

# **ZAMBIA NATURAL HONEY PROJECT**

**OCTOBER 2019**

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## I. Executive Summary

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The Zambia Natural Honey Project (ZNHP) falls under the honey sub sector, which is among other priority areas, which have been identified by the Government of the Republic of Zambia (GRZ), to drive the diversification of the economy. GRZ is putting in place both fiscal and non-fiscal incentives and measures in a bid to attract investors and grow the honey sub sector.

The ZNHP will entail the establishment of a modern honey processing plant at the Lusaka South – Multi Facility Economic Zone (LS-MFEZ) in Lusaka, Zambia. The honey processing plant will produce an average of **5,000 tonnes of natural organic honey per annum**. The main driver of the ZNHP is the increasing demand for natural honey in Zambia and globally. The GRZ has signed a Memorandum of Understanding with China to supply organic honey. To date, small quantities have been exported, which also presents opportunities to the ZNHP to fill the gap since there is a ready market. In addition according to the European Commission Report, April 2019, it is reported that European Union, which is the largest importer of honey, has an annual deficit of about **153,000 tonnes** of honey. This presents an opportunity for suppliers of honey since there is a ready and unmet demand. The timing of the project is therefore apt, given the prevailing high levels of demand for honey both locally and globally. In addition, the GRZ policies are supportive, labour is readily available and affordable and there is an abundance of raw materials (raw comb honey).

In the first five years, **60% of output will be for the domestic market in Zambia, with 40% being exported to the regional and international markets**. Off take agreements will be signed with major customers in order to guarantee a steady demand for honey. Similarly, supply agreements will be signed with suppliers of raw comb honey to ensure a reliable and steady supply of raw honey to the ZNHP plant for processing.

The total project cost is **US\$5 million** and a Private Investor is invited to invest in the project and provide the entire US\$5 million as equity finance. GRZ, through the Ministry of Trade Commerce and Industry (MTCI), Zambia Development Agency (ZDA), LS-MFEZ, Industrial Development Corporation (IDC) and Ministry of Livestock (MoL) will facilitate the investment and assist the Investor to establish the project. LS-MFEZ has set aside land earmarked for light industrial manufacturing and investors who establish manufacturing or processing plants on that piece of land qualify for incentives such as tax exemption and assistance with market linkages.

The project is expected to generate an average annual turnover of **US\$9.88 million** during the first five years, with the gross and net profit margins projected to average **53% and 25%** respectively. The Internal Rate of Return (IRR) is projected to be **36%** and the payback period of **4** years. The project will employ 100 full time staff, 40 seasonal workers and create employment to many traditional beekeepers.

The project will be **completed in 12 months**.

## II. Project Description

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### A. Background and Overview

The ZNHP entails the establishment of a modern processing plant at the LS-MFEZ by a Private Investor at a total cost of US\$5 million.

The project is largely dependent of the abundance of raw materials, mainly raw comb honey, which is produced in large quantities in Zambia. Most of the raw comb honey is produced by traditional beekeepers mainly in North Western Province, which produces about **30,000 tonnes per year**. Other provinces where there is honey production include, Northern, Central and Western Province areas of Mpika, Mbala, Chinsali, Isoka, Kaoma, Kabwe and Kapiri Mposhi. It is estimated that Zambia has at least **20,000 beekeepers and above 6,000 honey hunters**.

Most of the beekeeping in Zambia has been done for substance purposes but GRZ in collaboration with other agencies such as ZDA, MCTI, MoL and Zambia Honey Council (ZHC) is stepping up efforts to grow the sector and create efficiencies in the production and supply of honey. Apart from raising export earnings and helping to diversify the Zambian economy, it is the belief of GRZ that promoting beekeeping will alleviate poverty for a large number of Zambians, as well as help protect the environment through an enhanced biodiversity. In view of these positive socio-economic externalities, GRZ is promoting private sector investments in the honey sub sector.

GRZ will provide necessary support and incentives to investors in the honey sub sector, which include trade facilitation. For instance, in order to facilitate exports of honey to the regional and international markets, **GRZ will facilitate the removal of tariff and non-tariff barriers**. Tariff barriers relate to taxation (duty) that exporters are subjected to when exporting honey. Exports of honey from Zambia are exempted from duty provided the exporter produces a **Certificate of Origin** to confirm that the honey is wholly obtained or produced from Zambia. GRZ, through Zambia Revenue Authority (ZRA) will ensure that certificates of origin are issued seamlessly to the honey exporters. Non-tariff barriers relate to barriers associated with the quality of honey, packaging, traceability and health aspects. GRZ is committed to work closely with investors in the honey subsector to ensure that all non-tariff barriers are addressed in order to facilitate trade and exports of honey.

The honey sub sector presents lucrative investment opportunities to investors, given the increase in the global demand for honey, which is primarily underpinned by health considerations. On the regional and international markets, Zambian honey is being exported to various countries such as the EU, US, France, Botswana, Italy, South Africa and China.

## B. Product/service description

The ZNHP will produce natural organic honey for the local, regional and international markets. The organic honey has many health benefits and it is on high demand. There is a premium price available to suppliers of organic certified honey, which is in especially strong demand within the EU and China. The project will source its raw comb honey from selected trained traditional and commercial beekeepers who will meet specific set production standards such the supply of raw comb honey free from antibiotics and pesticides. Overall, the project will ensure that no antibiotics are used at any point in beekeeping and honey harvesting and the product will be sourced from remote areas far removed from Commercial Agriculture in order to ensure that the product is untouched by any pesticides and fertilizer use.

Since some of the honey will be exported to the EU, China and other regional and international markets, there is need to ensure that it meets stringent quality specifications. For instance, most EU consumers prefer light coloured honey varieties with a mild taste. According to the Zambia Honey Strategy (December, 2006), Zambian honey is of superior quality. However, some of the honey produced in Zambia is often dark and has a strong taste. This is partly due to lack of modern production materials and poor traditional harvesting techniques, which result in dark or semi-dark honey. The ZNHP will train its suppliers on modern production techniques in order to ensure that high quality, light coloured honey with a mild taste is produced.

During the first five years, the project will focus on the production of natural organic honey only. However, after five years of operation, the project will consider expansion into the production of beeswax (used for candles, floor polish etc), propolis (used as natural medicine), and industrial honey (used by bakeries and food processors as natural sweeteners) in order to take advantage of the entire honey value chain.

In order to ensure steady supply of raw comb honey to the processing plant, supply agreements will be entered into with beekeepers and other honey suppliers. Beekeepers will be organised in **Beekeepers Collectives or Clusters (BC)**. ZNHP will then educate members of the various BCs on modern beekeeping and honey harvesting techniques as well as provide them with equipment such as buckets and drums for collecting honey and protective clothing together with other necessary accessories. Supply agreements will then be signed between ZNHP and various BCs to ensure stable supply of honey to the processing plant, in terms of both quality and quantity.

The project will target to produce **5,000** tonnes of natural organic honey per annum. The honey will be packed into branded glass containers of 250 to 500 grams with a metal screw cap, for the local market. For regional and international markets, bulk honey will be shipped in 205 or 210 liter steel drums, which must be of good quality and coated with food safe paint, clean and moisture proof.

The honey earmarked for the regional and international markets will have organic certification. Zambian organic certification is issued by **Organic Producers and**

**Processors of Zambia (OPPAZ).** Since honey production in Zambia, in general is naturally free from contamination and fertilizer use and given that ZNHP will train its suppliers on modern techniques of organic honey production, it is envisaged that the organic certification process will not be a challenge.

### **C. Project delivery and plan**

#### **Project delivery**

The ZNHP will be implemented through a **Special Purpose Vehicle (the Company)**, which will be owned by Private Investors or a single Private Investor.

The first step towards the project delivery is the incorporation of the Company, with the Patents & Companies Registration Agency (PACRA). This will be followed by registration with Zambia Revenue Authority (ZRA) for tax identification number and obtaining of all relevant permits to operate a honey processing plant. This process normally takes two weeks. It is therefore imperative for all legal incorporation documents and licenses and permits for the Company to be in place before the project is operationalized.

The ZDA will also play a part in facilitating the delivery of the project through the issuance of investment licence to the Company. In order to access certain incentives such as tax exemptions and rebates, a company registered in Zambia is required to obtain an investment licence from ZDA. This process takes an average of 3 weeks.

Zambia has stringent regulations pertaining to the environmental issues. The regulatory authority charged with the responsibility of protecting the environment called the Zambia Environmental Management Agency (ZEMA) has to give a no objection decision towards the implementation of the project. This process normally takes a maximum of two weeks. Therefore, an Environmental Impact Assessment (EIA) has to be undertaken at least two weeks prior to the actual project implementation. The EIA is an assessment of the impact of the project on the environment particularly pollution of the water and air before physical implementation can commence. A detailed account of the processes should be given as it relates to the efficacy of the project, the process of waste management as well as the safety of the processes to the environment.

The expected time frames for executing the Honey Processing Project is 12 months as outlined on Fig 1 below.

**Fig 1: Project Implementation Time Frame Table**

Item	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Company Registration and EIA												
Procurement of materials												
Construction work												
Installation of equipment												
Hiring of staff												
Staff Training												
Sensitization of suppliers												
Buyer Relationship initiation												

The production process will commence after 12 months and when the commissioning of the processing plant is complete.

As the construction works are being undertaken, off take agreements will be concluded with the distributors and buyers of honey, before commencement of production.

In addition, beekeepers will be engaged for sensitization about the project, training, capacity building and signing of supply agreements.

#### **D. Technology and equipment considerations**

The technological and equipment requirements should be considered for the entire honey production value chain starting with beekeeping and honey harvesting all the way to actual honey production in the plant.

## **Beekeeping and honey harvesting**

The first stage in honey production is beekeeping and raw comb honey harvesting. Most beekeepers in Zambia utilize simple traditional techniques and equipment and have little or no protective clothing. This implies that more smoke has to be used when harvesting the honey from the hive, often leading to a smoke-tainted taste, which is very difficult to sell outside local Zambian markets. In addition, most of the honey that is produced is kept in traditional bark hives or log hives. These hives have several inferior properties compared to more modern equipment such as the top bar hive and the frame hive, as outlined below:

### **Disadvantages of traditional bark hives**

- **Lower capacity** – The capacity of a bark hive is lower as it can only produce a maximum of 25kg of honey, compared to the top bar hive which can produce up to 45 kg of honey.
- **Shorter life span** – The bark hive has a shorter life span of 3-4 years compared to the top bar hive which can last for a lifetime if properly maintained.
- **Lower mobility** – The bark hive is not as mobile as the top bar hive which can be moved to different locations in order to follow flowering and thereby maximizing the production.

In addition, the construction of bark hives requires that a tree is debarked, leading to its death (deforestation). The deforestation ultimately directly affects the beekeepers as the trees that are used for this purpose are often the same trees that the bees feed on in order to produce honey.

The project will supply selected beekeepers in BCs with appropriate equipment and accessories such as protective clothing, top bar hives, press and separation tables, buckets and drums for collecting honey as well as centrifuges. This is intended to increase the yields and quality of honey to be delivered to the processing plant.

### **Production Factory**

The actual processing of raw comb honey into natural organic honey will be done at the plant located in LS – MFEZ. The equipment used includes modern honey processing machines and plant. The ZNHP will produce organic and non-pasteurized honey. This will be done through the use of a centrifugal extraction method, which results in pure and smooth honey that meets the highest standards in the world and maintain the healthy bioflavonoids, enzymes and nutritious elements that are typically lost in the pasteurization process.

The equipment for honey processing is readily available in overseas markets. ZNHP will either buy the equipment from China or any source with competitive prices, high quality and durable equipment. The Investors will choose the supplier of the equipment and will be responsible and involved in its procurement.



## E. Key staff of the project

The key staff that will oversee the project implementation and setting up of the project are shown on Fig 2 below.

**Fig 2: Key Project Implementation Staff**

Job Title	Institution	Key Responsibilities
Project Coordinator	ZDA	To ensure the successful implementation of the project and coordinate with all stakeholders.
Investments & Finance Expert	ZDA	To appraise the investment and assess the viability of the project and its returns to investors.
Legal Expert	GRZ	To advise on all legal documentation and agreements including incorporation of the company.
Trade Expert	MCIT	To ensure that all trade facilitation documents are in place, including to advise on applicable incentives.
Honey Production Expert	Private Sector	To ensure that all industry norms and standards are adhered to and to enforce quality controls.
Honey Sector Expert	ZHC	To coordinate with all relevant institutions in the honey sub sector and liaise with beekeepers and honey suppliers.

The key staff of the project will work closely with the GRZ to ensure that the project accesses all necessary incentives to facilitate its smooth implementation.

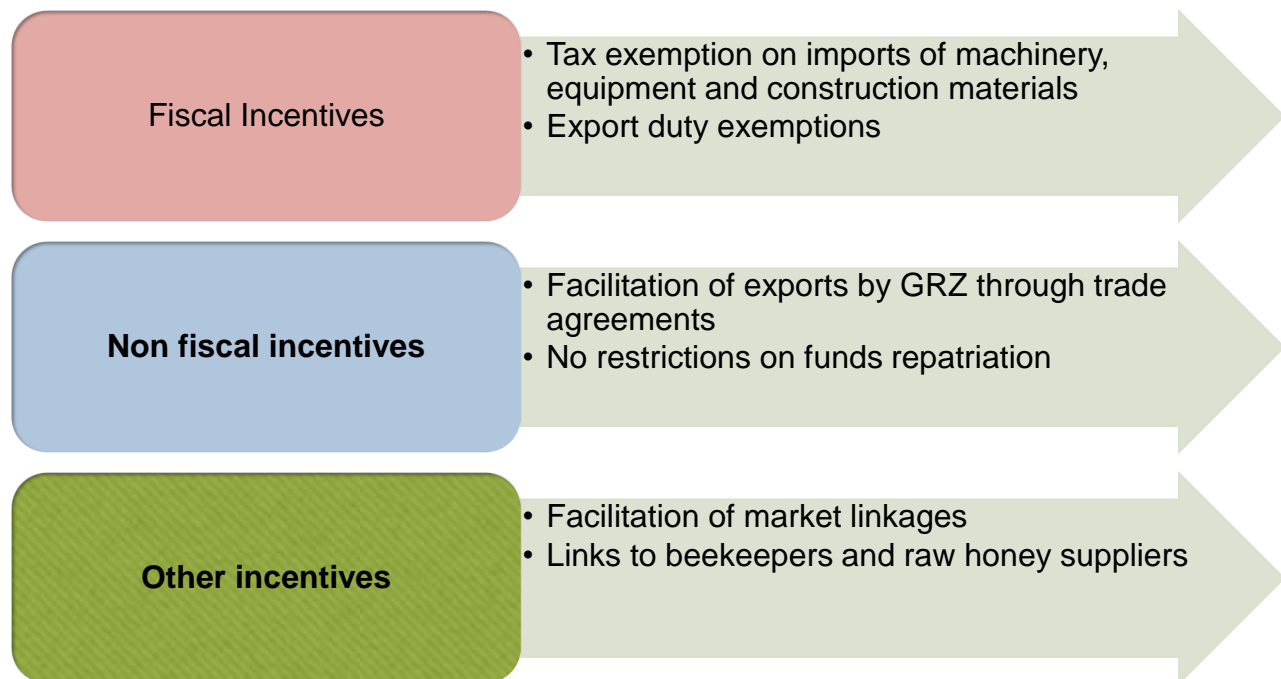
## F. Location and subsidiaries

The project will be located at the LS-MFEZ, which is about 20 km from Lusaka Central Business District (CBD). LS-MFEZ was established through Statutory Instrument No. 47 of 2010. The zone is one of the Special Economic Zones (SEZs) created to enhance investment, exports, job creation, and industrialization within Zambia.

LS-MFEZ is located in the South Eastern part of Lusaka and is accessible from all locations within the city, including the country's main international airport, the Kenneth Kaunda International Airport. The LS-MFEZ has been established as a mixed use development designed to promote manufacturing, exports, technology development, and skills transfer. Companies that establish branches at the LS- MFEZ will access certain benefits and preferential treatment from GRZ.

The location of the project at the LS-MFEZ is therefore strategic because the project will enjoy both fiscal and non-fiscal benefits as listed in fig 3 below.

**Fig 3: Benefits and Incentives of project location at LS-MFEZ**



The geographic location of Lusaka is also strategic because it allows the project easy access to other provinces for purposes of distribution of the processed honey to various markets countrywide. The road network that connects Lusaka and other provinces is also well established which facilitates easy transportation of raw materials (raw comb honey) and processed products through road.

The project will establish a warehouse in North Western Province for the collection of raw honey from beekeepers. North Western Province is an ideal site for the collection warehouse because it produces the largest quantities of raw honey in Zambia.

### **G. Organizational structure and staffing**

The organizational structure of the company will entail the creation of four departments as itemized below.

- **Office of the Managing Director** – This will include the Managing Director and Personal Assistants.
- **Finance Department** – The Finance Manager will head the department.
- **Operations & Trade Department** – The Manager Operations & Trade will head the department and it will include the Production and Trade and Marketing units. The drivers and casual/seasonal workers will fall under this department.
- **Administration Department** – The Administration Manager will head the department and it will include procurement and human resources units.

Overall, the project will employ an estimated 100 full time staff, spread across various departments as shown on Fig 4 below.

**Fig 4: Number of Employees per Department**

<b>Divisions</b>	<b>Number of Staff</b>
Office of the Managing Director	3
Finance Department	5
Operations & Trade Department	40
Administration Department	52
<b>Total</b>	<b>100</b>

The company will have a flat organizational structure that facilitates efficiency in terms of decision-making. The project will also employ 40 seasonal workers (part time).

### **Social Impact**

In addition to the full time employees, it is anticipated that the project will indirectly empower a large population of people mostly in rural areas through the beekeeping and honey production value chain. In urban areas, employment will be created for those involved in the distribution of processed honey. The project will therefore have a significant social impact in terms of employment creation and poverty reduction in Zambia.

People involved in beekeeping and honey value chain will also benefit in terms of access to annual training, capacity building and modern technology in beekeeping and honey harvesting.

### **H. Legal structure**

A Private Limited Company will be incorporated in accordance with the **Companies Act (No.26 of 1994) of the Republic of Zambia**. The company will have its own appropriate governance structure, which will include the Board of Directors and Management. The constitution of the board shall include representatives from the respective Private Investors. The powers of the directors as well as voting rights, together with all other standard legal covenants shall be contained in the company's Articles of Association.

In addition, if the project involves more than one Private Investor, all Private Investors involved will negotiate and sign a Shareholders' Agreement, in line with Standard Practice.

### III. The Investment Opportunity

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#### A. The Investment proposal

The ZNHP involves the establishment of modern honey processing plant at the LS-MFEZ in Lusaka, Zambia. The project will take advantage of the abundance of raw comb honey that is supplied by both traditional and commercial beekeepers in Zambia to process organic honey targeted for the local, regional and international markets.

It is envisaged that the project will address the existing and increasing demand for honey on the local, regional and international markets. The growing demand for honey is driven by a general rise in disposable income and wellness considerations, especially with the urban population. Honey has medicinal and health benefits and its demand has been increasing steadily over the years.

GRZ, through LS-MFEZ, will allocate 20 acres of land for the project site on a 99 years lease. The Private Investors will be expected to meet construction costs, acquisition and installations of the processing plant and all other project development costs. The total estimated costs for operationalizing the project are US\$5 million. The Private Investors will therefore be required to inject cash equity of US\$5 million in order to operationalize the project.

The Private Investors will benefit from both fiscal and non-fiscal incentives associated with setting up the honey processing plant at the LS- MFEZ location.

The project presents a lucrative opportunity to the investors because of the increasing demand and high prices for honey on the local, regional and international markets. It offers attractive returns, with an IRR of 36% and high growth prospects.

#### B. Required financing

The total cost for the project is estimated to be **US\$5 million** and the Private Investors are expected to provide equity finance for the project.

The breakdown of the US\$5 million total project investment is shown on Fig 5 below:-

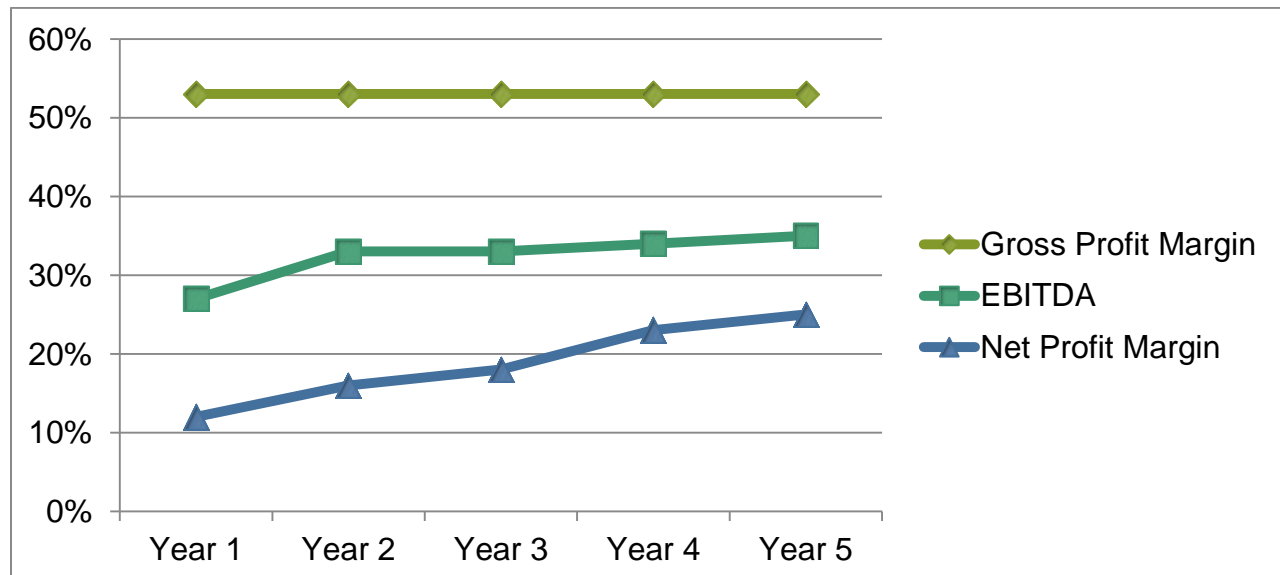
**Fig 5: Breakdown in the use of funds and investment**

Description	Amount (US\$)
Company registration, license fees, Environmental impact Assessment fees and other project establishment fees	100,000
Purchase of construction materials and payments to main contractors of buildings and processing plant infrastructure	2,500,000
Purchase of manufacturing equipment and installations, vehicles, factory and office furniture and equipment.	1,400,000
Working capital for purchase of raw comb honey and operational expenditure items.	800,000
Capacity building and equipment for selected beekeepers and honey suppliers	200,000
<b>Total Cash Required</b>	<b>5,000,000</b>

### C. Profit analysis summary

The Project will start generating profit from the first year of operation, with **net profit margins** rising from **12%** in year 1 to **25%** in year 5 and **IRR of 36%**. The project **Pay Back Period is 4 years**, with a **Discounted Cash Flow (DCF) valuation of US\$31,870,000** (using a discount rate of 12% which is the current cost of capital in Zambia) and a **Net Present Value (NPV) of US\$6,600,570**. Fig 6 below shows the trend on the project's gross and net profit margins over a period of five years.

**Fig 6: Gross Profit and net profit margins trend**



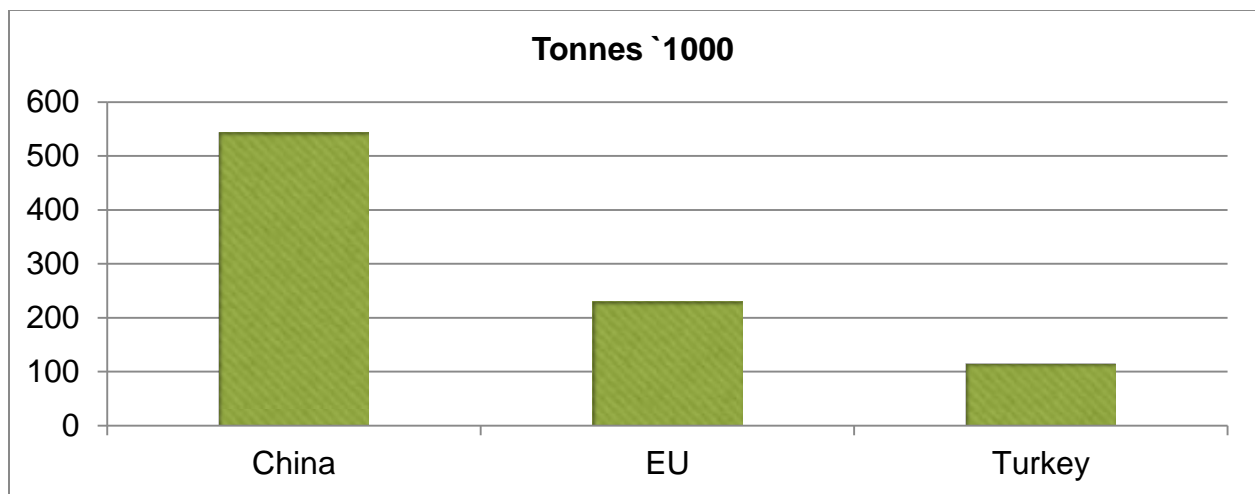
## IV. Market Analysis

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### A. High-level Industry Analysis

According to the European Commission Report, April 2019, China is the largest producer of honey in the World, followed by the EU and Turkey as shown on Fig 7 below.

**Fig 7: Top 3 Producers of Honey in the World**



In Africa, the major producers of honey are Angola, Ethiopia, Kenya and Tanzania as shown on Fig 8 below.

**Fig 8: Producers of honey from Africa**



Zambia is an upcoming market although on a global context, the production levels are still very low. There is therefore scope and potential to increase production levels and participate meaningfully on the global markets.

According to industry experts, Europe has in the last few years been experiencing a decrease in the bee colonies arising from bee diseases and intensive use of chemicals in agriculture. According to the European Union, the EU is only 60% self sufficient in honey production, with the deficit of 40% being filled by imports. This presents opportunities to ZNHP to export some of its products to the EU market.

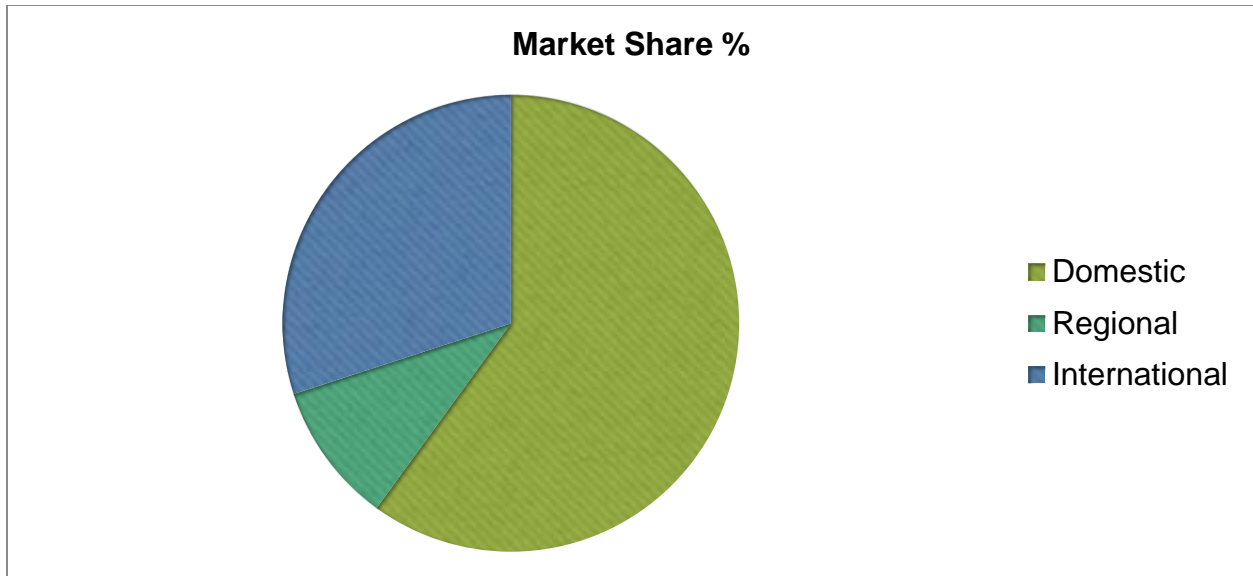
## B. Target Market of the project

The target market for natural organic honey is divided into three segments as outlined below:

- **Domestic Market**– Customers on the local Zambian market nationwide.
- **Regional Market** – Focus will be on regional countries with high levels of honey imports, namely South Africa, Botswana, Namibia, Angola and Democratic Republic of Congo
- **International Market** – This includes among others, China, EU, Germany, Italy and France.

The target market split in terms of percentages is 60% (domestic), 10% (regional) and 30% (International) as shown in Fig 9 below.

**Fig 9 : Market Share**



The domestic market has the highest share of 60% because it has many advantages compared to the regional and international markets. Some of the advantages include the following:

#### **Advantages of selling honey to domestic market**

- **Less stringent requirements** - The domestic market is less stringent in terms of the type of packaging used, honey specifications and other requirements. On the contrary, exporters are very particular on packaging type, specifications.
- **Less paperwork** – The domestic market does not require export documents and permits, certificates of origin as well as sanitary and phytosanitary requirements which are required for the export market.
- **Low transportation costs** – This is particularly a major challenge for international markets such as China, EU and USA. Since Zambia is a landlocked country, there is need to transport honey by trucks to the ports of Dar Es Salaam, Durban, Beira or Welvis Bay before shipping it to the respective customers on the international markets. Since all ports are at least 2,000 Km away from Lusaka, this presents a huge cost in terms of transportation which increases the costs of honey exports.
- **Possibility to sell in smaller quantities** – In the domestic market it is possible to sell small quantities of honey to various customers nationwide. On the contrary, regional and international customers often require a steady supply of large quantities of honey, which might not be possible to sustain during periods of low production volumes. In addition, due to economies of scale, it is often not viable to transport small quantities of honey for exports to the regional and international markets.



Notwithstanding the advantages listed above, the ZNHP will sell some of its honey to the regional and international markets in order to capitalize on the high prices obtaining on those markets as well as to generate foreign currency.

### **C. Competition**

The Competitors of the ZNHP are divided into three groups namely, Local Competitors, Regional and International competitors.

#### **Local Competitors**

Currently there are a few Zambian companies that are involved in honey production, with the major players being, Forest Fruits Limited, Mpundu Wild Honey, Mershearsles Enterprise, Kapendamabula and Adcorns Investments.

Forest Fruits Limited, whose brand is Zambian Gold Honey is the dominant player on the Zambian market. The main strength of Forest Fruits Limited is that they have a strong and wide distribution network and their products are affordable and have created customer loyalty. Their main weakness is that their capacity is small and hence they do not benefit from large economies of scale resulting in a premium price for their products. ZNHP will capitalize on large economies of scale and the linkages to be created in the entire honey value chain ranging from collaborations with beekeepers to strategic links with distributors, to produce high quality honey and sell it at a competitive to the customers.

#### **Regional and International Competitors**

The Regional competitors are mainly large companies mainly from countries in Eastern and Southern Africa.

International competitors include suppliers of honey from all over the world who export honey to the ZNHP`s target market.

The main strength of Regional and International competitors is their advanced processing plants, which result in high levels of efficiency, high quality products and competitive prices. Most of them are also large companies that enjoy economies of scale and hence they can afford to charge competitive prices for their products. In addition, they have established strong international distribution networks and branding for their products.

In order to compete effectively with competitors on the local, regional and international markets, the project will acquire and install state of art modern processing plant and pay particular attention to the quality of its products. The main differentiation strategy for the project will be anchored on quality of the products and the health benefits given that the products will be natural and organic.

## D. Target Market Strategy

The target market strategy is tailored to cater for the local market and the regional and international markets as outlined below.

### Local Market Strategy

On the local market, the project will target both retail and wholesale customers. The Project will target specific customers such as retail and wholesale and chain shops in the niche exports markets nationwide with more focus on the urban population. A strong distribution network of retail outlets, supermarkets, convenience shops and chain shops will be created.

Supply and distribution agreements will be signed with specific supermarkets for the supply of products and payment terms and conditions agreed upon.

The strategic positioning of the product will focus on the customers' needs and segments and on the product proposition, uniqueness and perception as shown on fig 10 below:

**Fig 10: Strategic Positioning of the Product**



### Regional and International Markets Strategy

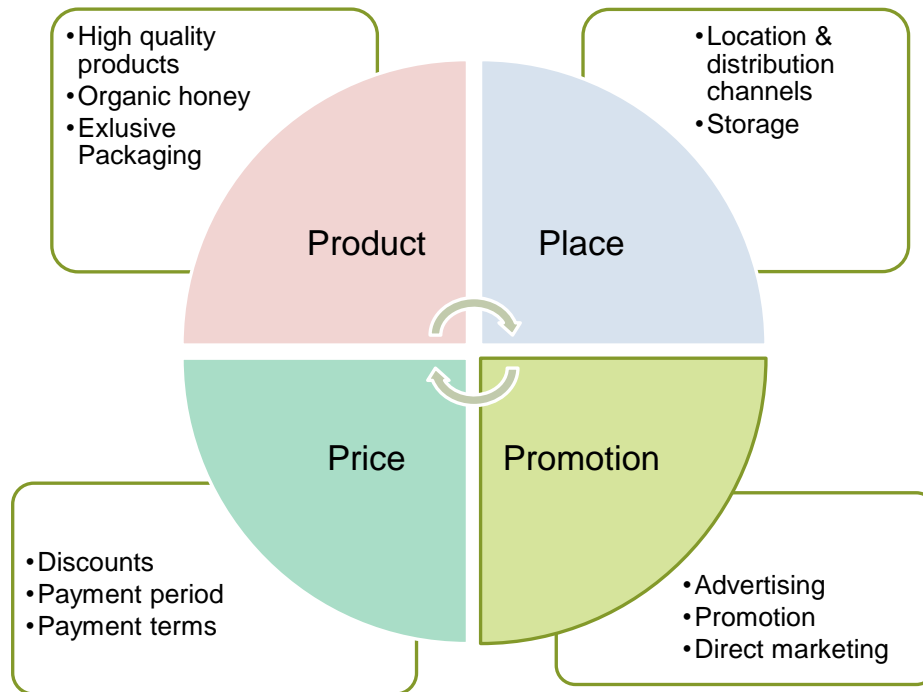
On the regional and international markets, the project will target mainly wholesale customers and brokers/agents. Off take agreements will be singed with customers and honey will be packaged to meet their respective specifications.

## E. Go-to-market approach

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The project's go to market approach and marketing strategies will address all 4 P's of marketing namely; Product, Place, Promotion and Price which are summarized on fig 11 below:

**Fig 11: 4 P's of Marketing**



### Product

The processing plant will produce organic honey that is non pasteurized and with light colour and mild flavor. The honey will be at least comparable in quality and packaging with the leading international brands that are currently on the market.

### Price

The products will be priced competitively in order to reflect their positioning as **true value for money products**. The price will range between US\$2,050 per tonne to US\$3,500 per tonne depending on the product specifications. Favorable payment terms (payment within 30 days from invoice date) will be negotiated and agreed with larger customers such as established supermarkets.

## **Promotion**

Different promotion strategies such as direct marketing, sales promotion and advertising will be used. The sales of honey will be conducted via a combination of personal sales efforts through direct marketing and selected brokers/agents. The use of brokers and agents will be pronounced during the first year of production in order to enable the project to penetrate the market and build a large customer base. In the future, from the second year onwards, the use of brokers and agents will be minimized because this strategy tends to reduce the products` profit margins.

Below is a list of the specific promotion strategies that the project will employ:-

### **(1) Classic advertising**

The products will be extensively advertised through placing advertisements on newspapers, television (TV), radio and billboards in order to achieve wide coverage.

### **(2) Public Relations**

This will be achieved through arranging for newspaper articles, TV and radio documentaries to be written and made on the project and its products. In addition, trade visits to the plant site at LS-MFEZ will be encouraged as a means of generating awareness and confidence.

### **(3) Direct Marketing**

This will include product sampling at various locations as well as distributing of flyers and other promotional material.

### **(4) Social Media**

The project will have a website as well as a Facebook page. The online platforms will be used to disseminate information such as serving suggestions and will also be used for online competitions and promotions. Use will be made of well-known personalities active on social media to create awareness and excitement around the products.

## **Place**

The products will be distributed widely and extensively to the target markets using the following distribution channels:-

### **(1) Direct distribution**

This involves direct deliveries to outlet selling throughout the main cities and towns in Zambia. This will be done using the company`s fleet of distribution vehicles.

## (2) Wholesalers and Agents

Wholesalers and agents are an important route to distribute the products to the mass market. Bulk wholesalers in selected areas will ensure that the project's products are available through this supply chain.

## (3) Chain stores

Chain stores include international supermarkets such as Pick and Pay, Spar, Choppies and Game Store. The chain stores will also be used as a distribution channel nationwide.

## F. Risk analysis

The main risks that can threaten the project and their mitigation solutions are outlined on Fig 12 below.

**Fig 12: Main Risks**

<b>Risk</b>	<b>Probability of Occurrence</b>	<b>Impact on Project</b>	<b>Mitigation Solution</b>	<b>Responsible Party for Mitigation</b>
Inadequate supply of raw materials for production (raw comb honey)	Low	High	Sign agreements with various beekeepers to ensure steady supply of raw comb honey.	Company
Poor quality of raw materials (raw comb honey)	Medium	Medium	Training of beekeepers on modern beekeeping and honey harvesting techniques	Company
Low production levels due to equipment breakdown	Low	High	On-site spare parts will be maintained along with a fully stocked maintenance shop at the factory.	Company
Low levels of demand and decline in prices	Low	High	Signing off take and future contracts with major buyers can mitigate this.	Company
High competition due to lack of barriers to entry	Medium	Medium	Establishing a large modern technology processing plant, which will produce competitively, can mitigate this.	Company

## V. Financial projections

The project's financial projections are summarized on Fig 13 to Fig 16 below.

**Fig 13: Fundamental Assumptions**

Target Market	Year 1	Year 2	Year 3	Year 4	Year 5
Exports (tonnes)	800	1,200	1,400	1,800	2,000
Domestic (tonnes)	1,200	1,800	2,100	2,700	3,000

The growth in production is in line with the estimated demand for the honey in the respective target markets.

### Average price and direct costs of production

Target market	Unit Cost per tonne (US\$)	Unit Selling Price per tonne(US\$)
Export	1,000	2,300
Domestic	1,500	3,050

**Fig 14: Projected Profit and Loss Statement**

<b>Projected Profit &amp; Loss Statement</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>All figures in USD</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
Revenue from sales	\$5,500,000	\$8,250,000	\$9,625,000	\$12,375,000	\$13,750,000
Cost of Goods Sold (COGS)	(\$2,600,000)	(\$3,900,000)	(\$4,550,000)	(\$5,850,000)	(\$6,500,000)
<b>Gross operating profit</b>	<b>\$2,900,000</b>	<b>\$4,350,000</b>	<b>\$5,075,000</b>	<b>\$6,525,000</b>	<b>\$7,250,000</b>
<i>Gross operating profit margin</i>	53%	53%	53%	53%	53%
Salaries	(\$707,000)	(\$857,460)	(\$939,558)	(\$1,083,933)	(\$1,159,661)
Fixed costs (Sales, General & Administration)	(\$710,000)	(\$763,500)	(\$1,005,267)	(\$1,172,000)	(\$1,338,234)
<b>Net operating profit (EBITDA)*</b>	<b>\$1,483,000</b>	<b>\$2,729,040</b>	<b>\$3,130,175</b>	<b>\$4,269,067</b>	<b>\$4,752,105</b>
<i>EBITDA margin</i>	27%	33%	33%	34%	35%
Depreciation	(\$625,000)	(\$1,125,000)	(\$906,250)	(\$710,938)	(\$533,203)
<b>Earnings before Interest &amp; Tax (EBIT)</b>	<b>\$858,000</b>	<b>\$1,604,040</b>	<b>\$2,223,925</b>	<b>\$3,558,130</b>	<b>\$4,218,902</b>
Tax due	(\$171,600)	(\$320,808)	(\$444,785)	(\$711,626)	(\$843,780)
<b>Net Earnings</b>	<b>\$686,400</b>	<b>\$1,283,232</b>	<b>\$1,779,140</b>	<b>\$2,846,504</b>	<b>\$3,375,122</b>
<i>Net Profit margin</i>	12%	16%	18%	23%	25%

**Fig 15: Projected Balance Sheet**

<b>Projected Balance Sheet</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>All figures are in USD</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash in bank	\$469,756	\$2,207,166	\$4,432,145	\$7,568,764	\$11,266,678
Accounts Receivable	\$1,055,342	\$1,583,014	\$1,846,849	\$2,374,521	\$2,638,356
<b>Total current assets</b>	<b>\$1,525,099</b>	<b>\$3,790,180</b>	<b>\$6,278,995</b>	<b>\$9,943,285</b>	<b>\$13,905,034</b>
<b>Long Term Assets</b>					
Property, Plant, Machinery & Equipment	\$4,375,000	\$3,500,000	\$2,843,750	\$2,132,813	\$1,599,609
<b>Total long term assets</b>	<b>\$4,375,000</b>	<b>\$3,500,000</b>	<b>\$2,843,750</b>	<b>\$2,132,813</b>	<b>\$1,599,609</b>
<b>TOTAL ASSETS</b>	<b>\$5,900,099</b>	<b>\$7,290,180</b>	<b>\$9,122,745</b>	<b>\$12,076,098</b>	<b>\$15,504,644</b>
<b>LIABILITIES</b>					
<b>Current Liabilities</b>					
Accounts Payable	\$213,699	\$320,548	\$373,973	\$480,822	\$534,247
<b>Total Current Liabilities</b>	<b>\$213,699</b>	<b>\$320,548</b>	<b>\$373,973</b>	<b>\$480,822</b>	<b>\$534,247</b>
<b>Long Term Liabilities</b>					
Long term debt	\$0	\$0	\$0	\$0	\$0
<b>TOTAL LIABILITIES</b>	<b>\$213,699</b>	<b>\$320,548</b>	<b>\$373,973</b>	<b>\$480,822</b>	<b>\$534,247</b>
<b>SHAREHOLDER FUNDS (EQUITY)</b>					
Paid in capital	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
Retained earnings	\$686,400	\$1,969,632	\$3,748,772	\$6,595,276	\$9,970,397
<b>TOTAL SHAREHOLDER FUNDS</b>	<b>\$5,686,400</b>	<b>\$6,969,632</b>	<b>\$8,748,772</b>	<b>\$11,595,276</b>	<b>\$14,970,397</b>
<b>TOTAL LIABILITIES + EQUITY</b>	<b>\$5,900,099</b>	<b>\$7,290,180</b>	<b>\$9,122,745</b>	<b>\$12,076,098</b>	<b>\$15,504,644</b>



**Fig 16: Projected Cash Flow Statement**

<b>Cash Flow Statement</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>All figures in USD</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
<b>Cash Flow from Operations</b>					
Net Operating Profit (EBITDA)	\$1,483,000	\$2,729,040	\$3,130,175	\$4,269,067	\$4,752,105
<b>Change in Working Capital</b>					
(Increase) / decrease in accounts receivable	(\$1,055,342)	(\$527,671)	(\$263,836)	(\$527,671)	(\$263,836)
Increase / (decrease) in accounts payable	\$213,699	\$106,849	\$53,425	\$106,849	\$53,425
<b>Net change in working capital</b>	<b>(\$841,644)</b>	<b>(\$420,822)</b>	<b>(\$210,411)</b>	<b>(\$420,822)</b>	<b>(\$210,411)</b>
Tax	(\$171,600)	(\$320,808)	(\$444,785)	(\$711,626)	(\$843,780)
<b>Total cash flow from Operations</b>	<b>\$469,756</b>	<b>\$1,987,410</b>	<b>\$2,474,979</b>	<b>\$3,136,619</b>	<b>\$3,697,914</b>
<b>Cash Flow from Investing</b>					
Sale of assets	\$0	\$0	\$0	\$0	\$0
Capital expenditure	(\$5,000,000)	(\$250,000)	(\$250,000)	\$0	\$0
<b>Total cash flow from Investing</b>	<b>(\$5,000,000)</b>	<b>(\$250,000)</b>	<b>(\$250,000)</b>	<b>\$0</b>	<b>\$0</b>
<b>Net cash flow before finance</b>	<b>(\$4,530,244)</b>	<b>\$1,737,410</b>	<b>\$2,224,979</b>	<b>\$3,136,619</b>	<b>\$3,697,914</b>
<b>Cash Flow from Financing</b>					
Equity in	\$5,000,000	\$0	\$0	\$0	\$0
Dividends paid	\$0	\$0	\$0	\$0	\$0
<b>Total cash flow from Financing</b>	<b>\$5,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Cash Flow</b>	<b>\$469,756</b>	<b>\$1,737,410</b>	<b>\$2,224,979</b>	<b>\$3,136,619</b>	<b>\$3,697,914</b>
<b>Cash in Bank at year end</b>	<b>\$469,756</b>	<b>\$2,207,166</b>	<b>\$4,432,145</b>	<b>\$7,568,764</b>	<b>\$11,266,678</b>