.

*"The current climate change in our country has reduced marijuana production because of more dry spells and wet spells because crops cannot grow when it is muddy" (FGD, P1).*

(FGD, P2) *"The dry weather condition has reduced productivity of illegal marijuana because we do not use the green houses or nets to protect our crops against harsh weather conditions".*

(FGD, P3) *"The production of marijuana has declined because of climate change. Too much rain is not good for the plants, and also, there are long dry seasons, and crops die easily".*

### 4.4.3 Planting and Caring for Illegal Marijuana

The study revealed that traditional marijuana cultivators often use seeds from their previous harvests to make seedlings which they plant outside when they have fully developed. From this stage the cultivators sometimes have to water the plants during very dry seasons and weeding is also done around marijuana plants to prevent pests and loss of minerals meant for the marijuana plants. As the plants grow, base cleaning which is the removal of the lower leafs is done for proper ventilation and also to prevent pests. When the plants have grown and are about to be harvested, selective de-leaf (removal of dry yellow leafs which hinders proper ventilation) is done, and this also prevents pests. A few days before the harvest, final de-leaf is done (FGD, P1, P3 & P4).

There are some pests in marijuana and these are inclusive of aphids, spider mites, and FIPS. If there has not been any harvest done on the plants, only the buds and branches are cut off, then the enter plant is left to produce more buds, but if there have been several harvests done on the

plants, they are chopped off then the buds are cut off, and a new plant will be planted. "*After harvesting, we place our buds in a spacious container so that there is enough air circulation, and then we place them in a room temperature and leave it for several days to dry. We mostly grow female marijuana as it is the one which produces the buds which are mostly useful"*. (FDG, P5).

### 4.4.4 Individual or Collective Production of Marijuana

The participants were asked whether they grow their crops individually or are there areas in which they cooperate with each other. The illegal marijuana growers indicated that: *"We grow our crops individually; we only cooperate when we take our produce to the international markets"* (FGD, P1).

*"I cooperate with my friend and we do our cultivation in the mountains*" (P2*).*

*"I grow my marijuana individually; we only cooperate after harvesting when we sell our produce. If I do not have the type of marijuana that a customer needs, I refer them to someone who I know has that type of marijuana. Also when we take our produce to South Africa we cooperate to avoid conflicts and competition"* (P3).

*"Most of the traditional marijuana cultivators grow their crops individually because they use their gardens which are not big enough for them to cooperate with others"* (FGD, P5).

The findings of this study indicate that some farmers grow illegal marijuana as individuals whilst others cultivate it collectively. Two factors seem to determine whether farmers cooperate to produce their crop of illegal marijuana or not. The first factor is the amount of land on which they cultivate their land. Those who cultivate on small plots of land such as gardens tend to grow the crop on an individual basis. The second fact comprises the markets to which they supply their produce. Those who produce for export, primarily to South Africa tend to cooperate in order to meet higher market demands which they cannot achieve on an individual basis.

### 4.4.5 Cultivation of Other Crops

The farmers were also asked if they produce other crops outside the illegal marijuana that they grow. Their responses were as follows:

*"I have some fields and I cultivate different grains and vegetables which I sometimes sell if I have harvested a lot of them"* (LF 1).

*"I only grow grains in my field because they mostly rely on rain fall for irrigation, but if it is not sufficient I use water from the dams"* (LF 3).

### 4.4.6 Farmers' Incomes

The illegal marijuana farmers were asked on how much income they made from marijuana production. There was wide variation between those who produced for local consumption and those who produced on a larger scale for export to South Africa as indicated in their responses below.

*"Our produce is sold locally and outside Bela-Bela, including South Africa and only a small quantity is sold locally; the rest of the produce is sold in South Africa which is our main market. Marijuana is sold in small packages like matchboxes in Bela-Bela, but in South Africa it is sold in large quantities. For marijuana that is sold in small quantities like matchbox, the prices are set by the seller, but for large quantities, the buyer is the one who negotiates the prices. Our sales are in cash only in South Africa, but we sometimes sell on credit in Bela-Bela to some customers that we trust"* (MC1)

*The produce is sold both locally and in South Africa and only a small amount of it is sold in Bela-Bela, most of it is sold in South Africa. Locally, we sell in small quantities, and in South Africa we sell in large quantities such as buckets and bags. The prices are set by sellers if the customer buys in small quantities, but with large quantities, the customer negotiates the prices depending on how much cash they have. All our sales are in cash both locally and outside Bela-Bela".* (MC1).

*"The primary cultivators of marijuana in Bela-Bela are men, and the key motivation is that they generate income from selling it. I only sell locally because I do not plant plenty of it, so the produce is not enough to be sold outside Bela-Bela and I only sell in small quantities. The prices are set by me and I only sell in cash".* (MC3)

*"I do cultivate marijuana but in a very small plot for my own consumption because if the police arrive here and find a certain amount of it that an individual is not allowed to have, I may be arrested because they say it is illegal to have a lot of marijuana".* (MC6)

### 4.4.7 Transporting Illegal Marijuana to Markets

The respondents were also interviewed on the modes of transport used while transporting their produce to market places outside Bela-Bela area. The following are various narratives given by the respondents.

*"We use donkeys as our mode of transport"* (MC4)

*"I always hire a car to transport my marijuana to the market place in South Africa"* (MC5)

*"The most commonly used mode of transport is cars, but some still use donkeys"* (MC2)

*"My partner and I always travel on foot and cross in to South Africa through Mohokare River so that we can avoid the police".* (MC1)

The study also found that with every harvest that the growers make, they transport their produce to South Africa, and Free State was commonly cited as the main area to which they send their produce. *"With every harvest that we make, we make sure to transport it to South Africa. Since we make 2 to 3 harvests per year, we also transport our marijuana 2 to 3 times a year. Our main market is Free State because it is close to the border, so it makes it easier for us to mitigate the risk of being arrested"* (FGD, P2).

*"I transport my marijuana produce to South Africa twice a year because I make two harvests a year. We sell it in different areas of Free State because we avoid travelling a long distance in to South Africa because we might get arrested"* (FGD, P5).

*"How often we transport our marijuana to South Africa depends on how many times we harvest marijuana in a year, if we harvest twice in a year, then we transport our marijuana to South Africa twice in a year. We have different market places in Free State; which is where we sell our produce*." (FGD, P1)

### 4.4.8 Earnings from Illegal Marijuana Production

When asked about the average amount they make when they sell marijuana to South Africa on each trip, the participants shared the following insights. *"We make different amounts of money on each trip depending on the amount of marijuana that we have. On average it is about 6 to 8 thousand on each trip."* (FGD, P4)

*"The highest amount of money we have made in South Africa is 15 thousand, but on other trips we often make 7 to 10 thousand because of the competition in the market"* (FGD, P2).

*"The amount of money we make when selling our produce in South Africa differs depending on the type of marijuana that we would be selling on each trip. Lower grade marijuana is sold at cheaper prices so we normally make about 5 thousand on each trip, but with high grade marijuana we normally make close to 8 thousand on each trip"* (FGD, P1).

*"I normally do not transport a lot of produce because I a small space for cultivation, so I normally make 4 thousand on each trip"* (FGD, P3).

The excerpts above highlight that the illegal status of marijuana cultivation creates significant financial and operational risks. Cultivators face potential legal consequences, which impacts their business decisions and market strategies, such as avoiding detection by using informal transport methods or crossing borders at less monitored points.

The variability in income based on the quality and quantity of marijuana sold highlights the volatility and competition in the market. This affects their income stability and may lead to fluctuating financial outcomes.

The above statements also show that traditional marijuana cultivators earn their incomes by selling their produce. It was commonly cited that they sell in different quantities (small and large) and that their main market is outside Bela-Bela area; in South Africa. The research findings also show that the key cultivators are men and youth, with the motivation of generating income. The study also found out that various modes of transport are used while transporting marijuana to the market, depending on an individual's preference.

### 4.4.9 Police Raids

The security of the livelihoods of farmers who cultivate illegal marijuana is affected by raids by the police and the military. This is due to the fact that the production, possession, sale and transportation of marijuana, outside the licences that are given to producers of medicinal marijuana, is prohibited by law in Lesotho. This is indicated in the data that was collected from Bela Bela. The following responses were given by illegal cultivators of marijuana in this regard:

*"One of the risks we are facing is of being arrested and beaten by the police men or soldiers, they also destroy our marijuana, and they only way we mitigate this risk is by hiding from them"* (MC 2).

"*We do not often get raided by the police or military, it happens once or twice in a year and such raids are done through house to house searches. Sometimes they just go straight to the illegal cultivators because someone has reported them, so they have a lead on where to search"* (FGD, P1).

*"We not get raided a lot since we do our cultivation in the mountains where it is hidden, sometimes a year passes by without getting raided, but when it happens it is because we have been reported by an anonymous individual not because the police or military were conducting a search"* (P3).

*"Now that there is a military post near our village, we now get raided often, about 4 times a year, and their raids are focused on house to house searches. They have even recognized which households cultivate illegal marijuana and sometimes they just go to such households only. However, in the past years it only happened about two times a year through house searches"* (FGD, P4).

### 4.4.10 Strategies to Mitigate the Risks from the Police and the Military

The findings of this study indicated that despite the risks the growers of illegal marijuana continued to produce illegal marijuana to enhance their livelihoods by undertakings mitigation measures.

*"The risk is mitigated by just hiding marijuana by planting maize near that marijuana if it is the right season to plant maize"* (MC 1).

*"We do our cultivation in the mountains where it is hidden"* (P3)

The findings of this study indicate that there is variation in the frequency of raids. In the case of some farmers there have been two raids in the course of the last year in the case of other farmers there have been four raids. The findings also indicate the different strategies adopted by farmers as some farmers hide their production by planting between rows of maize, other farmers have moved their production to less accessible areas such as the mountains.

### 4.5 Farmers' Expectations When Marijuana Production was Legalised in Lesotho

The legalisation of marijuana production as well as the location of the Verve Dynamics plant in the area of Bela Bela brought with it numerous expectations to local marijuana producers as well as the local communities. This section looks at some of these expectations and the findings were as follows:

*"We had anticipated that they would be given a chance to work with the project as we already have some farming skills, even though they are not very relevant with medical cannabis cultivation. We had anticipated that we would be given some kind of training to improve the skills we already process have, but this did not happen; only farmers whose fields have been used were temporarily hired during the construction"* (LF1).

*"The expectation was that farmers will be prioritized because the project deals with cultivation, but that was not the case because some of the people who were hired had not farming skills at all".* (LF2)

*"The local community, had anticipated that many jobs were going to be created by the project, however, people were not well informed when the job applications were open, we would just recognize that a certain individual has started working at the medical cannabis project, and this did not give a fair chance for farmers and other community members to be part of the project"* (LC4).

*"Our main expectation was that we would be employed because the project is all about marijuana production which is what we are already doing"* (FGD, P2).

*"I was expecting that at least we can be assisted with some tools to help us improve our production because I knew that we could not all be employed at the same time"* (FGD, P3).

*"I think almost everyone's expectation was getting a job when we first heard about the coming of the project in our community"*(FGD, P5).

### 4.5.1 Extent to which the Expectations were Met.

The illegal marijuana producers, the communities as well as the management of the project were asked about to the extent to which these expectations were met. Their responses were as follows:

However, the study revealed that none of these expectations were fulfilled. When asked further why their expectations have not been fulfilled, the participants assert that *"Our expectations were not fulfilled because we did not get any jobs from the marijuana project"* (FGD, P5).

*"All the expectations that we had were not fulfilled as none of the traditional marijuana cultivators that I know of have not been hired by the project"* (FGD, P2).

"Traditional marijuana cultivators have not been given any form of assistance by the project, or been employed, meaning none of our expectations have been fulfilled.

When asked why the cannabis firm is not engaging local cannabis producers in their cannabis production, ProC indicated that "*Our project is not engaging local cannabis producers because we are in completely different farming industries; our medical cannabis is monitored in a completely different way as theirs. They do not have proper skills to produce the type of cannabis we produce. However the agreement was that the project would provide some community members including the illegal marijuana cultivators with some training on how to make cannabis products such as oil, soap or bath salts to improve their income from marijuana cultivation. We are still going to carry on with the plan once the project has made enough profits to help the community".*

## 4.6 Costs and Benefits of Location of the Verve Dynamics Firm in Bela Bela

### 4.6.1 Linkages with the Legal Marijuana Growers

When asked about the project's impact on farmers' livelihoods, which includes their well-being and income opportunities, the project coordinator highlighted that the project is yet to give back

to the community at large because it has not yet made enough profits, thus it has so far had zero impact on local farmers' livelihoods in general, except for those whose fields have been used.

The respondents' narratives show that implementation of the medical cannabis cultivation project has not improved or had any impact on local farmers' well-being. The traditional marijuana cultivators are still faced with risks of illegal marijuana cultivation, and the small-holder farmers have also been sidelined in the production process, with no training to improve their production.

### 4.6.2 Costs and Benefits of the Project in Relation to People's Livelihoods

In the light of the expectations and the extent to which the expectations were reached by the establishment of the Verve Dynamics Project in the Bela-Bela area, the local communities as well as the Project management were asked, in different interviews, what the benefits and the cost of the project were to the community. Their responses are presented below.

The local chief noted that *"The medical cannabis cultivation project has brought Bela-Bela community together since some of the community members have been employed by the project, which is something that builds peace within the society"* (LC1).

### 4.6.3 Benefits that were Brought by the Project

The study finds that the implementation of the medical cannabis cultivation project has brought about different socio-economic benefits to the local communities. Job creation, skills development, improved local income infrastructure development and social assistance to poor households have been cited as the benefits that came with the project's implementation within the community.

When asked about the particular advantages of having located the marijuana production enterprise in Lesotho and in the area of Bela-Bela in particular, the project coordinator stated that *"one of the key advantages of having located our company in Bela-Bela is that we got plenty of land we needed for our enterprise, and relatively cheap labour. There is also a lot of water in the area, which enhances our production. One more advantage is that Lesotho's warm weather is quite suitable for cannabis production."*

The local chief and the community councillor also stated that *"one of the benefits we have gained as the community leaders from the medical cannabis cultivation project are the cleaning services that provide for the chief's office and the council office. Once in a while they come and cut the grass and also offer some cleaning chemicals for the offices".*

The above statements show that the project has contributed to local infrastructure development, such as providing cleaning services for local offices. The project has also utilized available land and cheap labor in Bela-Bela to leverage local resources for sustainable development.

### 4.6.4 Job Creation

The study findings show that some local community members were hired in the early stages of the project's erection, while others were hired when the project began its operation. The study uncovered that job creation has improved in Bela-Bela since the project was implemented, and some households' living standards have improved. While asked what impact they think the project has had on job creation in Bela-Bela, the focus group discussion indicated that:

*"The project created many jobs during its construction, but only few people remained employed after it stated its operation"* (FGD P1).

*"The project increased job creations within the community since some community members were selling food and snacks at the project site during its construction"* (FGD P2).

*"The project has not improved job creation within the community because most of the employees lost their jobs after construction, and only a few were employed when the project started operating"* (FGD P5).

*"Job creation has increased in Bela-Bela since the implementation of the project"* (FGD P8).

One of the community members highlighted that *"the only benefit I gained is that during the construction phase, I was selling freezer suits to the workers because the project is located at the foothills"* (CM3).

Some project employees also added that *"one of the benefits I have gained from the project is of being employed; however, I lost my job after the construction phase was over"* (Pro E2).

The local chief and the community councilor also share the same sentiment that *"The project has improved job creation within the community because there are some people from the village who have been employed"* (LC 2 & CC).

The project coordinator also states that *"the company has not yet generated a lot of income as well as creating many jobs mainly because the cannabis industry is unchartered territory in Lesotho. There is lack of necessary knowledge and tools; hence there was a lot that was only to be learned as we started the operation because we had not anticipated some of the difficulties we are encountering with operating the medical cannabis industry. Currently, most of our unskilled labour is from Bela-Bela, and of course we had to outsource most of our skilled labour from other parts of the country"* (Pro C).

The above responses show that several jobs have been created for the community, even though majority of the community members are unskilled labour. Most the skilled labour has been sourced outside Bela-Bela. The study also finds that the project implementation also improved local income in Bela-Bela communities. Business opportunities were open for some community members during the construction of the project. However, the project has not created many jobs for the local communities as it had promised in the beginning, and some people who had been hired during the project's erection lost their jobs when the construction phase was completed.

### 4.6.5 Skills Development

The research revealed that people who have been employed by the project have been equipped with some skills development. The study found out that most of the local people who have been hired are unskilled labour, thus they had to go under a certain training first. The employees were then provided with skills training for appropriate skills needed in the medical cannabis industry.

The project employees stated that *"we have been provided with some training and skills; we were even taken for a workshop in Cape Town to improve our knowledge and skills on how to process medical cannabis after it has been harvested from the green houses"* (Pro E1).

*"The project arranged a workshop for us after employing us, which was meant to equip us with certain skills and knowledge we would need for medical cannabis cultivation"* (Pro E2).

Additionally, the project coordinator also indicated that *"Since the community members do not have skills of producing medical cannabis, when they got to the company, they were offered some training on how to monitor and test medical cannabis. There were some skills transfers before they got to do the job"* (Pro C).

The study revealed that only the project employees have been provided with some skills development, other community members have not been provided with any kind of skills training by the project. The project has not yet fulfilled its promise of providing community members with some training to help them start their own production.

### 4.6.6 Social Assistance

The study shows that since the project has been implemented, is has only provided social assistance to poor households in a form of food packages. Some orphans from local communities were once provided with some kind of social assistance for their well-being.

The focus group discussion explained that *"Yes, there are orphans who were once invited for a closing party by the project and they had lunch with the rest of the staff"* (FGD P2).

*"Some poor households were once given some food parcels by the project"* (FGD P3).

*"I do not know of any social assistance that has been provided to poor households"* (FGD P1).

*"Some poor households and orphans were once given some groceries by the project"* (FGD P8).

According to the study, the project has not provided social assistance to poor households in Bela-Bela communities as anticipated. The social assistance has only been provided once and only small food packages were offered.

### 4.6.7 Infrastructure Development

According to the study, the anticipated infrastructure development has not taken place since the implementation of the medical cannabis cultivation project in Bela-Bela. Some infrastructure developments that include developing local sports ground, horse racing fields, building taps and constructing electricity in nearby villages were to be made by the project as soon as it began its operation.

Some study participant highlighted that *"There has not been any infrastructure development within the community since the medical cannabis project was implemented in Bela-Bela"* (FGD P1, P2, P5 & P7).

The local chief (LC 1) also added that *"There has not been any infrastructure development within the community".*

Local chief (LC 2) on the other side stated that *"Bela-Bela community has been improved by constructing a road and a bridge within the community".*

Additionally, FGD P3, P4 and P8 shared the same sentiment that *"the only infrastructure development that has been brought by the project is the road construction that leads to the project site and a bridge".*

**4.7 Costs that were Brought by the Project**

When community members and the illegal marijuana farmers were asked what costs the project brought to the community their responses were as follows:

*"I think the project has brought more divisions within the community because it has only benefited its employees, while other community members did not get any form of benefits from the project, it has not changed our livelihoods and this has caused some conflicts among community members"*(CM 1).

*"The medical cannabis project has brought divisions within the community because there were conflicts that arised because the project destroyed some graves that were on one of the fields where the project is located, and the families were not compensated".* (CM2)

*"Since the project was implemented, there have been many conflicts within the community that have been caused by the project, community members complain that the project does not hire fairly; favoritism and local politics are used when hiring staff, so I think it has brought some divisions within the community"* (CM3)

*"The medical cannabis project has created some divisions within the community because only a few number of local community members were employed, also farmers who sold their fields have*

*not been fully compensated. This has caused some conflicts and disturbed peace among the community members"* (LC1).

The community councilor also stated that by creating jobs within the community, the project has brought the community closer.

The Project coordinator noted that *"when the project initially erected, there were some disputes and misunderstandings between community members and the project stakeholders, however, as the project coordinator, I worked tirelessly to ensure that all the disputes are resolved, and we are in good terms with the community members. This means that currently, our relations with the communities as the company are good since all the challenges we faced have been resolved, if the community has some issues with the company, we ask the local chief to arrange a "Pitso" so that we can talk and come up with solutions. The same thing applies with us as the company, if have any news for the community, we also follow the same procedure."* (ProC)

On the other hand, the ProC stated that *"our relations with the community as the company are good since all the challenges we faced have been resolved"*. She further stated that for the improvement of their relations with the community, *"if the community has some issues, they can ask the local chief to arrange a "Pitso" so that we can talk and come up with solutions, the same goes with us as the company; if we have some issues with the members of the community, the local chief can arrange a "Pitso" so that we raise our concerns and resolve all the issues that we have".*

*"Since the project implementation, the society expects me to be a mediator and ensure that the project benefits the community at large, all disputes are resolved and that people who are still owed by the project are paid"* (CC).

*"Farmers make a living out of the income they get from selling grains like beans, maize and sorghum from their fields, while others also sell their animals".* (FGD P7).

### 4.7.1 Negative Impacts

The study finds that the implementation of the medical cannabis cultivation project in Bela-Bela has had some negative impacts within the community. These impacts are mostly on job creation, farmers' well-being, and unhygienic environment. The following perceptions were shared by community members, local farmers and the project coordinator.

*"One of the challenges is that since the medical cannabis was an untempered territory in Lesotho, we do not have the appropriate knowledge and tools; hence there is a lot that we still need to learn for our business to boom. This has led to us having to outsource skilled labour from South Africa which is expensive. Thus all the expectations that we had of making a lot of money have not been met since we are competing with experienced and already thriving companies that have created synthetic products that are the same as ours in the international markets. Additionally, the key challenges that we have encountered are in the global market, we have experienced a dip in the cannabis industry from what was projected to be the lucrative market rates in 2018. We are less competitive in the market since we are competing with countries that are making synthetic cannabis, affecting the market prices"* (Pro C).

*"One of the challenges that I have encountered that have been brought by the cannabis cultivation project is that it has not delivered the promises it had made regarding community development such as building taps and improving the community's livelihoods*." (LC 1).

*"The challenge I have encountered is that the community wants me to intervene in their disputes with the project management as it has not delivered its promise of giving the community 25 thousand monthly to help the community with some developments, so I am not able to help the community since the management keeps on making empty promises"* (CC1).

*"After the construction of the project was completed, some construction materials that were used while building the bridge were abandoned by the road side, and it has now become a dumping site, and this causes pollution in our environment"* (CM 2).

It was commonly states by the local farmers whose fields have been used by the project that they did not receive full compensation on their fields, and this has negatively affected their well-being. These farmers highlighted that their food production has declined, and they are not able to

make ends meet for their households, as a result their livelihoods have worsened since the implementation of the project.

The study findings also show that the project has not made any initiatives to improve the livelihoods of the community members in Bela-Bela. Most of the benefits on livelihood improvement were reaped by the project employees.

### 4.8 Acquisition of Project Land on which Medicinal Cannabis is Produced

In many instances in Lesotho, there is a lot of contention around the impact that large projects have on the livelihoods of the households and communities that lose land in the course of the development of the large project. It was therefore important to understand the procedures that were followed in the acquisition of fields for marijuana production. The participants were asked how members of the community were approached by the project when they requested their fields, whether there was a pitso, did they volunteer to give their fields or if they were forced to join the project. Addressing this question, the community members stated that:

*"The approach was not a good one because we were never introduced to the project owners. Our local chief and the councillor were the ones who were responsible for the arrangements of land acquisition. There was no Pitso that was made for the whole community members to request the fields. They were going door to door to the owners of the fields to ask them to sell their fields to the project. I am one of the victims because I disagreed to give my field away because I was giving them my own conditions that if I give them my field, then I want 1% share of their profits every year or they should give me 1 million, and they disagreed. Then they went on to others owners and convinced them that their children would be hired and they will be given a good sum of money which is 15 thousand. Some were only given 5 thousand each while others have not been given anything at all. Some owners even died of heart attacks because of losing their fields. There were no specific payment arrangements that were made because there was no written agreement on how they would be compensated, and this made it difficult for the owners to claim their fields back or the payment they were promised"* (CM. 1).

Sharing the same sentiment, the other participant also highlighted that *"The project did not approach the land owners properly. With my field there were no procedures that were followed because my field and my uncle's field were affected during the road construction that was done by the project and there were absolutely no arrangements or communication that was done. We were only surprised when we saw the construction machines destroying the fields for road construction. There were no payment arrangements that were made, so we have not been compensated at all. We did not take any initiative as we felt it would be a waste of time and money because we knew that the chief was involved in this, so we would not get any justice or help. We just had to let it go.*

*"The local chief held a Pitso and explained the benefits of engaging in the project by selling their fields and they were assured that they are going to gain multiple opportunities such as their children being permanently hired by the project. From there the land owners were contacted individually and convinced that they are going to be paid 15 thousand per field because they were no longer using them. However, there were no proper agreements written on paper or documented".* CM3

However, when asked about what arrangements were made by the project with the farmers when they acquired their fields, the project coordinator stated that *"The land that has been used belonged to the chief because those fields were not being used anymore. Only two farmers' land was used and there was a fair compensation that was made, and I as the project coordinator believe that there was even a documented agreement regarding the sale of such land between the farmers and the project since that would help in acquisition of land lease for new land owner which is now the project. This land acquisition however caused some conflicts between the local chief and community members who were claiming that those fields belonged to some farmers. The chief then requested everyone who claims to own a field that has been used by the project to report themselves with proof of such land ownership and no one came forward. This caused so much conflicts and the TRC (transformation resource center) had to intervene. There were also some court cases regarding this land acquisition but those conflicts were eventually resolved".*

The participants were further asked to explain the specific payment agreements that were made between the project and the community if there were any regarding the cannabis production in

the area. The respondents highlighted that *"The agreements between the project and the community were that every month the community will be given 20 thousand for community development and that community members would be provided with some training so that they may start producing"* (CM3).

*There were no specific agreements that were made between the project and the community because since the project was introduced, the project management in general has never held a meeting with the community, only the coordinator, the local chief and councilor have made a Pitso in which only promises about community development and job creation opportunities were made, there is no written agreement between the project the community with respect to cannabis production within the community"* (CM2).

CM1 also attested to the above statements that *"There were no proper arrangements that were made because even the community members at large have never been introduced to the project owners, the local chief and the councilor only made a Pitso to tell the community that there is a project that is going to start operating within the community and they promised the community a sum of twenty thousand for some developments and job creation opportunities"*

### 4.8.1 Cannabis Cultivation

Various perceptions emerged regarding the medical cannabis cultivation project among community members, community leaders as well as community stakeholders such as the project coordinator. To better understand how different people within Bela-Bela community perceive the project's implementation in the area. The researcher sought to investigate various positive spinoffs and the challenges that have been brought by the project in Bela-Bela community.

The project coordinator indicated that the project stakeholders had already anticipated that there would be some misunderstandings and issues between the community and them. When asked what were the expectations of the project in terms of their relations with the local community, the project coordinator stated that "*We had obviously anticipated that it would not be a smooth ride all the way where many people are involved, people will step on each other's toes every now and then but nothing so far has been out of the ordinary. This anticipation was caused by the fact that we had heard that there have been conflicts between medical cannabis projects and*

*community members in various parts of the country where cannabis projects have been established".*

The researcher sought to understand if the cannabis project makes any concerted efforts of operating in a way that enhances rather than degrading the society and its environment. The project coordinator was asked if the project has any Cooperate Social Responsibility (CSR) activities, and to explain them if there are any. The following excerpt describes the projects' CSR activities.

*"Yes our company does have a corporate social responsibility, which is economic responsibility. Our aim is to achieve some of the societal goals as a way of giving back to the community; hence we try by all means to promote the society's well-being. Our company has invested in education/ skills development of our local employees. All the employees who are based in the greenhouses and in the laboratory attend frequent workshops and training courses which are fully paid for by the company. Our project also contributes to local economic development by creating jobs and improving the local households' income. We have also positively impacted this environment since there are a few infrastructural developments that have been made by our project. We do provide cleaning services such as cutting grass to the local chief and the councillors' offices every now and then to promote a clean environment where members of the community access most of the services"* (ProC).

The above responses indicate that medical cannabis project has had difficulty living up to community expectations, mostly because of a mismatch between formal project procedures and the needs and expectations of the local community. Although there are some good effects of CSR initiatives, the community's expected support and financial demands have not been fully met.

### 4.9 Perspectives on the Future of Cannabis Production in Lesotho

The Study participants shared their different perspectives on what could be done to ensure that the medical cannabis industry is more beneficial to their livelihoods. The excerpts below provide perceptions of the local farmers, the focus group discussion, the local chiefs, community councillor and the project coordinator.

*"I think the local farmers have to be given a chance to participate in the cannabis project because they already have some farming skills"* (LF 2).

*"We should at least be helped with some farming equipment like fertilizers and pesticides, or be provided with some training to help us improve our production if we are not going to be involved in the medical cannabis production"* (LF 3).

*"The project should implement the development plans it had made to improve Bela-Bela"* (FGD P1).

*"There are some educated people from Bela-Bela, and they should also be given a chance to work with the project"* (FGD P2).

"*The village committee should make a follow up on the promises that were made to ensure that they are kept and the community benefits from the project"* (FGD P3).

*"People should be hired fairly not with connections and bribes"* (FGD P4).

*"There has to be a community representative within the project management to ensure that the community is well served by the project"* (FGD P5).

In addition to this, LC 1 also said *"The only way the medical cannabis industry can be more sustainable and more beneficial to the community is if it can be expanded so that more community members can be hired"* (LC 1).

*"The medical cannabis industry can be more sustainable and more beneficial only if the promises that were made in the beginning can be kept because they seemed to be very good for community development"* (LC2).

The community councilor on the other hand indicated that *"making strike is the only way of making sure that the medical cannabis industry is more sustainable and more beneficial to the community".*

*"As the project's future, I foresee the company creating more employment opportunities, developing the community in the promises that have been made initially when the company*

*arrived that it would take some of the community members for training to help the community have their own products. The community is also yet to profit a lot because the company had promised to use some of the profits to develop local grounds like soccer fields, and also to build water taps in the village. I foresee the cannabis industry growing by opening more companies so that more jobs can be created to help Basotho become financially independent, thereby creating stability in our economy*"(Pro C).

Additionally, the traditional marijuana cultivators also shared their perspectives on what they think needs to be done in order to help them participate in economic growth thorough marijuana production. The excerpts below provide the participants'' insights on future developments.

"*The project should provide us with training on how to produce different marijuana products as it had promised in the beginning, in that way we can participate in economic growth through marijuana production because selling marijuana is illegal in our country"* (FGD, P1).

*"The high license fees for producing marijuana should be reduced, or the government can at least subsidize those fees so that local marijuana cultivators can also afford them and join the legal marijuana production"* (FGD, P4).

*"I think traditional marijuana cultivators should be allowed to engage in the legal marijuana production projects across the country because we have some marijuana cultivation skills and experience, we only need training on how to do the cultivation in a greenhouse"* (FGD, P2).

*"Since our cultivation is considered illegal, these legal cannabis companies should engage us or make partnerships with us so that we can also participate in economic growth through marijuana production without any fear of being arrested"* (FGD, P5).

### 4.10. Discussion of Findings

This section presents the research findings with the relevance of the political economy of agriculture framework. The research findings are also discussed to demonstrate the relationship with the empirical literature to review some similarities and differences with other studies that have been conducted on medical cannabis cultivation and rural livelihoods.

### 4.10.1. Cultivation of illegal Cannabis

The literature reviewed (UNODC report 2022, & Kelly 2020) highlighted that majority of rural households in Sub-Haran Africa depend on cannabis cultivation to sustain their livelihoods. This cultivation of cannabis provides a possible direction for rural entrepreneurialism. The study findings therefore demonstrate how marijuana cultivation helps the traditional marijuana cultivators in Bela-Bela to sustain their livelihoods by selling their produce. Traditional marijuana cultivators have shown that their key motivation for cultivating marijuana is to make a living, and this is done by exporting most of their produce to South Africa which is their main market for selling. Mentioning the key motivations, how they generate income and the disputes encountered among them disclosed that traditional marijuana cultivators are aware of the livelihood strategies they may employ for outcomes such as increased income, improved well-being, reduced vulnerability and increased food security (UNDP, 2017).

Due to a lack of other work options, Bela-Bela's traditional marijuana producers, who are primarily unskilled, rely on marijuana production as their main source of income. Like in Lesotho, the Bela-Bela growers rely primarily on marijuana for their livelihood. On each trip to South Africa, participants claim to have made between 4,000 and 15,000. The income range is subject to variation depending on a number of factors, such as the quantity, quality, and level of competition in the market for marijuana. This reliance highlights the important role that illegal cultivation can play in local economies when there are few alternatives for legal employment; cannabis has provided a means to achieve diversification and to provide a subsistence living (Bloomer, 2009).

In accordance with the political economy of agriculture, potential revenues are a factor in farmers' decisions to dedicate land to marijuana growing, and the variations in land use are indicative of different economic approaches. The amount of area that farmers have allocated for marijuana varies widely. Some grow marijuana on huge plots dedicated to the crop, while others find it difficult to grow their plants in their current gardens and instead choose mountainous areas. This resonates with the literature which suggests that illegal cannabis is usually grown in public as well as tribal lands for hiding it from law enforcement (Kelly, 2020).

(Blomer, 2019) also stated that cannabis production varies in size and scope, from small isolated patches to large fields that resembles any agricultural cycle with animals to plough the fields and using seeds that are saved from the previous harvest, along with the application of artificial fertilizer. The necessity of routinely inspecting off-site cultivating areas raises important questions of security and accessibility, which have an impact on the viability and effectiveness of growing marijuana outside of gardens.

Conventional marijuana growers in Bela -Bela typically oversee two to three harvests annually; the number of harvests is limited by the winter months. The production of marijuana has been greatly impacted by climate change due to an increase in weather variability. Excessive rains and extended dry spells are detrimental to crop health and yield. This aligns with the literature that production is mostly rain-fed and there are two crop yields per year (Bloomer, 2019). Those that manage three harvests might be using tactics to maximize productivity in spite of seasonal difficulties. The consequences of bad weather are made worse by a lack of preventive measures, which emphasizes the necessity for adaptive farming techniques.

Data collected showed that the comprehensive cultivation techniques, which include producing seedlings, providing water, weeding, and undergoing several stages of de-leafing, demonstrate an all-encompassing approach to marijuana farming. These techniques aim to maximize yields, control pests, and improve plant health. Cannabis growing is sensitive to changes in the environment because it depends on natural circumstances for planting and drying, and it needs more attention during dry seasons. Regular maintenance and cautious management are necessary to prevent major damage and yield loss when dealing with persistent pest problems. To maintain product quality, buds must be handled and dried properly. The preference for female plants and the recommendation to dry buds in an area with good ventilation are indicative of an emphasis on producing high-quality cannabis.

The results of this research study demonstrated that some traditional marijuana cultivators grow vegetables and cereals in addition to marijuana. In order to deal with the volatility in marijuana production as well as the wider effects of climate change, diversification might be used as a risk management technique. Bloomer (2009) emphasizes the role that social networks have in the production of illegal cannabis. This is seen in Bela-Bela, where growers work together to market

and transport their produce, demonstrating a calculated approach to getting over obstacles and optimizing profits.

The literature shows that recently, border officials found 3.5 tons of cannabis in a truck owned by Manthabiseng Phohleli, the deputy minister of health, during a cannabis smuggling operation (Mokhethi and Ntaote, 2018). This has been in line with the study findings that due to the country's increased demand and bigger transaction volumes, traditional marijuana growers mostly focus on the South African market; local sales are more restricted and involve lesser quantities. Local and regional markets have different prices and payment options. Local sales often involve fixed prices and cash transactions, but bulk sales in South Africa entail price negotiations and cash payments. Cultivation procedures are influenced by concerns about personal use and legal implications. The tension between cultivating methods and regulatory frameworks is highlighted by the fact that some cultivators restrict their operations in order to stay out of trouble with the law.

It is clear that in spite of challenging circumstances, Bela-Bela traditional marijuana farmers mostly rely on their human and natural capital to support their livelihoods. The necessity to deal with legal concerns, restricted access to formal markets, and climate change all influence their actions. While cooperation and diversification are important tactics they use to deal with these issues, the overall effects of illegality and environmental concerns still provide major hurdles.

In accordance with the political economy of agriculture framework, the study illustrates how Bela-Bela traditional marijuana growers manage a complex combination of economic pressures, regulatory constraints, social dynamics, and environmental issues (limate change/ weather conditions). The wider structural problems, like the illegality of their activities and the effects of climate change, provide substantial obstacles in spite of the reliance on human and natural capital. Their cooperation and diversification tactics show how they have adapted to these difficulties, but they also highlight how important it is to have supportive governance and policy frameworks in order to increase their sustainability and resilience.

According to the literature (Bloomer, 2009), illegal cannabis growers face a number of difficulties, including unpredictability in the market and legal threats. The risks mentioned are apparent in Bela-Bela, where traditional marijuana growers have to contend with the possibility

of raids and legal repercussions. This is consistent with Bloomer's research on the unstable character of illegal cultivation and how it affects the community's means of subsistence. The difficulties that both traditional and small-holder farmers in Bela-Bela experience are a reflection of observations about the effects of illicit farming on community well-being. The insufficient support from the cannabis production project and the evolving threads for marijuana growers reflect issues raised by Bloomer (2009).

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The study findings show that in order to avoid being discovered by the authorities, some cultivators choose to travel on foot as well as to using modern modes of transportation like vehicles and donkeys. The various needs and limitations that growers face are reflected in this diversity of transport. Free State is the best place to sell marijuana because of its close proximity to the border and the benefits it offers in terms of logistics and law. To mitigate the hazards associated with illicit transportation, cultivators utilize a range of tactics, such as targeted market selection and discrete delivery techniques, and planting other crops besides their cannabis such as maize to hide it. This aligns with the literature that it is also common to intercrop with other food crops, such as maize and beans (Bloomer, 2019).

### 4.10.2. Expectations of Illegal cannabis Producers

What was actually delivered by the project does not align with the expectations of the local community and farmers. Many believed they would have a good chance of finding work and that

their current farming abilities would be put to use. They discovered, to their dismay and regret that the hiring procedures did not live up to their expectations. The discrepancy between the medical cannabis project's projected and actual results is consistent with Bloomer's explanation of how outside projects may fall short of local demands and implications, particularly when expectations and community involvement are not sufficiently taken into account.

The literature suggests that low job creation potential is due to value chains, which are inclusive of traditional marijuana growers who are not part of the emerging industry (Gobbi, 2022). This is apparent in Bela-Bela as the study findings show that because of a mismatch in expertise and cultivation methods, the cannabis project does not involve local producers. Furthermore, The 2019 African cannabis report revealed that Lesotho's cannabis industry was projected to be worth about $29m by 2023, yet the local farmers who cannot afford licenses are left out of the growing industry (Mbuyisa,2023). This comment emphasizes how medical cannabis production differs significantly from traditional marijuana cultivation in terms of requirements. However, it appears that the traditional marijuana growers believe that their current skill set should have been adequate or that they ought to have been given the chance to close the gap through vocational training or employment.

The literature highlights that local farmers and community members are given a chance to produce and sell their agricultural produce to the company and its employees as a way of giving them support (Abate, 2020). However, this has not been the case in Bela-Bela as there has not been any kind of support given to local farmers as they had anticipated. The training did not live up to the expectations regarding skill improvement. This reveals a discrepancy between the project's actual execution and the expected support for local farmers. A small number of local farmers were temporarily employed during construction, which does not adequately meet the requirements or expectations of the local farmers, in terms of training or possibilities for up skilling.

The study findings revealed that the local farmers anticipated support and job openings immediately. Frustrations and conflicts have resulted from the delay in offering support and training, as these expectations were not immediately fulfilled. Although the project emphasizes that training will not take place until the company generates a profit, it does acknowledge the

promise of future training. As a result, there is currently a disparity between the project's stated goals and their actual accomplishment. This links with the literature that emphasizes that “Green rush” growers, which are described as large-scale cannabis cultivation projects have led to divisions among small-holder traditional cannabis growers in rural areas, thus rejecting the restoration movement culture of some rural areas (Kelly, 2020).

### 4.10.3. Extend to which Cannabis Legalization Benefited or Disadvantaged Illegal Cannabis Production

The project coordinator highlighted that the viability and efficiency of cannabis cultivation are greatly increased by the availability of vast land expanses, cheap labor, an abundance of water supply, and a warm environment. The fact that local offices are receiving cleaning services suggests a beneficial but restricted direct community benefit.

Creation of business opportunities for local people is another linkage between medical cannabis production and rural livelihoods (Abate, 2020). This resonates with the study findings which highlight that during the construction period, the project created quite a few job opportunities, boosting the local economy and giving members of the community a temporary source of income. This covers both direct and indirect jobs, such as sales of food and snacks.

The research findings indicated that the medical cannabis company has worked hard to train staff members' skills by providing them with external training chances, structured workshops, and on-the-job training. These training initiatives have addressed the initial shortage of local knowledge and equipped staff members with the necessary skills for processing and growing cannabis. This is in accordance with the literature that emphasizes that in the cannabis industry, knowledge and technology transfer do not only refer to equipment, but also refers to a very broader range of elements which comprise whole systems together with their constituent parts, which are inclusive of know-how, goods and services, equipment as well as organizational and managerial procedures (Stiglitz, 2017 & Gobbi et al, 2022).

Although the training has improved the skills of the staff and might have long-term advantages, the wider effect on employment creation and retention is still an important aspect to monitor. The acquisition of these skills is a start in the right direction toward creating a trained labor force for

Lesotho's cannabis sector, but its full potential will depend on the project's continued expansion and success.

The medicinal cannabis project has taken part in a number of charitable initiatives, such as organizing events for orphans, delivering food parcels, and stocking low-income houses with foodstuffs. These initiatives provide a constructive method for engaging and supporting the community. Unfortunately, there are gaps in the knowledge and communications surrounding the social assistance initiatives, since some people of the community are unaware of the entire scope of the support offered. The assistance's irregular nature may further restrict its longer-lasting and wider effects.

The medical cannabis project has had a mixed effect on the development of the community's infrastructure. While some residents have noted improvements to the roads and bridges that lead to the project site, others have not noticed any notable changes to the community's overall infrastructure. The project has made significant investments in environmental services, job creation, and staff education as part of its CSR initiatives. However, the literature indicates that clearly the medical marijuana industry does not generate many new jobs, even though they are jobs that offer relatively descent working conditions Gobbi (2022). The general population's perception of a lack of direct infrastructure development, however, points to a discrepancy between the project's purported benefits and actual community experiences.

The project is regarded to have caused conflicts and created divisions in the community, primarily because of disagreements over employment methods, perceived unfairness in benefit distribution, and a lack of compensation for lost land. Conflicts and disruptions to communal harmony have resulted from these issues. These study findings resonate with the literature highlighting that while the nascent licit medical marijuana industry may well provide job opportunities and some benefits to some individuals, the general changes taking place seem to be far more related to long-standing process of capital accumulation, together with elite capture of land, and labour (Bloomer, 2019). The project's disruption, which includes farmland loss and inadequate pay, has a detrimental effect on the livelihoods of local farmers and other community members who depend on farming and animal husbandry.

The study findings revealed that significant obstacles pertaining to conflict and community relations have been encountered by the local community. The primary problems are disagreements over recruiting procedures, insufficient compensation for land loss, and perceived unfairness in benefit distribution. In an attempt to settle disputes and maintain peace among members of the community, the project coordinator has addressed concerns through the use of "Pitso" and discussions. Although there are initiatives to mend fences and resolve complaints, the efficacy of these actions is disputed, and some community members believe that their issues are still unaddressed.

Reduced profitability and increased operating costs are the effects of operating in an emerging industry and requiring external expertise. The project's performance in the market is impacted by the intense competition it encounters from well-established international companies. Relations between the project and the local community are strained as a result of the failure to live up to promises made regarding community development. As a result, there is now less trust and more discontent among leaders and community members.

Cannabis production adds to the ecological damage, it might get existing plant life for extension free from cultivating, possibly bringing about deforestation, backwoods discontinuity, wetland misfortune, soil disintegration, and effects on delicate environments (Butsic, 2018,Wartenberg et al., 2021). This connects with the research findings highlighting that the contamination caused by the construction materials that were abandoned reveals shortcomings in the project's environmental management. This problem influences not just the surrounding environment but also the project's negative perceptions.

### 4.10.4. Dynamics of Interaction Between Legal and Illegal Producers

A number of community members (CMs) voiced their disappointment with the project's method of acquiring land. The project did not provide the community a proper introduction. Rather, agreements were reached via local authorities like the chief and the council member, and landowners were contacted one-on-one, frequently without calling a formal community gathering (Pitso). In the context of medical cannabis projects, written agreements and community engagement are important, according to recent studies. Effective community participation and open communication are essential for cannabis projects to succeed, according to a report by

Kritzinger (2021), particularly in areas like Lesotho where local stakeholder involvement and land rights are major concerns. The limitations identified in the above mentioned study are reflected in the absence of official community gatherings and direct contact with landowners, as reported in the study findings.

Reasonable compensation and clear legal guidelines are necessary for medical cannabis projects to be legitimate, according to a 2023 report published by the Lesotho Medical Cannabis Association (LMCA). The study findings show that insufficient remuneration and unofficial agreements caused a great deal of suspicion and resistance from the local community.

The difficulties encountered by cannabis projects in Lesotho are examined in a recent study by Matlosa and Moteane (2022), with a special emphasis on problems pertaining to local government and community representation. It emphasizes how decisions taken in the absence of thorough community consultations can harm a project's chances of success and create negative perceptions in the community.

According to a research by the Lesotho Development Fund (2023), if there is no official mechanism in place to enforce agreements, unmet promises in developing industries like medicinal cannabis can cause disputes and discontent. This is consistent with the community's worries that the project has fallen short of expectations since official agreements and oversight procedures are lacking.

The community's objections regarding inadequate compensation bring to light a prevalent problem in agricultural operations wherein economic advantages are not dispersed fairly. One essential element of the social contract that exists between communities and development projects is fair compensation. Resistance and a loss of confidence may result if the compensation falls short of the community's requirements or expectations.

### 4.10.5. Key Recommendations

The literature indicates that due to seasonal fluctuations in cannabis prices, it is difficult for farmers to estimate incomes to be generated in future with a degree of any certainty (Bloomer, 2009). However, the study findings highlighted that farmers in Bela-Bela feel that because they already have farming experience, they need to be part of the cannabis endeavor so as to improve

their livelihoods from cannabis production. Whether or not they are actively involved in the production of medicinal cannabis, there is a great desire for support in the form of tools (pesticides, fertilizers) and training to boost their production. The project needs to carry out its objectives for development and incorporate skilled locals.

To make sure that commitments are honored and to address concerns about fairness in hiring procedures, community supervision is being called for. To guarantee that community needs are fulfilled, the inclusion of a community representative in project management is considered essential. Emphasis is placed on eliminating high license fees for marijuana production and providing training for local community to produce marijuana products and sell them.

Sustainability and advantages are said to depend on growing the sector to generate more employment and honoring early commitments to community development. The councillor makes the suggestion that going on strike could be required to guarantee that the industry's advantages are felt. Future employment growth, community development through promised measures (training, local infrastructure), and economic stability through increased business and job creation are all anticipated by the project coordinator.

### 4.10.6. Summary

This chapter presented the study findings. The participants' responses have been used to support the study's research questions and the reviewed literature. This study endeavored to explain how the medical cannabis industry impacts the livelihoods of rural communities. This phenomenon was examined and explored through conducting in-depth interviews at Bela-Bela and conclusions were drawn based on the methodology used.

# CHAPTER 5

## Summary, Conclusions and Recommendations

### 5.0 Introduction

The study results have been presented and discussed in chapter 4. This chapter presents the summary of findings, conclusions, recommendations of future research in relation to the study's objectives which are explained in chapter 1 of this study. This chapter also sets out on the study's limitations and future research area. The study's objectives were:

- To understand the importance and risks of illegal cultivation of illegal cannabis in the livelihoods of farmers in the area of Bela-Bela.
- To find out the expectations of illegal cannabis producers when the production of medicinal marijuana was legalised.
- To find out the costs and benefits of the legislation of marijuana to illegal cannabis producers in the area of Bela-Bela.
- To use the establishment of the Verve Dynamic project which produces medicinal cannabis in the Bela-Bela area as a case study to understand the cost and benefits of such a project to the illegal cannabis producers.
- To explore what recommendations can be made on how the legalization of cannabis can benefit farmers in the area of Bela-Bela.

### 5.1 Summary of Findings

The study examined how medical cannabis industry has affected local farming practices and local food security in Bela-Bela. The study revealed that due to lack of alternative employment opportunities, traditional marijuana producers at Bela-Bela significantly rely on marijuana production as their primary source of income. The significance of illegal operations in local economies where there are few legal options is demonstrated by this dependence. Climate change presents challenges for cannabis farmers, such as variable rainfall and high temperatures that lower crop output and sustainability. Some growers diversify their crops to include grains and vegetables as a risk management tactic against the unpredictable nature of marijuana production and the effects of climate change. They collaborate in marketing as well as and transportation so as to enhance their resilience.

The study's findings also demonstrate that, because the medical cannabis project is a distinct industry from traditional marijuana growing, it has not had a substantial impact on local farming techniques. But it has hurt farmers by taking away their land and paying them too little, which has reduced their general well-being and food security. Farmers were dissatisfied with the medical cannabis project's lack of skill development and job prospects, which left them exposed to the legal risks of growing cannabis illegally.

The study draws attention to disparities in the way the medical cannabis industry benefits certain groups of people while excluding small-holder producers. This makes the challenges that Bela-Bela's traditional growers already confront worse. Both traditional marijuana producers and small-holder farmers confront obstacles and missed expectations due to institutional failures and a misalignment between project goals and local needs.

The research study highlights more of the intricate dynamics of cannabis growing in Bela-Bela, such as its importance to the local economy, susceptibility to climate change, and effects of external projects like the medical cannabis effort. It emphasizes the necessity of comprehensive and encouraging strategies that more successfully address local livelihoods and sustainability. The study found that by giving preference to some groups over others and not offering just compensation for disrupting local customs, the project has deepened rifts among the community. Tensions and conflicts have arisen between the community's members and the project management as a result of this.

The project has generally stressed social cohesion, notwithstanding certain beneficial consequences like job generation. Community cohesiveness and trust have been weakened by problems including favoritism, low compensation, and cultural insensitivity. But Bela-Bela's traditional governance institutions have been steady, signaling that the project hasn't had a major impact on community leadership or decision-making procedures. This stability, though, also raises the possibility of ineffective involvement or integration with current governance frameworks.

The analysis demonstrated that the project had a detrimental effect on community resources. Land acquisition procedures are thought to be unjust and unclear, which causes disagreements

and insufficient payment. The community's natural, social, and maybe human resources have been diminished as a result.

The study also showed that although the Bela-Bela medicinal cannabis project has created some economic prospects, social cohesiveness and community governance have been severely hampered. Traditional production methods still perpetuate gender inequities, even if the medical cannabis sector in Bela-Bela shows improvement in this direction through defined responsibilities and training. In order to address these discrepancies, formal sectors' structured approaches and inclusive practices must be used to support community livelihoods that are sustainable and to advance gender inclusion.

The study uncovered that the community first believed that the medical cannabis initiative would have a major positive economic impact, creating jobs and chances for skill development. These hopes, though, have not really been fulfilled. The traditional growers expressed hope that their techniques will be improved by integration into the medical cannabis project. Discontent has been created and a discrepancy between community expectations and project outcomes has been brought to light by the inability to include local cultivators and provide the promised support.

The study also emphasizes how the project's operational standards diverge greatly from traditional farming practices, which causes confusion and unfulfilled expectations among members of the local community. As mentioned in the literature review, this disparity highlights how difficult it is to match formal medical cannabis industry standards with current local knowledge and customs. Several CSR initiatives, including skill-building for local staff members and support for regional economic growth, have been carried out by the project. Further assessment by the project is necessary to determine how well these initiatives satisfy community needs and improve relations.

The project hasn't given local community members many job prospects, despite initial promises. The project has not been able to reach its full economic potential due to operational and financial challenges, which has limited the planned improvements in rural communities. There is a need for long-term, sustainable social support because social assistance programs, such food packages for orphans and irregular events, have been patchy and insufficient to address long-term community needs. In a similar vein, not much infrastructure has been developed, with access

roads and bridges receiving the majority of attention rather than more general community requirements like neighborhood sports fields and utilities.

The project has resulted in environmental issues, such as contamination from leftover building materials causing shortcomings in environmental accountability and management. Furthermore, the emphasis on using outside skilled labor rather than nurturing local talent has further hampered sustainability and community advantages.

**5.2 Conclusions.**

In conclusion, the study results highlight that due to a lack of other options for employment, traditional marijuana producers in Bela-Bela mostly rely on the production of cannabis. These local growers have not reaped significant benefits from the medical cannabis operation, despite it creating some jobs. Rather, it has brought about economic challenges such as land loss and insufficient payment, which has made their food and economic security worse. Climate change presents serious obstacles for cannabis farmers, such as fluctuating rainfall patterns and high temperatures that impact crop production. In response, a large number of growers are increasing the diversity of their products and working together on marketing and transporting in order to reduce risks and strengthen their resilience. Traditional farming practices still sustain gender inequality, regardless of the medicinal cannabis project's improvements in gender equity and formal training.

Due to problems like discrimination, insufficient compensation, and cultural insensitivity, the project has exacerbated social divisions and weakened community cohesion. The community and project management relationships have become tenser as a result; however traditional governance mechanisms have not really changed. Issues with transparency, governance, and fair resource allocation have come to light during the project's implementation. Conflicts over the acquisition of land and inadequate compensation are a reflection of larger issues with the project's strategy for equitable stakeholder treatment and inclusive growth.

The project has not significantly advanced the development of wider community infrastructure and has instead caused environmental issues, such as contamination from construction materials. While there have been significant infrastructure upgrades, there are still unmet community demands, such as those for recreational facilities.

In general, the study emphasizes how challenging it is to integrate traditional production methods with the legal medical cannabis sector and emphasizes the necessity of taking a more inclusive and flexible approach to development that takes into account the demands and reality of the local community.

### 5.3 Recommendations

1.The government should review its policies on medical cannabis cultivation to ensure that medical cannabis projects establish a means for traditional marijuana growers to be actively involved in the medical cannabis project's development and execution. This could involve partnership agreements, advisory groups, and consultations to make sure their needs and viewpoints are taken into account.

Establish just and transparent land acquisition procedures, compensating impacted farmers fairly. This needs to include clear criteria for land use changes as well as comprehensive agreements.

2. The project should enhance environmental management procedures to deal with concerns such as material contamination from building materials. Conduct regular environmental assessments and set precise guidelines for trash disposal and safeguarding the environment. Implement sustainable development concepts in the project’s operations to reduce adverse effects on the environment and improve the welfare of the community.

3. Promote community-led projects and allocate funds or resources to community projects that improve the standard of living and promote solidarity within the community.

4. The medical cannabis project should manage conflicts and tensions that have arisen through communication and mediation, and rebuilt community trust by resolving complaints and showing dedication to equitable and impartial practices.

Provide a clear and accountable governance structure for the project that consists of techniques for community evaluation, frequent reporting, and clearly defined roles and responsibilities. Adopt decision making procedures that incorporate a wide range of participants, such as local farmers, community leaders and project beneficiaries.

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**Appendix 1: Letter of Introduction**

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**DEPARTMENT OF DEVELOPMENT STUDIES**

Dear Sir/Madam,

**Re: Letter of Introduction Tsepiso Albertina Lenkoe (201702671)**

Tsepiso Albertina Lenkoe, whose student number is 201702671, is a Student at the National University of Lesotho where she has enrolled in the Masters Programme in Development Studies. She is currently undertaking her research for her dissertation which is entitled "Medicinal Cannabis Cultivation and Rural Livelihoods: The Case of Verve Dynamics Project in Bela-Bela". This research seeks to contribute to the overall knowledge on the extent to which the cultivation of Medicinal Marijuana in Lesotho is contributing to the main pillars of the NSDP, particularly, employment generation, and economic growth at the local level as well as the challenges it entails.The National University of Lesotho, through the Department of Development Studies, herein kindly requests that you assist her with information that he needs for the completion of her research dissertation.

Please do not hesitate to contact me as her research supervisor if any further clarification is required.

Yours Sincerely,

Setšabi Setšabi

(Senior Lecturer, Development Studies and Research Supervisor).

**Appendix 2: Traditional Marijuana Cultivators**

- Who are the primary cultivators of marijuana? (Men, Women, Youth).
- What are the key motivations for cultivating marijuana?
- Where is the market for the marijuana produce (is it sold locally or or to places outside the Bela Bela area, including South Africa)
- How much of the produce is sold locally?
- How much of the produce is sold outside the area of Bela Bela?
- How is it principally sold? (e.g in match boxes or other).
- How is it transported to the market? (do buyers come from afar or do they use their own transport such as cars, horses, donkeys)
- When is marijuana planted? When is it harvested? How is it processed for the market? (e.g. the different types/grades, and the drying processes)
- How are prices negotiated?
- How are disputes resolved?
- Are Sales in cash or kind or through credit?
- What were/are the key risks faced by marijuana producers?
- How are the risks mitigated?
- Where and how is illegal marijuana cultivated? (is it cultivation in the fields, in the garden or in the mountains?
- How much land has each grower dedicated to marijuana production?
- How many harvests do they make per year?
- Explain the marijuana production process from cultivation to harvest (what are the key activities involved?) – how the marijuana is planted, how it is cared for, are there any insect pests, is there need for weeding (ho hlaola), how is the plant harvested and dried? Are there any variations in the types of marijuana that are planted.
- How often do illegal marijuana growers get raided by the police and the military each year? Can they explain in detail the nature of the raids. Have the raids just focused on the fields or have they involved house searches?

- Do the marijuana growers grow the crop individually or are there areas in which they cooperate with each other?
- How has climate change affected the production of illegal marijuana?
- Has the production of illegal marijuana increased or decreased over the last 10 years – please explain your answer.
- Those who transport marijuana to South Africa, how frequently do they do that? To what areas of South Africa do they send their produce?
- On average how much money do they make when they sell marijuana to South Africa on each trip?
- What were their expectations in relation to the coming of the marijuana producing project?
- Were their expectations fulfilled and if not why not?
- What do they think needs to be done in order to help them participate in economic growth through marijuana production?

**Appendix 3: Local farmers**

- How did farmers/local population anticipate that they would participate in the marijuana production process?
- What has been their experience? (in relation to their expectations)
- What have been the main benefits?
- What have been the main challenges/disadvantages?
- How can the situation best be addressed so that local benefits are maximized?

**Appendix 4: Questions to the Community Members**

1. **In what ways have relationships in Bela-Bela area been impacted by the medical cannabis industry?**
    - Do you think the cannabis project has brought the Bela-Bela community closer together or it has created more divisions? Why?
    - How have you been affected by the implementation of the project?

- Were any of your fields used by the project?
- How has the cannabis project affected how you are expected to act and behave, and how you make decisions in your community?
- What were the expectations of the community members when they were first told that there would be a marijuana project that would be locating in their area?
- How were members of the community approached by the Project when they requested their farms? – was there a pitso? Did they volunteer to give their fields to the project? Were they forced to join the project? Were there any specific payment arrangements and if yes they must be explained.
- What specific procedures were followed in the acquisition of fields for marijuana production?
- What specific agreements were made between the Cannabis project and the community with respect to cannabis production in the area?
- Were the expectations of the community members met? Explain why they were not met.

2. **What have been the positive spinoffs and negative impact of medical cannabis industry on local communities in Bela-Bela?**
    - What benefits have you gained from the medical cannabis cultivation project?
    - What initiatives have been undertaken by the project to improve your livelihood?
    - What challenges have you encountered that have been brought by the cannabis cultivation project?
    - Have you seen any changes in the way community rules are enforced since the introduction of the project?
    - How can you say the project has improved Bela-Bela community?
    - Have you been provided with any kind of skills training by the project?

3. **Focus Group Discussions**

- What different roles are played by men and women in the medical cannabis industry?
- How has the medical cannabis industry affected men and women behaviors and attitudes within the community?
- Has the project given any social assistance to poor households within the community?
- What are the assets, income, and employment opportunities of community members?
- How has medical cannabis production affected the livelihoods of community members in Bela-Bela?
- What impact do you think the medical cannabis cultivation project has had on job creation within the community?
- Has there been any improvement on your community infrastructure since the project implementation?
- What do you think should be done to ensure that the medical cannabis industry is more sustainable and more beneficial to the community?

## Appendix 5: Expert Questionnaires

- What is the name of the company?
- Is this primarily a Lesotho owned company or does it involve investors from outside the country?
- What are the main products that are produced by the company in the area of Bela-Bela?
- The company is expected to generate a lot of income and create jobs, has that happened?
- Are the employees predominantly from the area of Bela-Bela?
- What are the arrangements, if any, of involving the community in the production of medicinal marijuana?

- What are the particular advantages of having located the marijuana production enterprise in Lesotho and in the area of Bela Bela in particular?
- What are the key challenges that have arisen in the production of medicinal marijuana in the area of Bela Bela?
- Are the main markets of your products in Lesotho or outside the country? Please explain.
- How can you summarise your relations with the local communities?
- How do you propose that the company can better improve your relations with the local communities?
- How do you think your project has changed the livelihoods of small-holder farmers and the community at large?
- What do you see as the project's future on the livelihoods of Bela-Bela community?
- What do you see as the future of the marijuana industry in Lesotho?
- What are the key opportunities and challenges around investing in the cannabis industry in Lesotho?
- What arrangements did the project make with the farmers when the project acquired their fields?
- Why is the cannabis firm not engaging local cannabis producers in their cannabis production?
- What were the expectations of the project in terms of their relations with the local community?
- Does the project have any Corporate Social Responsibility activities? If yes please explain. If no please explain why not.
- How does the project think its relations with local cannabis producers can be improved?
- How does the project think relations with local community can be improved?