# SLUP
## (STATE LEVEL UPGRADATION PLAN)
for
## MOKOKCHUNG DISTRICT IN THE STATE OF NAGALAND

Prepared by
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## EXECUTIVE SUMMARY

Mokokchung district is endowed with varying natural conditions for farming of agricultural crops and rearing of livestock. The main crops are paddy, maize, tapioca, Rice-bean. An increasing number of farmers are also engaging in fishery, dairy, poultry and tea production.

### Major Gaps

**Technology:** Lack of awareness of food processing technology, processors do not know who to approach for proper machinery such kind of issues need to be addressed in the district. Solution is to provide advance technology to increase the production of finished goods & it will create less dependence on the workers.

**Public Infrastructure:** Good quality road is the basic constraint in infrastructure, almost every respondent mentioned about quality & connectivity of roads. Due to the poor quality of roads, transportation is getting affected.

**Common Infrastructure:** The district is lack of common infrastructure facilities such as Grading and Sorting Units, Cold Storages, Warehouses, Pack houses etc., the solution is to establish one common infrastructure facility and one incubation centre at district head quarters.

**Skill Training:** There is a shortage of skilled labor in the Coffee processing industry and there are no proper skill training facilities available in the district. At present only a few skilled laborers are available in the district and for the rest skill development program needs to be conducted by the concerned department.

### Proposed Intervention

A total of INR 27.28 Cr. fund is proposed for the Mokokchung district for the up-gradation of 133 existing and potential new units in the district. INR 12.43 Cr. is expected government assistance under the SLUP from the total fund proposed for the up-gradation of the food processing units.

| Intervention | Target No. of units | Total Cost (Cr.) | Subsidy per unit | Govt. assistance (Cr.) |
|---|---|---|---|---|
| Capital Investment in Plant and Machinery (Individual units) | 121 | 16.3 | 35% | 5.70 |
| Capital Investment in Plant and Machinery (FPO/SHG/ Cooperatives) | 12 | 1.63 | 35% | 0.57 |
| Common Infrastructure | 1 | 4 | 35% | 1.4 |
| Incubation Cum Custom Hiring Centre | 1 | 2.75 | 100% | 2.75 |

| Intervention | Target No. of units | Total Cost (Cr.) | Subsidy per unit | Govt. assistance (Cr.) |
|---|---|---|---|---|
| Branding and Marketing (Total no. of Units/group) | | 1.2 | 50% | 0.6 |
| Training and Mentorship (No. of the individual) | 266 | 1.4 | 100% | 1.4 |
| **Total** | | 27.28 | | **12.43** |

## PROJECT METHODOLOGY

This chapter explains about the study area, sampling techniques, different tools and techniques used for analyzing the collected data. The methodology adopted for the present study is presented under following sections.

1) Study area
2) Sampling Technique adopted
3) Nature and sources of data
4) Analytical tools and techniques used

### Study Area

The study on State Level Up-gradation Plan is conducted in entire Mokokchung district of Nagaland state of India.

### Sampling Technique and Sample Size adopted

Sampling Technique - Multistage random sampling technique was adopted.

**Sample Size:** 22 Samples are covered for ODOP and NON-ODOP commodities in Mokokchung district.

### Nature and sources of data

Both primary and secondary sources of data are collected for this study.

### Primary Data

India is one of the leading producers and processors of coffee beans. Coffee processing has undergone a lot of developments from traditional to modern processing. The survey was conducted in various coffee processing units located in Mokokchung district. In the process of the primary survey, we met different unit holders registered and unregistered, farmers, agriculture department officials, horticulture department officials, raw material suppliers, skilled labor, district industries center officials, farmer producer organizations, retailers, logistics officials concern, etc., and gathered the necessary information like the availability of raw materials, year on year production, varieties cultivated, problems facing by them, production process and the technology adopted by unit holders, availability of skilled labor and their wages, range of products, value chain, the testing methodology adopted by them, packaging, marketing, exports and other information from them.

### Secondary Data

The secondary data is collected from various sources like DICGS annual report, Coffee Board, Nagaland Statistical Handbook, APEDA, Indiastat.com, Journals and articles and other internet sources to know the area, production, export, import of Coffee.

### Analytical tools and techniques used

Tabulation of Collected Data, Percentage Analysis and Graphical Solutions were used in order to get a comprehensive picture and analysis of the Data. After the data has been collected, it has been interpreted and presented to arrive at conclusions.

# I. Baseline Assessment studies:

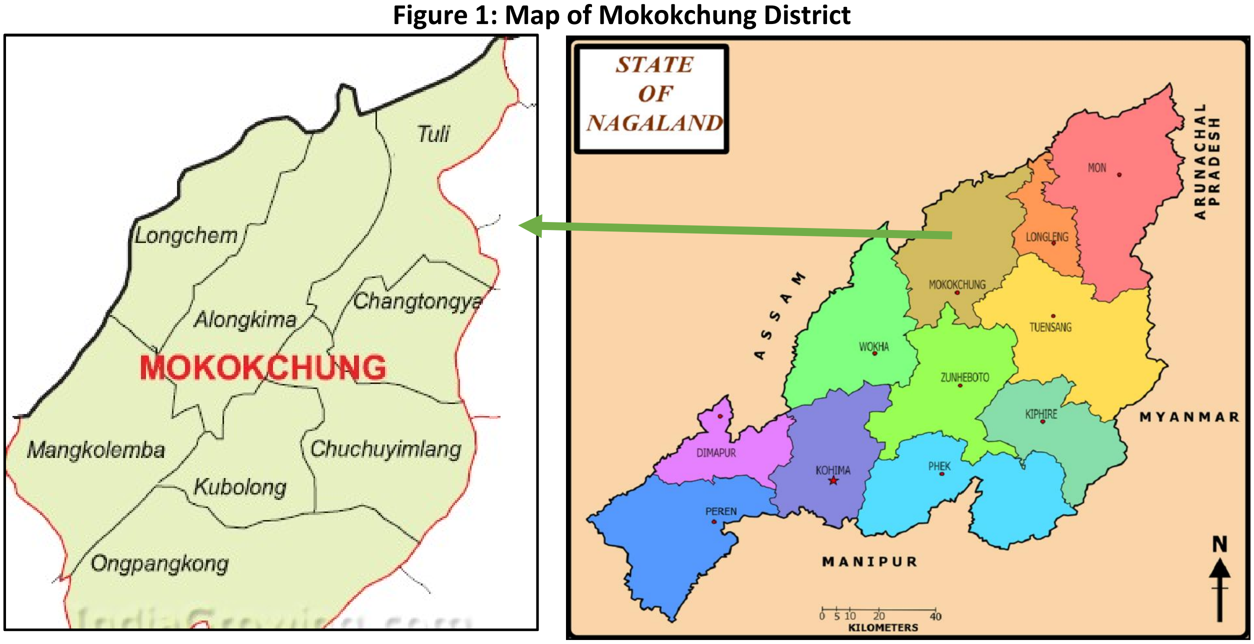
## MOKOKCHUNG DISTRICT

### 1. Baseline Assessment studies:

Mokokchung is a town and a municipality in Mokokchung district in the Indian state of Nagaland. It is the districts headquarter as well as the main urban hub of Mokokchung district. District is the cultural center of the AO people and is economically and politically the most important urban centre in Northern Nagaland. In fact it is the most important urban hub in all of Nagaland after Dimapur and Kohima. The town is made up of 16 wards of which Kumlong, Sangtemla, Alempang and Yimyu are the largest. Mokokchung is particularly noted for its extravagant Christmas, New Year, Moatsü and Tsungremong celebrations. Its tradition of celebrating Christmas and New Year midnight celebrations in the main town square is regarded as one of the unique features of Mokokchung.

Historically, Mokokchung was one of the first Naga Hills sites where the Assam Rifles, led by Britishers, established their outposts (then called stockades) in the later part of 19th century. Much of the town initially grew around this post located in the DC Hill. The British administration was then gradually extended eastwards towards the remote parts of the Naga Hills.

**Figure 1: Map of Mokokchung District**




### Location & Geographical Area

The physiographic of the district shows six distinct hill ranges. The ranges are approximately parallel to each other and are aligned roughly north-east/south-west. The district lies between 94.29 and 94.76 degrees east longitude and 26.20 and 26.77 degrees north latitude. The entire district of Mokokchung is conveniently sub-divided into ranges. The main valleys are Tsurang, Changki and Milak Valleys. The district is agriculturally and industrially among the most progressive districts in the state, along with Dimapur and Kohima. Major agricultural regions are Changki-Longnak, Tsurang, Milak and Dikhu valley regions. Tuli-Milak region and Changki-Longnak valley are the major industrial areas.

### Demography

According to the 2011 census Mokokchung district has a population of 193,171. District has a sex ratio of 925 females for every 1000 males, and a literacy rate of 92.68 %.

**Table 1: District Demography**

| Demographic Label | Value |
|---|---|
| Population (2011) | 193,171 |
| Projected population (2018) | 220,052 |
| Population density | 120 per square Km |
| Literacy rate (2011) | 91.62 |
| Literacy rate (male) | 92.18 |
| Literacy rate (female) | 91.01 |
| Growth rate (urban) | 280.10 |
| Growth rate (rural) | 711.89 |
| Total electors in district | 136,743 |
| Male electors | 69,196 |
| Female electors | 67,547 |
| Sex ratio | 925 |
| No. of Assembly Constituencies | 10 |
| No. of polling stations | 226 |

### A. Agriculture Profiling of the Districts in the State

The majority of the population consists of the AO Naga tribe, who depends on agriculture for their livelihood and practice traditional methods of farming like Jhum.

Mokokchung district is endowed with varying natural conditions for farming of agricultural crops and rearing of livestock. The main crops are paddy, maize, tapioca, Rice-bean. An increasing number of farmers are also engaging in fishery, dairy, poultry and tea production.

**Agro -Ecological Situation**

Three Agro-Ecological Situations (AES) prevailing in the district are as follows:

AES 1- Plains below 400 m MSL
AES 2- Mid-hill from 400 - 1200 m MSL
AES 3- Above 1200 m MSL

Jhum and terrace cultivation are practiced in the district and rice is the staple food. Cultivation of mixed crop in Jhum is practiced. Modern technologies of agriculture such as improved seed, application of fertilizers, modern plant protection methods are in limited use. This minimum usage of agro-chemical in crop production has an advantage of acceding to organic farming.

The varied agro climatic condition of the district is favorable for growing various types of fruits, vegetables, flowers and many other sub- tropical to temperate crops.

### Land Utilization in the District

| Sr. No. | Particulars | |
|---|---|---|
| i) | Total Area | 161,500 Ha |
| ii) | Forest Cover | 28,976.79 Ha |
| iii) | Non Agriculture Land | 129,011.21 Ha |
| iv) | Cultivation Barren land | 35,120 Ha |

### Agricultural Scenario in Mokokchung District

In 2019-20, the total area under the major crops like pulses, cereals, and oilseeds in the district is 34,267 ha with a production of 79,791 MT. Major crops cultivated in the district are Jhum paddy, WTRC Paddy, Sugarcane, Maize, and Soyabean.

**Table 2: Area and Production of Agricultural Crops in Mokokchung District in 2019-20**

| Sl.No | Crops | Area (Ha) | Production (MT) |
|---|---|---|---|
| 1 | WTRC Paddy | 7,700 | 22,318 |
| 2 | Jhum Paddy | 9,300 | 18,516 |
| 3 | Sugarcane | 342 | 14,824 |
| 4 | Maize | 3,966 | 7881 |
| 5 | Tea Green | 782 | 3,489 |
| 6 | Rapeseed Mustard | 3,122 | 3,143 |
| 7 | Rajma/Kholar | 1,256 | 1,612 |
| 8 | Soyabean | 1,123 | 1,396 |
| 9 | Jute | 720 | 1,370 |
| 10 | Pea | 652 | 722 |
| 11 | Small Millet | 641 | 721 |
| 12 | Linseed | 770 | 630 |
| 13 | Ricebean/Nagadal | 362 | 412 |

| Sl.No | Crops | Area (Ha) | Production (MT) |
|---|---|---|---|
| 14 | Ragi | 80 | 381 |
| 15 | Beans | 220 | 309 |
| 16 | Sesamum | 465 | 284 |
| 17 | Tur/Arhar | 300 | 270 |
| 18 | sun-flower | 419 | 255 |
| 19 | Lentil | 243 | 200 |
| 20 | Mesta | 142 | 155 |
| 21 | Groundnut | 146 | 152 |
| 22 | Perilla | 223 | 140 |
| 23 | Jobstear | 111 | 121 |
| 24 | Urd/Moong | 60 | 70 |
| 25 | Bajra | 60 | 60 |
| 26 | Gram | 70 | 60 |
| 27 | Black gram | 80 | 60 |
| 28 | Castor | 80 | 60 |
| 29 | Wheat | 692 | 40 |
| 30 | Barley | 40 | 40 |
| 31 | Oats | 40 | 40 |
| 32 | Horsegram | 40 | 40 |
| 33 | Ramie | 20 | 20 |
| 34 | Total | 34,267 | 79,791 |
| *Source: Department of Agriculture, Mokokchung District, Nagaland State* | | | |

## Horticultural Crops Scenario in Mokokchung District

In 2019-20, the total area under the major crops like Fruits, Vegetables, Spices, Flowers, and Plantation in the district is 114,949 ha with a production of 2,761,586 MT. Major crops cultivated in the district are Flowers followed by Tapioca, Pineapple, Banana, Cucumber, Cabbage and Potato. The area and production of horticultural crops are provided in below table.

**Table 3: Area and Production of Horticultural Crops in Mokokchung District in 2019-2-**

| Sl.No | Crops | Area (Ha) | Production (MT) |
|---|---|---|---|
| 1 | Anthurium | 25,000 | 985,000 |
| 2 | Rose | 25,000 | 963,000 |
| 3 | Lilium | 22,000 | 499,125 |
| 4 | Gladiolus | 10,000 | 210,000 |
| 5 | Alstroemeria | 25,000 | 25,000 |
| 6 | Tapioca | 950 | 11,875 |
| 7 | Pineapple | 445 | 10,000 |
| 8 | Banana | 1,250 | 7,500 |

| Sl.No | Crops | Area (Ha) | Production (MT) |
|---|---|---|---|
| 9 | Cucumber | 280 | 7,163 |
| 10 | Cabbage | 410 | 5,900 |
| 11 | Potato | 320 | 4,160 |
| 12 | Kinnow/Mandarin Orange | 620 | 4,030 |
| 13 | Leafy Vegetables (Amaranthus, Kashmiri Sag, Spinach, Celery etc.) | 340 | 3,450 |
| 14 | Tomato | 200 | 3,400 |
| 15 | greenchilly | 296 | 1,850 |
| 16 | Betelvine in Lakhs Number | 13 | 1,750 |
| 17 | Ginger | 150 | 1,730 |
| 18 | Arbi/Colacasia | 125 | 1,720 |
| 19 | Limes and Lemons | 232 | 1,672 |
| 20 | Sweet Potato | 120 | 1,320 |
| 21 | Passion Fruit | 500 | 1,200 |
| 22 | Beans (All Including Lab-lab) | 160 | 1,200 |
| 23 | Papaya | 120 | 620 |
| 24 | khaddu/pumpkin | 38 | 500 |
| 25 | Peas (Green) | 80 | 480 |
| 26 | Mango | 60 | 472 |
| 27 | Sweet Orange /Mosambi | 55 | 470 |
| 28 | Carrot | 30 | 417 |
| 29 | Brinjal | 35 | 400 |
| 30 | Onion | 30 | 365 |
| 31 | Ash Gourd/Petha | 24 | 360 |
| 32 | cauliflower | 45 | 354 |
| 33 | Other citrus (Specify crop in Remarks Column) | 70 | 350 |
| 34 | Bitter Gourd | 35 | 350 |
| 35 | Lichi | 52 | 345 |
| 36 | Other Spices (Specify crop in remarks column | 65 | 345 |
| 37 | Radish | 42 | 330 |
| 38 | Aonla/Gooseberry | 32 | 320 |
| 39 | Plum | 52 | 298 |
| 40 | Bottle gourd | 18 | 250 |
| 41 | Garlic | 30 | 240 |
| 42 | Gauva | 40 | 235 |
| 43 | Jackfruit | 25 | 218 |
| 44 | Okra/Ladies Finger | 24 | 218 |
| 45 | Turmeric | 32 | 200 |
| 46 | Pear | 19 | 198 |

| Sl.No | Crops | Area (Ha) | Production (MT) |
|---|---|---|---|
| 47 | Red Chilly | 65 | 188 |
| 48 | Tamarind | 8 | 180 |
| 49 | Peach | 20 | 120 |
| 50 | Watermelon | 9 | 107 |
| 51 | Cardamom Large | 170 | 95 |
| 52 | Beetroot | 5 | 90 |
| 53 | Pomegranate | 16 | 75 |
| 54 | Other vegetables Specify Crop in Remarks Column) | 60 | 55 |
| 55 | Grape | 9 | 53 |
| 56 | Mushroom | 0 | 44 |
| 57 | Ber | 8 | 42 |
| 58 | Ridge/Sponge Gourd (Torai) | 30 | 40 |
| 59 | Coconut in Lakh Number | 6 | 40 |
| 60 | Tea | 15 | 25 |
| 61 | Arecanut | 13 | 16 |
| 62 | Other Plantation Crops (Specify Crop in Remarks Column | 12 | 12 |
| 63 | Strawberry | 2 | 10 |
| 64 | Black Pepper | 21 | 7 |
| 65 | Broccoli | 8 | 4 |
| 66 | cinnamon | 6 | 2 |
| 67 | Other Fruits (Specify Crop in Remarks Column | 2 | 1 |
| 68 | Kiwi | 1 | 1 |
| 69 | Total | 114,949 | 2,761,586 |
| *Source: Department of Horticulture, Mokokchung District, Nagaland State* | | | |

## ODOP

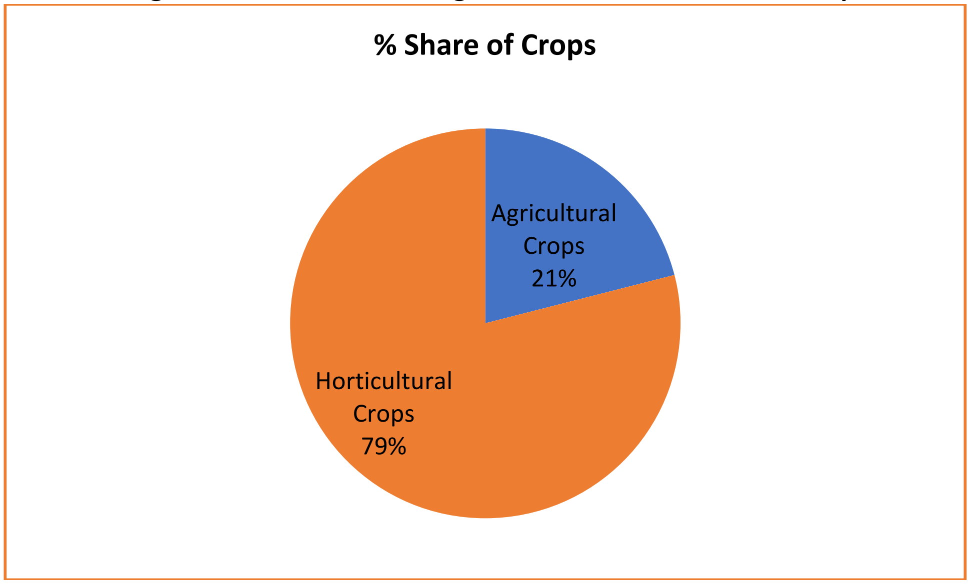
### i. Total production of the product in the district

As per the data received from the Department of Horticulture, Nagaland State currently, around 78 hectares of land is a coffee plantation in the state and the age of the plant is 3 to 4 years, the bearing of berries is not yet started. And also through a primary survey, we noticed that the area of coffee plantations in the state and Mokokchung district, and other districts also are increasing significantly.

### ii. Percentage Share of Area under Agriculture and Horticultural Crops in Mokokchung District

79 % area is under horticulture produce and 21% area is under agriculture produce in the district during 2019-20. The predominant agriculture crops grown is district are paddy, maize, potato, rajma sugarcane etc., where as in horticulture produce floriculture plays a major role and majority of area is under floriculture in the district.

**Figure 2: Percentage Share of Area under Agricultural and Horticultural Crops in the District**




*Source: Department of Agriculture and Horticulture, Nagaland State*

### iii. Total Production of the Produce in the District and ODOP produce as a percentage of total agricultural produce of the district

As per the secondary data received from Department of Horticulture, Nagaland State currently there is no production of coffee in Mokokchung district.

According to the Department of Land Resources Development, Nagaland, it has been estimated that a total area of 10, 40,100 hectares (3, 55,300 hectares for Robusta and 6, 84,800 hectares for Arabica) is suitable for coffee plantation, which is about 67% of the total geographical area of the state.

At present, about 78 hectares are already covered under coffee plantation. Kohima is the district having the highest number of plantations with 34 lakh saplings covering 89 villages.

With the initiative of Department of Land resources, the state is expected to emerge as major organic coffee producer in the country. The state government plans to bring 50,000 hectares area under coffee plantation by 2027 as part of its vision 2030 programme.

In Mokokchung, Zuheboto, Wokha, Mon and Kohima districts, over 1000 farmers are involved in coffee cultivation.

### iv. Perishable nature of the produce

The shelf life of coffee depends on its preparation and storage condition.

A) When it is Unopened or Sealed

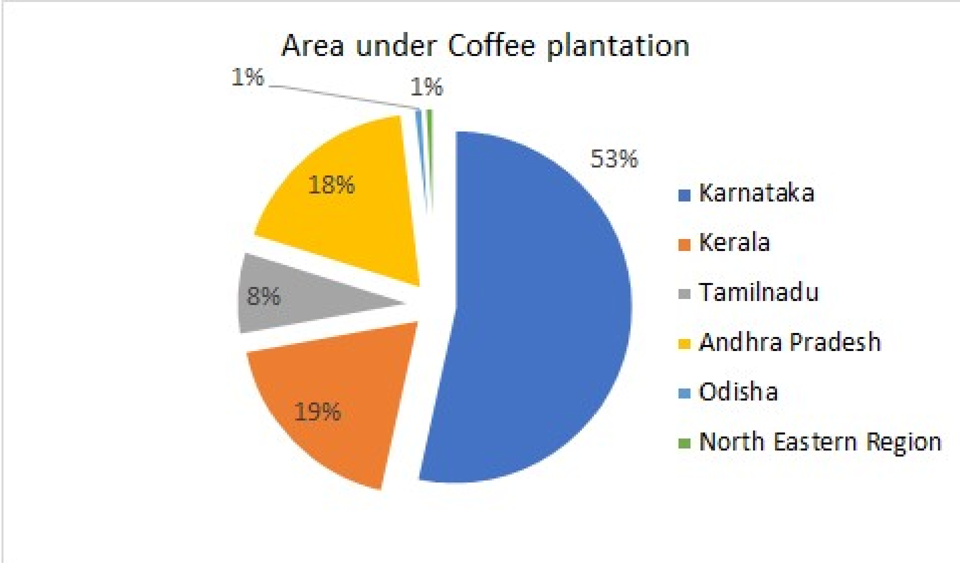
- Ground coffee lasts for 3-5 months when kept in a pantry at room temperature, but it can last 1-2 years in the freezer.
- Whole-bean coffee lasts for 6-9 months in the pantry and up to 2-3 years in the freezer.
- Instant coffee lasts for 2-20 years in the pantry, depending on the packaging. Most instant coffee packets are made with an aluminum layer. This provides an opaque cover that keeps out moisture and heat. Mold spores have no means to get in, so the coffee's shelf life is prolonged. In the freezer, sealed instant coffee packets will keep indefinitely.

B) When Opened

- Freshly ground coffee lasts 3- 5 months in the pantry or freezer.
- Fresh beans can last 6 months in the pantry and up to 2 years in the freezer.
- The shelf life of opened instant coffee in the pantry and freezer can be the same with unopened, depending on the packaging. Tightly re-sealed zip lock or rolled-up-and-clipped foil packs can keep freshness intact for a long time.

### v. Production of ODOP Agriculture Produce in that district compared to other district and states

**Figure 3: Major Coffee producing States in India**




Karnataka is the dominating state for area under coffee plantation with contribution of 53% followed by Kerala state second rank with 19%, Andhra Pradesh with 18% and North east region contributes only 1% in area under coffee plantation.

**Table 4: Planted Area of Coffee in Major States/Districts (Zones) of India (In Hectares)**

| Sl. No | State/District | 2019-20* | | | 2018-19 | | |
|---|---|---|---|---|---|---|---|
| | | Arabica | Robusta | Total | Arabica | Robusta | Total |
| I | Karnataka | | | | | | |
| 1 | Chikkamagalur | 55225 | 42357 | 97582 | 55225 | 42357 | 97582 |
| 2 | Kodagu | 28422 | 79144 | 107566 | 28182 | 79114 | 107296 |
| 3 | Hassan | 25258 | 15276 | 40534 | 25409 | 15001 | 40410 |
| II | Kerala | | | | | | |
| 1 | Wyanad | 0 | 67705 | 67705 | 0 | 67705 | 67705 |
| 2 | Travancore | 2146 | 11094 | 13240 | 2146 | 11094 | 13240 |
| 3 | Nelliampathies | 2085 | 2850 | 4935 | 2085 | 2850 | 4935 |
| III | Tamilnadu | | | | | | |
| 1 | Pulneys & Bodi | 16312 | 882 | 17194 | 16312 | 882 | 17194 |
| 2 | Nilgiris | 3805 | 4900 | 8705 | 3791 | 4854 | 8645 |
| 3 | Shevroys (Incl.Kollihills) | 6951 | 102 | 7053 | 6951 | 102 | 7053 |
| 4 | Anamalais (Coimbatore) | 2270 | 430 | 2700 | 2270 | 430 | 2700 |
| IV | Non Traditional Areas | | | | | | |
| | Andhra Pradesh | 83891 | 264 | 84155 | 79892 | 264 | 80156 |
| | Odisha | 4276 | | 4276 | 4282 | | 4282 |
| V | North Eastern Region | 2545 | 1540 | 4083 | 6536 | 2161 | 8697 |
| | **Grand Total** | **233186** | **226544** | **459728** | **233081** | **226814** | **459895** |

*Source- Coffee Board*

**Figure 4: Production of Coffee in Major States/Districts (Zones) of India (In MTs)**

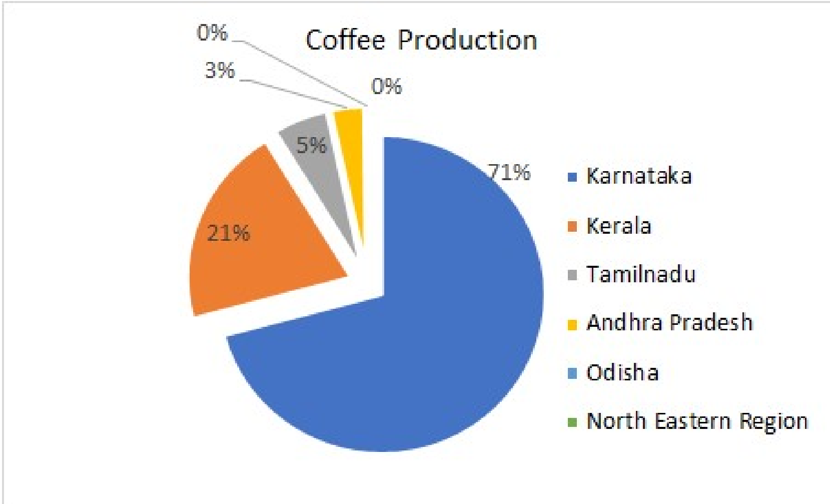



**Table 5: Production of Coffee in Major States/Districts (Zones) of India (In MT)**

| Sl.No | State/District | 2020-21* | | | 2019-20 | | |
|---|---|---|---|---|---|---|---|
| | | **Arabica** | **Robusta** | **Total** | **Arabica** | **Robusta** | **Total** |
| **I** | Karnataka | | | | | | |
| **1** | Chikmagalur | 35,800 | 44,500 | 80,300 | 29,300 | 39,300 | 68,600 |
| **2** | Kodagu * | 20,700 | 104,800 | 125,500 | 17,100 | 90,075 | 107,175 |
| **3** | Hassan | 18,800 | 17,700 | 36,500 | 14,470 | 13,200 | 27,670 |
| **II** | Kerala | | | | | | |
| **1** | Wayanad | 0 | 59,500 | 59,500 | 0 | 55,225 | 55,225 |
| **2** | Travancore | 850 | 6,900 | 7,750 | 800 | 7,350 | 8,150 |
| **3** | Nelliampathies | 1,050 | 1,500 | 2,550 | 1,000 | 1,550 | 2,550 |
| **III** | Tamilnadu | | | | | | |
| **1** | Pulneys | 7,550 | 410 | 7,960 | 7,250 | 475 | 7,725 |
| **2** | Nilgiris | 1,100 | 4,060 | 5,160 | 1,175 | 3,250 | 4,425 |
| **3** | Shevroys (Salem) | 3,985 | 50 | 4,035 | 4,175 | 50 | 4,750 |
| **4** | Anamalais (Coimbatore) | 700 | 470 | 1,170 | 625 | 400 | 1,025 |
| **IV** | Non Traditional Areas | | | | | | |
| | Andhra Pradesh | 10,900 | 30 | 10,930 | 10,370 | 35 | 10,405 |
| | Odisha | 500 | 0 | 500 | 670 | 0 | 670 |
| **V** | North Eastern Region | 65 | 80 | 145 | 65 | 90 | 155 |
| | **Grand Total** | **102000** | **240000** | **342000** | **87000** | **211000** | **298525** |

*Source- Coffee Board*

### vi. Number of workers engaged in the ODOP cultivation

During the primary survey, interviewed few coffee processing units entrepreneurs in the district, it is found; nearly 1,125 workers are engaged in ODOP cultivation. Out of which 68% are male employees and 32% are female employees.

## Non-ODOP:

### i. Major Agricultural crops are being cultivated apart from the chosen ODOP Product.

Apart from ODOP cultivation in the district the predominant crops cultivated in the district are, Paddy, Maize, Mustard and Kholar. The area and production of these crops are provided in below table.

**Table 6: Area and Production of Major Crops Cultivated in the District other than ODOP**

| Crop | Area (Ha) | Production (MT) |
|---|---|---|
| **Jhum Paddy** | 9,300 | 18,516 |
| **WTRC Paddy** | 7,700 | 22,318 |
| **Maize** | 3,966 | 7,881 |
| **Rapeseed/Mustard** | 3,122 | 3,143 |
| **Rajma/Kholar** | 1,256 | 1,612 |
| **Soybean** | 1,123 | 1,396 |

### Non-ODOP products

### ii. Total Production of each of the Produces in the District:

The identified Non-ODOP crops in the district are Ginger, Tapioca, Banana and Bamboo Shoot Products. The area and production of these crops are provided in below table.

**Table 7: Area and Production of NON-ODOP Commodities**

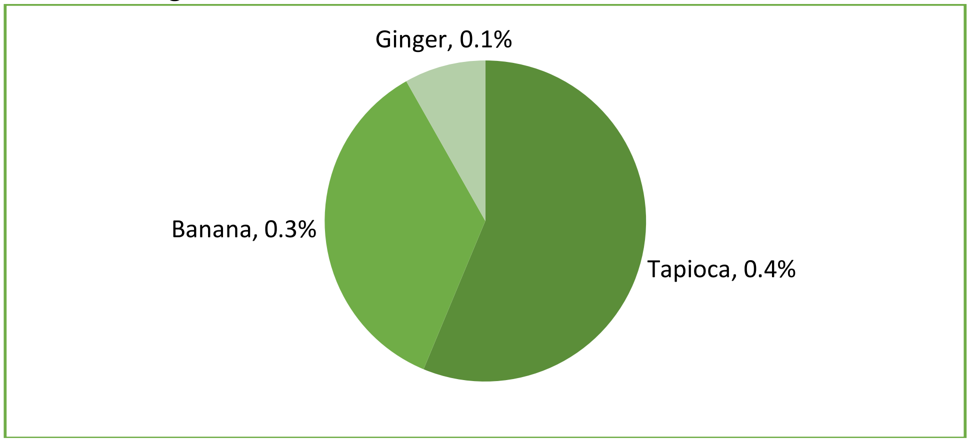
| Crop Name | Area (Ha) | Production (MT) |
|---|---|---|
| **Ginger** | 150 | 1,730 |
| **Tapioca** | 950 | 11,875 |
| **Banana** | 1,250 | 7,500 |

### iii. Non-ODOP produce as a percentage of total horticultural produce of the district:

Among Non-ODOP products tapioca contribute 0.4% of production to total horticulture production in district followed by banana (0.3%) and ginger (0.1%) respectively of total horticulture production in the district.

**Total horticultural production in the district was 2,761,586 MT**

**Figure 5: Percentage Share of NON-ODOP to Total Horticulture Production in the District**




### iv. Perishable nature of the produce:

Among identified Non-ODOP produce in the district ginger is only moderately perishable in nature whereas other identified Non-ODOP crops such as banana, and tapioca are highly perishable in nature and having very short shelf life.

**Table 8: Perishable Nature of NON-ODOP Produce**

| Crop | Perishable Nature | Shelf Life |
|---|---|---|
| **Banana** | Highly Perishable | Short Shelf life |
| **Tapioca** | Highly Perishable | Short Shelf life |
| **Ginger** | Moderately Perishable | Medium Shelf life |

### v. Number of workers engaged in the cultivation of each of the ODOP products.

Total area under Non-ODOP cultivation in district is 2,350 ha in 2019-20. Approximately four thousand and seven hundred households are engaged in Non-ODOP cultivation with the population of nineteen thousand.

**Table 9: Number of Workers Engaged in NON-ODOP Production**

| Crop Name and Particulars | Area (ha) |
|---|---|
| **Ginger** | 150 |
| **Tapioca** | 950 |
| **Banana** | 1,250 |

| | |
|---|---|
| **Total area Non-ODOP** | 2,350 |
| **Average Land Holing size of Nagaland State** | 0.6 |
| **No. of Households engaged in Non-ODOP Cultivation (No.)** | 4,759 |
| **Total Population involved in Non-ODOP Cultivation in district (No.)** | 19,033 |

## B. Assessment of the existing Policy and Regulatory frameworks for FPI and FPI micro Enterprises in the State:

### i. Assessment of Food Processing Policies in the State:

**Pradhan Mantri Kisan SAMPADA Yojana by MOFPI**

The government of India (GOI) has approved a new Central Sector Scheme – Pradhan Mantri Kisan SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) with an allocation of Rs. 6,000 crores for the period 2016-20 coterminous with the 14th Finance Commission cycle. The scheme will be implemented by the Ministry of Food Processing Industries (MOFPI).

PM Kisan SAMPADA Yojana is a comprehensive package that will result in the creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet. It will not only provide a big boost to the growth of the food processing sector in the country but also help in providing better returns to farmers and is a big step towards doubling farmers' income, creating huge employment opportunities, especially in the rural areas, reducing wastage of agricultural produce, increasing the processing level and enhancing the export of the processed foods.

**The following schemes will be implemented under PM Kisan SAMPADA Yojana :**

- Mega Food Parks
- Integrated Cold Chain and Value Addition Infrastructure
- Creation/ Expansion of Food Processing/ Preservation Capacities (Unit Scheme)
- Infrastructure for Agro-processing Clusters
- Creation of Backward and Forward Linkages
- Food Safety and Quality Assurance Infrastructure
- Human Resources and Institutions

| Policy and Incentives | Description |
|---|---|
| Name of Policy | State Industrial Policy-2000 (Revised-2004) |
| Nodal Agency | The Ministry of Food Processing Industries (MOFPI) |
| Single Window Clearance System | Not available |

| Policy and Incentives | Description |
|---|---|
| Power/Electricity Subsidy | Subsidy on power will be provided at the rate of 30% and 25% for connected loads up to 1 MW and above 1 MW respectively for five years from the date of commercial production subject to a maximum ceiling limit of ` 2.00 lakh annually. This will be a reimbursement scheme for the actual consumption of power for the manufacturing process substantiated with requisite details. |
| | Drawal of Power Line: Cost of drawal of 33/11 KV line to eligible units located outside the notified areas shall be reimbursed for one time only subject to a ceiling of `2:00 lakh (now as per NEIIPP-2007, anywhere in the State) |
| Capital Subsidy | Not available |
| Interest Subsidy | Not available |
| VAT/CST/SGST/TAX Exemption/Reimbursement | **Stamp Duty Exemption**<br><br>50% Stamp Duty and Registration Fee for securing loans from Financial Institutions including Mortgage of fixed assets shall be exempted from the Stamp Duty Act for 5 (five) years |
| Employment Generation | **Manpower Subsidy**<br><br>The government will reimburse up to 25% of the actual wage bill for local tribal employees employed by eligible units up to three years from the date of entertainment subject to a maximum ceiling of Rs.1.00 lakh annually. This grant would be for five years from the date of entertainment of such staff and would be given to those units where the investment in plant and machinery exceeds Rs.10.00 lakh and the number of employees engaged in the unit exceeds 20 (twenty) numbers and where the at least 50% of the employees are local tribal youth. Units availing subsidy under this scheme shall take all effective steps to ensure 75% employment of local youth over five years. This subsidy will be admissible on a reimbursement basis for only those employees who complete one year of regular employment in the unit. |
| Freight/Transport Subsidy | Not available |
| Others | **Subsidy for Feasibility Study Cost**<br><br>The subsidy will be available at the rate of 50% of the cost of Detailed Reports subject to a ceiling of Rs.1.00 lakh, which shall be eligible only for new units with investment in plant and machinery above |

| Policy and Incentives | Description |
|---|---|
| | Rs.25 lakh provided the report is prepared by a Government approved Industrial Consultants. |
| | **Subsidy Incentives for 100% Export Oriented Units (EOU)**<br><br>An additional 5% capital investment subsidy is subject to a maximum ceiling of Rs.3.00 lakh. |
| | **Subsidy for Quality Control measures**<br><br>The cost of laboratory equipment for quality control and ISI/BIS/ISO 9000 certification will be reimbursed subject to a maximum ceiling ofRs. 50,000/- in cases where it does not form part of the project cost for SSI and Rs.1.00 lakh in case of Large and Medium units. |

### ii. Assessment of ongoing and proposed Government programs of Nagaland Administration in the FPI and allied sectors:

Currently, there are no existing food processing policies in the state. Recently the Industry and Commerce department of Nagaland, Proposed One food processing policy named "Nagaland State food processing Industries policy (NSFPI).

### iii. Assessment of existing Regulatory frameworks for FPI:

**PM FME Scheme- PM Formalization of Micro Food Processing Enterprises Scheme-**

Unorganized micro food processing units, need intensive hand-holding support for skill training, entrepreneurship, technology, credit, and marketing, across the value chain, necessitating active participation of the state government for better outreach. In the last decade, Central and State Governments have made intensive efforts to organize farmers in Food Processing Organizations (FPOs) and women's Self-Help Groups (SHGs). SHGs have achieved considerable progress in thrift and their repayment record with a 97% NPA level is among the best. Governments have made efforts to enable SHGs to undertake various manufacturing and service sector activities including food processing. However, there are few Government schemes to support FPOs andSHGs to make investments and upscale their operations.

This scheme is a centrally sponsored scheme that is designed to address the challenges faced by micro-enterprises and to tap the potential of groups and cooperatives in supporting the up-gradation and formalization of these enterprises.

| Scheme Component | Particulars |
| --- | --- |
| Support to individuals and groups of micro-enterprises | Individual micro food processing units would be provided credit-linked capital subsidy @35% of the eligible project cost with a maximum ceiling of Rs.10.0 lakh per unit. The beneficiary contribution should be a minimum of 10% of the project cost with the balance being a loan from the bank. |
| Farmer Producer Organizations (FPOs)/Producer Cooperatives | i) Grant @35% with credit linkage;<br>ii) Training support;<br>iii) Maximum limit of grant in such cases would be as prescribed. |
| Self-Help Groups (SHGs) | Seed capital:<br>i) Seed capital @ Rs40,000/- per member ofSHG for working capital and purchase of small tools would be provided under the scheme;<br>ii) Priority would be given to SHGs involved in ODOP produce in giving seed capital;<br>iii) All the members of an SHG may not be involved in food processing.<br>Therefore, seed capital would be provided at the federation level ofSHGs;<br>iv) This would be given as a grant to the SHG federation by SNA/ SRLM. SHG federation would provide this amount as a loan to the members ofSHGs to be repaid to the SHG. |
| Support to individual SHG member | As a single unit of the food processing industry with credit linked grant @35% with the maximum amount being Rs 10 lakh. |

### iv. Stakeholder Mapping

**MINUTES OFTHE MEETING (MOM) OF NAGALAND PMFME SLUP STAKEHOLDERS MEETING DTD 09-02-2022 HELD AT DIRECTORATE OF INDUSTRIES and COMMERCE, KOHIMA – ONLINE and OFFLINE MODE – REG**

Industries and Commerce

- Kekhrievor Kevichusa, Commissioner and Secretary, Industries and Commerce department (Commissioner)
- Hokishe K Assumi, Director of Industries and Commerce (Director)
- Vitsutho Nyuthe, Additional Director of Industries and Commerce (Additional Director)
- Zakielatuo Yiese, Deputy Director, Industries and Commerce (Deputy Director)
- Mhasiphizo Michael Khezhie, Nodal Officer, PMFME Scheme, Directorate of Industries and Commerce (Michael)

TransGraph

- Dr. Abdul RahmanIlyas, Global Head and Vice President, TransGraph Consulting, Hyderabad
- Mr.DeekshitManchaiah, Analyst, TransGraph Consulting, Hyderabad

Stakeholders

- M. Rollan Lotha, COO, NSRLM, Nagaland
- Lentinaro, Program Manager, NSRLM
- Dr.Hiales Zeliang, Deputy Director, Veterinary, GoN
- Dr.Vimezo Kire, Deputy Director, Fisheries, GoN
- Sendong, Jr. Asst. Commissioner, Food Safety, GoN
- Meyasashi, Deputy Director Horticulture, GoN
- Bokato Hesso, Deputy Director, Cooperation department. GoN

**The meeting was held in the Directorate of Industries and Commerce, Kohima on Feb 9th, 2022 which started at 11.15 Am and concluded at 1.30 Pm.**

- The formal introduction was done by Michael who welcomed the offline and online participants, he was apprised about the PMFME scheme and the Stale Level Up gradation Plan (SLUP) and apprised the group that a state-level study was conducted by M/s. Transgraph Consulting prepares district-wise reports that were circulated to all the stakeholders and the objective of this meeting is to take suggestions from every stakeholder to be incorporated into the final report. He requested the attendees to introduce themselves and later requested Commissioner to give the keynote address.

- Commissioner presented the keynote and highlighted how important the PMFME scheme is for the State of Nagaland as it is bound to scale in the coming years in terms of increased support to the food processing sector, he highlighted the objectives of the PMFME and requested all the stakeholders present to offer their recommendations and suggestions if any to be incorporated into the final SLUP report that will become a torchbearer to implement for the development of the food processing sector so the inputs from all are going to be very crucial and encouraged all to participate.

- Director spoke about ODOP and Non-ODOP and gave a summary that Nagaland the produce is same across all the districts, so not to be confused on the ODOP and Non-ODOP, while in certain districts based on the production of that particular product is high was chosen while in other districts the same stand as Non-ODOP. So PMFME would be looking at the clusters. Director further said TranGraph Consulting Hyderabad has done a good study and the reports have been submitted to all today they will be presenting the summary and key findings of the report for stakeholders' suggestions and feedback. He requested TrangGraph to go ahead and present the report.

- Dr. Abdul Rahman from TransGraph Consulting, Hyderabad gave a brief overview of the PMFME Scheme and SLUP, he acknowledged the support of the Commissioner and Director and his team, and various important stakeholders across Nagaland. He further presented the methodology adopted for the study and gave a detailed crisp presentation on each district and covered 11 districts.

- Mr. RollanLotha, NSRLM spoke about Peren district and informed that they have a 100kg per batch vacuum drier, 24 tray over bio mass solar drier with 250 MT Capacity. In Wokha he informed fishery sector is dominated by Men, whereas NSRLM also includes women, he further informed that a fish value chain project is being currently planned in partnership with ECOP, New Delhi. 1500 kg of fish is going out of Nagaland from the Dhyong River and he wanted to establish a fish processing unit. He further informed that they have been waiting to get cooperative status for their organization which is pending with the Coop Department and requested that it be expedited. So that buy-back arrangement can be extended with a corpus which is currently a bottleneck for them.

- BokatoHesso, Deputy Reg, Cooperation Department, GoN, informed the audience that there is skilled labor available for barista coffee and he has shared a list of 100 cooperatives with the DFPI. He informed that they are working on the 10,000 FPO national mandate driven by Nabardand focusing on the creation of FPOs in Peren, Kiphire, and Kohima. 3 under the cooperative act under Nabard / NCDC and 10 under SFAC under Companys Act. He further informed that at Block level 5 villages engage in cooperative activity, hence they are trying to develop an Integrated Multipurpose Cooperative Society to tap the small group on their Adhaar base.

- Mr.Ashish, Trangraph's Survey lead informed that the touch-based Cooperatives list given by the Department and a few of them are inactive and others have been contacted and information captured. He further said that as part of the cluster study all the existing cooperatives will be mapped.

- Deputy DOH informed us that there is a marketable surplus in Pineapple and Kiwi. For example, he said farmers throw 20-25 of their produce at farm level and do not even bother to value add because of lack of time similarly in Kiwi there is a 50% marketable surplus resulting out of grading as only Grade ‘A’ is bought by traders. So there is an immense opportunity to convert the marketable surplus into value-added products which is currently not happening. In the district Phek, the production is kiwi is small at the same time other districts also have small production areas of Kiwi such as Kohima, Zonhebato, and Tusenang for which an aggregation hub can be created.

- Michael took over and informed all the stakeholders present to send their suggestions and feedback earlier by Monday i.e. 13th February 2022 formally. So that their respective feedback can be captured in the final report. He also requested the online participants to send their feedback by email. He further requested Additional Director to give closing remarks.

- Add. Director Industries thanked TrangGraph for giving an elaborate presentation and also thanked the participants for giving their valuable feedback. He also informed me that the report is in finalization state all the feedback and suggestions given will be incorporated.

**The meeting concluded at 13.30 hours.**

## C. Profiling of existing Micro Enterprises eco system:

### 1. Industrial Profile of the Districts in the State

In 2019, GDP for Nagaland was INR 3.19 million lakhs. Between 2013 and 2019, GDP of Nagaland grew substantially from INR 1.66 million to INR 3.19 million lakhs rising at an increasing annual rate that reached a maximum of 16.43% in 2018 and then decreased to 12.39% in 2019.

Predominantly an agrarian State, the economy of Nagaland is dependent on development of agriculture. In order to bring agriculture to the fore front and prioritize its development, it is important and necessary to utilize all available resources sensibly with application of modern technology to achieve the optimum level of development, in order to meet the goal of food security.

The state has considerable resources of natural minerals, petroleum, and hydropower. It has unexploited reserves of around 600 million MT of crude oil and more than 20 MT of hydrocarbon. Moreover, the state has 315 MT of coal reserves and 1,038 MT of limestone reserves.

The Government of Nagaland has identified the following Centers in Mokokchung District as Industrials Zone:

1. Tuli Sub-Division - Industrial Zone
2. Longnak/ Longtho Areas - Industrial Zone
3. Chuchuyimlang - Industrial Estate

**Table 10: Industrial Scenario of Mokokchung District**

| Sl.No | Head | Unit | Particular |
|---|---|---|---|
| 1 | Registered industrial unit | No | 95 |
| 2 | Total Industrial unit | No | 95 |
| 3 | Registered medium & large unit | No | 06 |
| 4 | Estimated average no of daily workers employed in small scale Industries | No | 1,254 |
| 5 | Employment in large and Medium Industries | No | 270 |
| 6 | No of Industrial area | No | 4 |
| 7 | Turnover of small scale Industries | In lacs | 1.5 |
| 8 | Turnover of Medium &large scale Industries | In lacs | 12.50 |

*(Source-MSME)*

## 2. Identifying Non-ODOP Products:

Identified Non – ODOP products through primary survey in the district are listed in below table;

| Sl. No | Crop Name | Value added products |
|---|---|---|
| 1 | Banana | Banana chips, Banana Powder, Banana Juice etc., |
| 2 | Bamboo Shoot | Bamboo Shoot Pickles |
| 3 | Ginger | Ginger powder, ginger oil, flakes, pickles etc., |
| 4 | Tapioca | Dehydrated slices and chips |

## 3. District wise Industrial profiling based on secondary research

Traditionally, the people in the district work on metal with simple technology but most of the production is meant for household needs and requirement. Basketry, weaving, wood carving, pottery, Spinning and Carpentry are traditionally activities in which a sizeable number of the local people are skilled. Along with traditional activities, The DIC, Mokokchung can introduce new Schemes for the benefits of Entrepreneur, to take up programmes for up-gradation new Technology under M/o MSME, Govt. of India like MSE-CDP, MSE-MDA, TREAD for women, Lean manufacturing, Design clinic, ICT, Bar Code, IPR etc in long run. Development of agro-processing units like extraction of fibers from pineapple leaves, dehydration unit for ginger and cardamom, extraction of citronella oil are some potentials non-farm activities, which can be developed in the district. New scheme are patchouli cultivation, Tea garden and vanilla cultivation in the district. On the basis of availability of raw material, labour and other infrastructure, non-farm sector investment in the district can be in the following areas: -

| Agro-based | Forest based | Mineral Based | Textile based | Engineering based | Demand Based |
|---|---|---|---|---|---|
| Rice Mill | Agarbati bamboo sticks | Stone crushing | Tailoring unit | Fabrication of grills, iron gates etc | Auto repair works |
| Ginger processing (dehydration plant) | Furniture making | Stone cutting & polishing | wool weaving unit | Repairs to machinery | Confectionery unit |
| Fruit/vegetable preservation/canning centre | Cane and bamboo unit | Stone curving | Hand loom unit | Motor works | Electrical Repair unit |
| Starch production unit | Handicrafts | Boulder mall. | Thread making unit | Printing press | Pickle making |
| Poultry/ cattle feed plant | wood curving | Stone dressing | Ready-made garments unit | Barbed Wire | Fish dry making |
| Patchouli, Ginger, Tea garden, Vanilla etc | Broom unit | cement Jally & other products | | Agricultural Implements | Cyber café |
| Food processing products etc | Ayurvedic Medicine | Pottery | | Tin-smithy | Green vegetables shop etc |
| Piggery farm | bamboo Mat Door & window frame | Brickfield | | Wax candle | |

| Agro-based | Forest based | Mineral Based | Textile based | Engineering based | Demand Based |
|---|---|---|---|---|---|
| Soya milk and toffee processing unit | | | | Washing Soap | |
| Potato and Banana chips processing unit | | | | | |
| Pop corn making unit | | | | | |
| Pineapple juice & packing unit | | | | | |
| Passion fruits extraction &packing unit | | | | | |

The District Industries Center needs to be strengthened extension work achieve the growth envisaged by exploiting the estimated potential. The present position in regard to the infrastructure available in terms of training centers, road networks, services centers, etc is inadequate and need to be augmented to bring about appositive change in the climate. At present, the district has the following networks of centers/units.

1. Citronella distillation unit- 1
2. Limon grass Distillation plant- 1
3. Weaving training Centre- 2
4. Patchouli distillation Plant- 2

To encourage prospective entrepreneurs to take up industrials activities, there are provisions to provide margin money/ seed money/ subsidy by the implementing agencies. However, there are several constraints that may be highlighted are: -

a) Lack of basic infrastructure facilities, in-adequate marketing support/ accessibility and raw material supply.
b) In-adequate power supply
c) Shortage of skilled /trained manpower
d) Lack of industrial experience, non-availability of managerial, administrative and technical experience among the local entrepreneurs.
e) High cost raw materials and transportation
f) Lack of co-ordination among various development agencies
g) Credit flow is very low due to poor return of bank loans.

### i. Is the district recognized with the ODOP product?

Based on the existence of household, small &micro-units and the relevant commodity is grown largely in the district the ODOP product is identified by the state department and Coffee is recognized as ODOP product.

### Awareness about the ODOP Product in Mokokchung District

From primary survey, it is observed that 24% respondents are aware that coffee is ODOP product for their district, rest 76% respondents are not aware about ODOP product.

### ii. Has the product been granted Geographical Indication status by Government of India?

The recognized ODOP product (Coffee based value added products) in Mokokchung district of Nagaland State has not been granted geographical indication status by government of India.

### iii. Special nature and relationship of the product with the district, uniqueness, history, etc?

Coffee farming in Nagaland began in the early 1980s under the Nagaland Plantation Crops Development Corporation (NPCDC) in collaboration with Coffee Board of India (CBI).

Coffee cultivation in Nagaland began in the 1970s with the encouragement of the Coffee Board of India. The National Bank for Agriculture and Rural Development (NABARD) was in charge of providing financial support for the programme, while the State Plantation Crops Development Corporation was in charge of the planting drive. Of the 40,000 Ha only 13,000 Ha was brought under coffee plantation, of which 7000 Ha was handed over to 5000 tribal growers. In Nagaland, the project was carried out in partnership with the Nagaland Plantation Crops Development Corporation (NPCDC).

The state has shown how coffee plantation can be an alternative way of self-employment.
The north-eastern states of India are categorized as non-traditional areas for coffee cultivation. They possess favorable soil and climatic conditions along with promising technological and economic feasibility. These conditions provide Nagaland with immense scope and potential for coffee plantation. Moreover, coffee is a high-value plantation crop. It has significant economic significance as it is potentially a high foreign exchange earner.
Coffee was first grown in Nagaland in the 1980s. However, initially, it failed because of the lack of management and unavailability of market. It was only in 2015, that the Department of Land Resources attempted to revive coffee plantations. With an objective to promote Nagaland coffee and encourage educated unemployed youths to take up coffee plantation as an alternative to employment, the Department of Land Resources has been promoting 'Naga Coffee' at Kisama since 2015 by opening a stall, where different varieties of Nagaland coffee are being served every day. Since then, coffee plantation has been an intrinsic part of the state's culture and has gained importance and large-scale popularity. The department also works in

close association with the Coffee Board of India. Presently, the state is exporting Nagaland coffee to South Africa and a memorandum of understanding (MoU) on 'marketing' was signed in 2016 with the Government of Nagaland. In 2019, 17 MT of Nagaland coffee was exported to South Africa.

**Different forms of Coffee**

- Instant
- Dalgona
- Affogato
- Irish Coffee
- Filter Coffee
- Mochaccino
- Long Black
- Espresso
- Flat White
- Cappuccino
- Café Latte
- Caffè Americano

### iv. Level of processing happening for ODOP in the district, in other districts and outside the State.

As per GIS LRD Nagaland, it has been estimated that total of 10,40,100 ha is suitable for coffee plantation in the state, which is about 62.7% of the states total geographical area of 1657900 ha. Presently about 78 ha have been covered in the entire state, which is 0.77% from the overall coffee suitable area of the state.

Based on 2019-20 data, Mokokchung is the largest producing district with production of 4,455 kg parchment coffee. Dimapur district have more processing units of coffee as compared to Mokokchung district.

Coffee production in India is dominated in the hill tracts of South Indian states, with Karnataka accounting for 71%, followed by Kerala with 21% and Tamil Nadu (5% of overall production with 8,200 tonnes).

There are about 250,000 coffee growers in the country; 98% of them are small growers.
The coffee sector provides direct employment to 664,505 workers via plantations and indirect employment to 1.3 million workers in coffee processing and other related activities. With increasing off farm employment opportunities, coffee planters have started experiencing shortages of skilled labor. Labor costs, which account for more than 50 percent of the cost of cultivation, continue to escalate. According to the Board's statistics, the general daily wage rate in the state of Karnataka rose to INR 314
(US$ 4.44), per day.

### v. Mapping of the Micro, Small, Medium and Large Industries in the District (Total number of Units).

In the Mokokchung district, almost 109 units of household, small, medium, large units are located.

**Details of Existing Micro & Small Enterprises and Artisan units in the Mokokchung District**

| NIC Code No | Type of Industry | No of units | Investment (Lakhs ) | Employment |
|---|---|---|---|---|
| 15 | Food Products & Beverages | 4 | 10.00 | 18 |
| 18 | Weaving apparel | 6 | 6.00 | 12 |
| 20 | Agro based | 6 | 12.00 | 18 |
| 22 | Soda water | Nil | | |
| 23 | Cotton Textile | Nil | | |
| 24 | Woolen, silk & artificial thread based cloths | 2 | 2.00 | 4 |
| 25 | Jute & Jute based | Nil | | |
| 26 | Readymade Garments & Embroidery | 2 | | |
| 27 | Wood/wooden based/furniture | 30 | 60.00 | 60 |
| 28 | Paper & paper products | 2 | 2.00 | 4 |
| 29 | Leather based | Nil | | |
| 30 | Rubber, plastic & petro based | 3 | 6.00 | 9 |
| 31 | Chemical/Chemical based | Nil | | |
| 32 | Mineral based | 5 | 10.00 | 60 |
| 33 | Metal based(steel fab) | 38 | 76.00 | 70 |
| 35 | Engineering units(furniture) | 5 | 10.00 | 12 |
| 36 | Electrical machinery & Transport equipments | Nil | | |
| 97 | Repairing & Servicing | 1 | 1.00 | 2 |
| 01 | Others | 5 | 5.00 | 10 |

Source: - Directorate of Economics & Statics, Govt of Nagaland

Large scale Industries/Public sector undertakings
List of the units in Mokokchung District & nearby area
1. Nagaland Pulp and paper co. ltd, Tuli
2. Fruits Canning Factory, Longnak.

Both the factory become sick due Lack of working capital, Power shortage, Lack of skill workers, Low capacity performances etc.,

The Cabinet Committee on economic affairs, GOI has taken decision to revive the NPPC, Tuli by enhancing the capacity from 100 MPD to 200 MTPD (white writing paper) by infusing about Rs 600 crores and the requirement of bamboo will be 3 lacs tonnes annually. Works relating to the revival programme is going on and once the mill is commissioned enormous avenues will be created for both direct and indirect employment among the locals, industrial work-culture will slowly changed the attitude of locals in particular and the enhanced economic conditions will definitely changed the living standard of the people in the state thereby the graph of the state gross domestic product (SGDP) will sharply goes upward trends**.**

### vi. Number of clusters engaged in the processing of this product

Khar village is the highest producer of coffee in the Mokokchung district. Yimachalu village has started coffee farming in May 2018.

However, there is no any formal cluster existing for Coffee and cluster can be made and all the processing units located in the different districts can be brought under one cluster.

### vii. Number of workers engaged in the ODOP processing

From primary survey, it is observed that approximately 800 to 850 workers engaged in coffee production and processing, among them 36% are female workers.

| Category | Male Employee | Female Employee | Total |
|---|---|---|---|
| **Household** | 354 | 222 | 576 |
| **Micro** | 58 | 21 | 79 |
| **Small** | 100 | 50 | 150 |

### viii. Marketing linkages within district, state and outside

Marketing of agricultural commodities are mainly done through the local weekly markets. Government has taken initiatives to market agricultural commodities in an organized way through the District APMC. Several farming organizations that can be utilized for marketing of agricultural and horticultural products in the district are:

Agent from Naga coffee agency collects the raw coffee from coffee growers, & processes it in Dimapur district & then it is exported to South Africa. Although, Nagaland coffee is now being exported to South Africa and Dubai, there is need to increase coffee export from the state.

Inter district trading is also there. Coffee processors sell parchment coffee with Rs.200 per kg while dry cherry with about Rs. 90-100 per kg.

Coffee retailers and cafes nowadays not only roast and sell rich creamy coffee, but, they also aim at giving customers the experience of picking their beans and brewing them through various techniques. Over the years, Indian coffee culture has progressed from Aero press coffee tournaments to experience centers and coffee-centered events. A fine example of this is best illustrated by the fact that, for the past three years, India has begun to conduct its own National Barista Championships & the Fine Cup Award; which are two of the most prestigious brewing competitions held in the country.

Apart from government initiatives, the HORECA sector also has a major role to play in revolutionizing the importance of a quality brewing experience. One such notable contribution is by the luxury resort, The Tamara Coorg and its one-of-a-kind Coffee Festival; a three-day experience that allows its guests to learn about the different varieties of coffee, how it is grown and how it can be made into a perfect brew.

### ix. Level of infrastructure for ODOP processing within district, in other districts and States

Regarding the infrastructure for ODOP processing within the district, they require warehouses, skilled labor, drying yards, new machinery for coffee processing, testing facilities and a formal association or syndicate to encourage the coffee processing in the district.

### x. Total production value of the ODOP product manufactured in the district and as % of total agricultural produce.

Based on 2019-20 data, Mokokchung is the largest producing district with production of 4,455 kg parchment coffee. However, if we consider other agriculture production then it is negligible i.e. 0% of the total agriculture production in the district.

### xi. Number of enterprises involved in the processing of this product and as % share of total number of micro food processing enterprises in that district

- No of coffee processing units registered in the district- approximately 17 household units
- Percentage of coffee Processing: 19%
- Percentage of Metal based(steel fab) processing: 28%
- Percentage of Wood/wooden based/furniture: 22%

### xii. Number of Self Help Groups and Farmer Producer Organizations engaged in the Processing of this product.

There is no specific self-help group or farmer's organization involved in ODOP processing in the district. There are farmers organization but for NON ODOP products like passion fruit & other agriculture crops.

**Table 11: List of FPOs in the District**

| Sl.No | Name of the FPO | Location | Contact details | Total No of Registered members | Produces/ Products manufactured |
|---|---|---|---|---|---|
| **1** | Aboriginal Agri & Allied Processing Cooperative Society Ltd. NL/7487 Dated 15.11.13 | Mokokchung | Shri. Toshiba 9774002716 | 30 | **Pickle Processing**. Organic Local chilly King chilli |
| **2** | Tama Agri & Allied farming Cooperative Society Ltd . NL/6060 Dated. 16.08.05 | Changtongya, Mokokchung | Shri. I Onen Jamir 9678146397 | 25 | Banana Chips Processing |
| **3** | Essalok Women Agri & Allied Cooperative Society Ltd., NL/8342 Dated.02.02.16 | Mkg Compound, Mokokchung | Smti. Alemla 9862126827 | 34 | Eri Pickle (Silkworm) |
| **4** | Pilgrims Agri & Allied Cooperative Society Ltd., NL/8929 Dated. 15.10.90 | Mepongchuket village | Smti. Moalemla 9862452029 | 20 | **Processed foods**. Cookies Pastries |
| **5** | Leimpang farming Cooperative Society Ltd. NL/1245 Dated. 15.10.90 | Mongsenyimti village | Shri. Supongramok 7630829983 | 30 | **Grain Processing**. Corn Processin Sticky Rice |
| **6** | Groove MPCS Ltd., NL/4783 | Alongmen ward, Mokokchung. | Smti. Masaienla 7005178358 | 40 | **Processed food**. Baking |

| Sl.No | Name of the FPO | Location | Contact details | Total No of Registered members | Produces/ Products manufactured |
|---|---|---|---|---|---|
| | Dated.27.05.98 | | | | Dairy curd Process |
| **7** | Lensendi farming Cooperative Society Ltd., NL/8352 Dated. 11.03.16 | Alongmen ward, Mokokchung | Smti. Rongenlemla 7005836877 | 30 | Mixed Pickel |
| | | | | | |
| **8** | Achitongpang AGRI & Allied Cooperative Society Ltd. NL/8071 Dated. 13.04.15 | Unger village, Mokokchung | Shri. Watimeren 7005871802 | 25 | **1. Fruits & Veg. dry processing**.<br>Gooseberry<br>Bitter Gourd<br>Banana<br>Rosselle<br>Pineapple<br>**2. Pickle**<br>Mixed pickle<br>Meat pickle |
| **9** | Rempu Lu Agri & Allied Cooperative Society Ltd., NL/7540 Dated. 21.01.14 | Ungma village, Mokokchung | Shri. Waluden 7005906818 | 30 | Fish Processing unit |
| **10** | Blue Bird MPCS Ltd., NL/3211 Dated. 07.09.95 | Dilong ward, Mokokchung | Shri. Imchatoba Imchen 9436403678 | 50 | Fish Processing unit |

**The Nagaland State Co-Operative Marketing & Consumers' Federation (Marcofed) Ltd.,H.O. Dimapur**

The Nagaland State Co-operative Marketing & Consumers' Federation Ltd. popularly known as MARCOFED is an Apex Level Co-operative Institution for Marketing of Agricultural produces and distribution of essential commodities in the State which was established in the year 1968 under the sponsorship of the State Govt. as a public sector undertaken with its Registration No. NL/0222 Dt. 17-08-1968 and based in Dimapur as its Head Office, Nagaland.

**Table 12:** Total Number of Cooperative Societies as On 30.01.21.

| Sl. No | Type of Society | Kma | Dmp | Mkg | Tsg | Wka | Zbto | Phk | Mon | Peren | Kpre | Lglg | Mba | Pftr | Stk | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | STATE LEVEL SOCIETIES | | | | | | | | | | | | | |
| 1 | Nagaland State Cooperative Bank Ltd. | | 1 | | | | | | | | | | | | | 1 |
| 2 | MARCOFED Ltd. | | 1 | | | | | | | | | | | | | 1 |
| 3 | Nagaland State Coop. Union | | 1 | | | | | | | | | | | | | 1 |
| 4 | Nagaland Apex Weavers Federation | | 1 | | | | | | | | | | | | | 1 |
| 5 | Nagaland State Piggery Federation | | 1 | | | | | | | | | | | | | 1 |
| 6 | Nagaland State Dairy Federation | 1 | | | | | | | | | | | | | | 1 |
| 7 | The Nagaland State Entrepreneurs Associates Thrift & Credit Coop. Federation Ltd. | 1 | | | | | | | | | | | | | | 1 |
| | | 2 | 5 | | | | | | | | | | | | | 7 |
| B | | | DISTRICT LEVEL SOCIETIES | | | | | | | | | | | | | |
| 1 | Kohima Dist. Milk Union | 1 | | | | | | | | | | | | | | 1 |

| Sl. No | Type of Society | Kma | Dmp | Mkg | Tsg | Wka | Zbto | Phk | Mon | Peren | Kpre | Lglg | Mba | Pftr | Stk | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Dimapur Dist. Milk Union | | 1 | | | | | | | | | | | | | 1 |
| 3 | Mokokchung Dist. Milk Union | | | 1 | | | | | | | | | | | | 1 |
| | | 1 | 1 | 1 | | | | | | | | | | | | 3 |
| C | | PRIMARY COOPERATIVE SOCIETIES (DISTRICT WISE) | | | | | | | | | | | | | | |
| 1 | Lamps C.S. Ltd. | - | 1 | - | - | - | - | - | - | - | - | - | - | | | 1 |
| 2 | Consumer C.S. Ltd. | 68 | 24 | 24 | 31 | 9 | 25 | 21 | 12 | 6 | 11 | 2 | 7 | 1 | - | 241 |
| | 1. Petrol Pump C.S. Ltd. | - | - | 1 | - | - | - | - | - | - | - | - | 1 | - | - | 2 |
| 3. | Service C.S. Ltd. | - | 37 | 16 | - | 9 | 4 | 2 | 1 | 6 | - | - | 4 | | | 79 |
| | Institution C.S. Ltd. | - | 1 | - | - | - | 1 | - | - | - | - | - | - | | | 2 |
| | Transport C.S. Ltd. | - | 2 | 1 | 2 | - | - | - | - | - | - | - | - | | | 5 |
| | Canteen C.S. Ltd. | - | - | 1 | - | - | - | - | - | - | - | - | - | | | 1 |
| | Education & Training C.S. Ltd. | 1 | - | - | - | - | - | - | - | - | - | - | - | | | 1 |
| | Dry Cleaners | 1 | - | - | - | - | - | - | - | - | - | - | - | | | 1 |
| 4 | Multi Purpose C.S. Ltd. | 854 | 974 | 320 | 249 | 426 | 287 | 231 | 97 | 104 | 160 | 35 | 118 | | | 3855 |
| 5 | Marketing C.S. Ltd. | 10 | 28 | 19 | 28 | 5 | 9 | 13 | 3 | 2 | 5 | 1 | 1 | | | 124 |
| | Trading | - | - | 1 | - | - | - | - | - | - | - | - | - | | | 1 |

| Sl. No | Type of Society | Kma | Dmp | Mkg | Tsg | Wka | Zbto | Phk | Mon | Peren | Kpre | Lglg | Mba | Pftr | Stk | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Weaving & Handloom/Knitting /Handicraft /Industrial C.S. Ltd. | 127 | 155 | 37 | 49 | 43 | 76 | 34 | 40 | 22 | 26 | 12 | 7 | - | | 628 |
| 7 | Dairy C.S. Ltd. | 37 | 58 | 13 | 25 | 6 | 20 | 30 | 17 | 7 | 9 | 1 | 2 | | 1 | 226 |

**Table 13: List of SHGs in Mokokchung District**

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| 1 | ADIANU | YIMCHENKIMONG | 9862264691 | 9(NOT REGISTERED) | TREE BEAN PICKLE, NIGHTSHADE PICKLE, MEAT PICKLE | LOCAL MARKET | 0.15 |
| 2 | LONGRA | DEBUIA | 8118949307 | 10(NOT REGISTERED) | NAMKEEN | LOCAL MARKET | 0.2 |
| 3 | MOLUNGTOK | DEBUIA | 8974805125 | 9(NOT REGISTERED) | SOYABEAN POWDER | LOCAL MARKET | 0.24 |
| 4 | ADIANU | MOLUNGKIMONG | 9862816138 | 10(NOT REGISTERE | LOCALLY MADE BISCUITS, TREE BEAN PICKLE, NIGHTSHADE PICKLE, MEAT | LOCAL MARKET, SUPPLIED TO TULI | 1 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | | | | D) | PICKLE | AND DIMAPUR | |
| **5** | TETEMJEN | MOLUNGKIMONG | 8729913887 | 8(NOT REGISTERED) | LOCALLY MADE BISCUITS | LOCAL MARKET, SUPPLIED TO TULI AND DIMAPUR | 0.6 |
| **6** | KONGYALA | MOLUNGKIMONG | 7085409209 | 10(NOT REGISTERED) | DONUTS | LOCAL MARKET | 0.3 |
| **7** | BENDANGRENLA (REDISEN) | WAROMONG | 9612207742 | 10(NOT REGISTERED) | DONUTS, TREE BEAN PICKLE, NIGHTSHADE PICKLE, BAMBOO SHOOT PICKLE | LOCAL MARKET | 0.2 |
| **8** | TIAMONGLA (LONGKA) | YIMCHENKIMONG | 8974121895 | 10(NOT REGISTERED) | TREE BEAN PICKLE, NIGHTSHADE PICKLE, MEAT PICKLE | LOCAL MARKET | 0.02 |
| **9** | LANLIA | CHANGKI | 7005267237 | 10(NOT REGISTERED) | LOCALLY MADE BISCUITS | LOCAL MARKET | 0.2 |
| **10** | TIANOCHETLA (MOLUNGAJEM) | CHANGKI | 7085609827 | 10(NOT REGISTERED) | PUFFED RICE BISCUIT | LOCAL MARKET | 0.1 |
| **11** | TEKANUNGLA (LANLIA) | CHANGKI | 9402697162 | 10(NOT REGISTERED) | LOCALLY MADE BISCUITS | LOCAL MARKET | 0.05 |
| **12** | WASEN | CHUNGLIYIMSEN | 8731006919 | 8(NOT REGISTERED) | NAMKEEN | LOCAL MARKET | 0.3 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| **13** | TEMSURENLA (MOLUNGTOK) | CHUNGLIYIMSEN | 8259825115 | 8(NOT REGISTERED) | KING CHILLY PICKLE, CHILLY PICKLE, TREE BEAN PICKLE, NIGHTSHADE PICKLE, MEAT PICKLE | LOCAL MARKET | 0.1 |
| **14** | BENDANGNARO (MOLUNGTOK) | CHUNGLIYIMSEN | 9612129436 | 8(NOT REGISTERED) | NAMKEEN | LOCAL MARKET | 0.3 |
| **15** | MERANGTI SHG | WAMEKEN VILLAGE | TEMSULILA/708543007 | 5(NOT REGISTERED) | GREEN CHILLI PICKLE AND MANGO PICKLE | 50/- PER PACKET | 0.03 |
| **16** | MOLUNGAJEM SHG | WAMEKEN VILLAGE | WAIKALA/9402460876 | 8(NOT REGISTERED) | TREE BEAN PICKLE (YONGCHAK) | 50/- PER PACKET | 0.02 |
| **17** | TELONGJEM SHG | KANGTSUNG YIMSEN | IMLINUNGLA/9366734627 | 7(NOT REGISTERED) | TREE BEAN PICKLE (YONGCHAK) | 20/- PER PACKET | 0.03 |
| **18** | NUKSHILAR SHG | KANGTSUNG YIMSEN VILLAGE | JAMIKUMLA/8132034898 | 8(NOT REGISTERED) | DRIED YAM LEAF (ANISHE) | 400/- PER KG | 0.05 |
| **19** | RONGMALAR SHG | KANGTSUNG VILLAGE | IMWATILA/7630830384 | 8(NOT REGISTERED) | STICKY RICE | 30-50/-PER PACKET | 0.03 |
| **20** | SUNGTIBEN SHG | KANGTSUNG VILLAGE | SEMERCHILA/8974738263 | 8(NOT REGISTERED) | TREE BEAN, KING CHILLI, LOCAL CHILLI | 85-120/- PER PACKET | 0.08 |
| **21** | ZARIFET | ANAKI | MEYIKANGL | 8(NOT | TAMARIND PICKLE | 50-100/- PER | 0.05 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | SHG | YIMSEN VILLAGE | A/6009251941 | REGISTERED) | | PACKET | |
| **22** | MERANGLAR SHG | ANAKI YIMSEN VILLAGE | NUKLUMENSU/9366839336 | 8(NOT REGISTERED) | STICKY RICE | 30/- -50/-PER PACKET | 0.03 |
| **23** | SHARON SHG | ANAKI YIMSEN VILLAGE | MOAMENLA/9365469321 | 10(NOT REGISTERED) | STICKY RICE | 30/- -50/-PER PACKET | 0.02 |
| **24** | MEDEMLAR | MOLUNGYIMSEN B VILLAGE | ODIKALA/ 9612313902 | 8(NOT REGISTERED) | WILD BERRIES AND OTHER FRUITS | 50/- PER PACKET | 0.03 |
| **25** | BENDENLAR | YAJANG C | 9361223080 | 8(NOT REGISTERED) | FRUIT JAM-CHINESE BAYBERRY, ORANGE, ROSELLE | FRUIT JAM-RS 50/350G | FRUIT JAM-0.15 |
| | | | | | FRUIT JUICE- LEMON,LIME, ORANGE, CHINESE BAYBERRY, ROSELLE | FRUIT JUICE-RS 100/750ML | FRUIT JUICE-0.3 |
| | | | | | PICKLE MAKING- TREE BEAN, BER, BAMBOO SHOOT | PICKLE- RS-100/200G | PICKLE-0.03 |
| | | | | | | MARKET-YAJANG C | |
| **26** | MODEL | YAJANG A | 6009419476 | 9(NOT REGISTERED) | BANANA CHIPS | RS 20/250G | 1.3 |
| | | | | | | MARKET-YAJANG A,YAJANG B,YAJANG C | |
| **27** | NUKLASEN | NOKPU | 8131065334 | 8(NOT REGISTERED) | JALEBI, SAMOSA, SWEET BISCUIT | RS30/200G MARKET-NOKPU | 0.9 |
| **28** | AONOKP | AONOKPU | 8787533607 | 7(NOT | BANANA CHIPS | RS20/250G | 1T |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | U JONGKOMEN | | | REGISTERED) | | MARKET-AONOKPU | |
| 29 | MULUNGTET | NOKPU | 6009900845 | 10(NOT REGISTERED) | LEMON JUICE | FRUIT JUICE-RS 100/750ML<br>MARKET-NOKPU | 0.12 |
| 30 | TZUSA SHG | KELINGMEN | 8732028334 | NOT REGISTERED | ANISHI , DRIED BAMBOOSHOOT, BANANA CHIPS,DEHYDRATED BANANA CHIPS, BAMBOO SHOOT WATER. | CTN TOWN | 500 KG, 150 KG, 1000 PACKETS,500 PACKETS, 500 LITRES |
| 31 | TZUSA SHG | KELINGMEN | 8414831504 | NOT REGISTERED | | | |
| 32 | TZUSA SHG | KELINGMEN | 6009902429 | NOT REGISTERED | | | |
| 33 | TZUSA SHG | KELINGMEN | | NOT REGISTERED | | | |
| 34 | TZUSA SHG | KELINGMEN | | NOT REGISTERED | | | |
| 35 | TZUSA SHG | KELINGMEN | 9862495545 | NOT REGISTERED | | | |
| 36 | TZUSA SHG | KELINGMEN | | NOT REGISTERE | | | |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | | | | D | | | |
| **37** | TZUSA SHG | KELINGMEN | | NOT REGISTERED | | | |
| **38** | TZUSA SHG | KELINGMEN | 8974853458 | NOT REGISTERED | | | |
| **39** | TZUSA SHG | KELINGMEN | 8732009092 | NOT REGISTERED | | | |
| **40** | WAROTSUBO SHG | CHANGTONGYA OLD | 9612479202 | NOT REGISTERED | TREE BEAN PICKLE, WILD BAY BERRY PICKLE | WITHIN THE DISTRICT | 20 KG, 15 KG |
| **41** | WAROTSUBO SHG | CHANGTONGYA OLD | 9612280512 | NOT REGISTERED | | | |
| **42** | WAROTSUBO SHG | CHANGTONGYA OLD | 8974121936 | NOT REGISTERED | | | |
| **43** | WAROTSUBO SHG | CHANGTONGYA OLD | 9862453629 | NOT REGISTERED | | | |
| **44** | WAROTSUBO SHG | CHANGTONGYA OLD | 8730661575 | NOT REGISTERED | | | |
| **45** | WAROTSUBO SHG | CHANGTONGYA OLD | 8729804730 | NOT REGISTERED | | | |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| **46** | WAROTSUBO SHG | CHANGTONGYA OLD | 9612902466 | NOT REGISTERED | | | |
| **47** | JINOKER SHG | CHANGTONGYA OLD | 8415824885 | NOT REGISTERED | BANANA CHIPS | CTN TOWN, MKG TOWN,DIMAPUR | 250 KG |
| **48** | MANGKOTERONG SHG | CHANGTONGYA OLD | 9862329240 | NOT REGISTERED | BANANA CHIPS | CTN TOWN, MKG TOWN | 300 KG |
| **49** | JINOKER SHG | CHANGTONGYA OLD | 9366564773 | NOT REGISTERED | BANANA CHIPS | CTN TOWN, MKG TOWN | 100KG |
| **50** | YIMKUMLAR | LIROYIM | 7005949563 | REGISTERED | BANANA CHIPS | CTN TOWN, MKG TOWN,DIMAPUR | 500 KG |
| **51** | FRONTIERS SHG | NUKSHIYIM | 9366463416 | REGISTERED | BAKERY | DIMAPUR | 500 KG |
| **52** | FRONTIERS SHG | NUKSHIYIM | 9612202340 | NOT REGISTERED | JAGGERY | ALL OVER NAGALAND | 500 KG |
| **53** | NUKLAYUR SHG | NUKSHIYIM | 8974943208 | NOT REGISTERED | FRUIT JUICE | ALL OVER NAGALAND | 500 LITRES |
| **54** | MERANGLAR 1 | NUKSHIYIM | 9612316976 | NOT REGISTERED | BANANA CHIPS | WITHIN THE DISTRICT | 1000 PCK |
| **55** | MERANGLAR 1 | NUKSHIYIM | 9612128694 | NOT REGISTERED | BANANA CHIPS | WITHIN THE DISTRICT | 1000 PCK |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| **56** | MERAN GLAR 2 | LIROYIM | 8729926118 | NOT REGISTERED | BANANA CHIPS | ALL OVER NAGALAND | 1000 PCK |
| **57** | YIMKUM LAR | LIROYIM | 9612871580 | NOT REGISTERED | BANANA CHIPS | DISTRICT | 1000 PCK |
| **58** | YIMKUM LAR | LIROYIM | 8787558447 | NOT REGISTERED | BANANA CHIPS | | |
| **59** | LIRUME DEM | CHUCHU-YIMLANG | 9366149300 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **60** | SENTIM OLUNG | CHUCHU-YIMLANG | 8415881847 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.04 |
| **61** | KINUNG ER | CHUCHU-YIMLANG | 8119823780 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **62** | LONGZU NG | CHUCHU-YIMLANG | 7005758886 | 9(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **63** | OBANGJ EM | CHUCHU-YIMLANG | 8414042243 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, | 0.06 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | | | | | | WHOLESALE | |
| **64** | SEVEN COLOURS | CHUCHU-YIMLANG | 8575754192 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **65** | ZUNGAPANGJUNG | CHUCHU-YIMLANG | 8787749395 | 10(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **66** | ABENSA | CHUCHU-YIMLANG | 9862609995 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.06 |
| **67** | SUMETEM | CHUCHU-YIMLANG | 8731925236 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.07 |
| **68** | TIMSUR | CHUCHU-YIMLANG | 9366659708 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **69** | TSUKMENATSU | CHUCHU-YIMLANG | 7005045756 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.06 |
| **70** | ADONAI | CHUCHU-YIMLANG | 7085611154 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, | 0.07 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | | | | | | WHOLESALE | |
| **71** | ONENDONG | CHUCHU-YIMLANG | 8837452771 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.08 |
| **72** | ALUZUNGA | CHUCHU-YIMLANG | 9366563978 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.05 |
| **73** | APITET | MONGSEN YIMTI | 8730917930 | 5(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY, WITHIN THE VILLAGE, WHOLESALE | 0.06 |
| **74** | TEINTET | MONGSEN YIMTI | 9856437855 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | WITHIN THE VILLAGE, NEARBY TOWNS | 0.06 |
| **75** | MULUNGTOK | MONGSEN YIMTI | 7628832023 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | WITHIN THE VILLAGE, NEARBY TOWNS | 0.06 |
| **76** | MERANGTET | MONGSEN YIMTI | 9612632615 | 9(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.06 |
| **77** | LESU | MONGSEN YIMTI | 9612292415 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **78** | TESHIMT | MONGSEN | 9862902776 | 8(NOT | PICKLE, CAKE, BISCUITS | SALES | 0.07 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | ET | YIMTI | | REGISTERED) | | DAY/WHOLESALE/ WITHIN THE VILLAGE | |
| **79** | HOR | MONGSEN YIMTI | 9612783617 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **80** | MERASEN | MONGSEN YIMTI | 6009156816 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **81** | LONGJEMNARO | CHAKPA | 8730061521 | 8(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **82** | ESTHER | CHAKPA | 8414843718 | 10(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **83** | EDEN | CHAKPA | 8787376238 | 11(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **84** | LONGZUNG | LONGKONG | 8415827188 | 7(NOT REGISTERED) | PICKLE, CAKE, BISCUITS | SALES DAY/WHOLESALE/ WITHIN THE VILLAGE | 0.07 |
| **85** | PENZUT | LONGKON | 8731830261 | 6(NOT | PICKLE, CAKE, BISCUITS | WITHIN THE | 0.07 |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | ONG | G | | REGISTERED) | | VILLAGE, NEARBY TOWNS | |
| **86** | ALENBANG | SUNGRATSU | 9612821187 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **87** | LUYIMER | SUNGRATSU | 8729804683 | NO | ANISHI/NUOSHI CAKE, PICKLES, BISCUITS | BASED ON ORDERS, SALES DAY | 1T 500 PACKETS (RS 20/ PACKET) |
| **88** | MEDEMER | SUNGRATSU | 9612810152 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **89** | BANGALOW | SUNGRATSU | 8974854218 | NO | ANISHI/NUOSHI CAKE, PICKLES, BISCUITS | BASED ON ORDERS, SALES DAY | 1T 500 PACKETS (RS 20/ PACKET) |
| **90** | 7-SISTERS | SUNGRATSU | 9615622957 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **91** | TAREBI | SUNGRATSU | 8119031240 | NO | ANISHI/NUOSHI CAKE, PICKLES, BISCUITS | BASED ON ORDERS, SALES DAY | 1T 500 PACKETS (RS 20/ PACKET) |
| **92** | LIDIA | SUNGRATSU | 7085293352 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **93** | TABITHA | SUNGRATSU | 8615239757 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **94** | KONGER BENJEM | SUNGRATSU | 8415947044 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS |

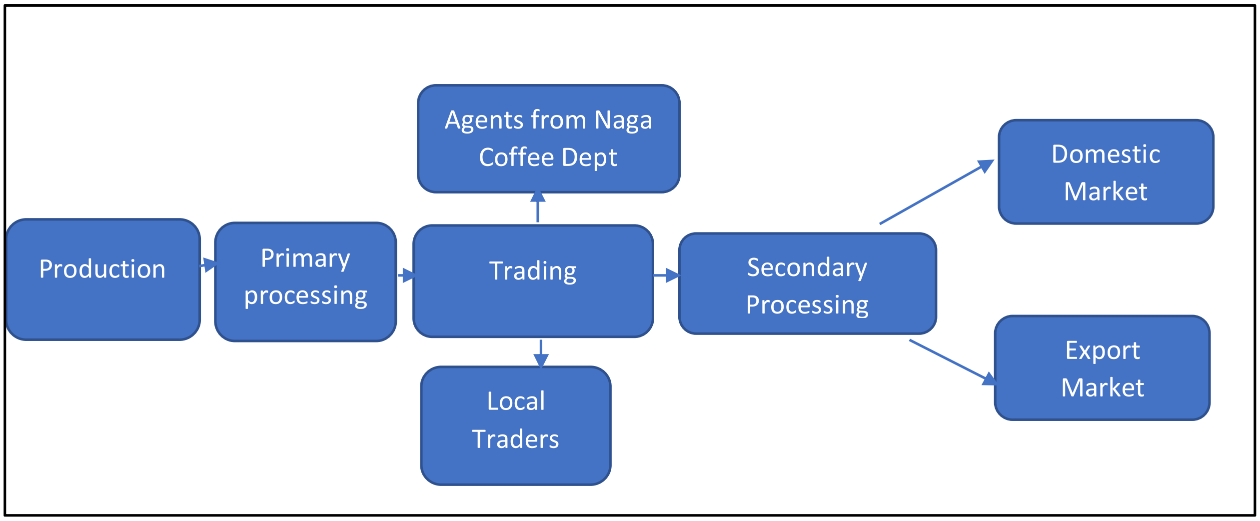
| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| | | | | | | | (RS 20/ PACKET) |
| **95** | YIMSEN | SUNGRATSU | 9862416284 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **96** | ANAK | SUNGRATSU | 7085296337 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **97** | SENDEN | SUNGRATSU | 9615446457 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **98** | MERAN GLAR | SUNGRATSU | 9862129997 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **99** | AWATSUNG | SUNGRATSU | 9612238132 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **100** | MEDEM TSUR | SUNGRATSU | 8837283742 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **101** | TELONGJEM | SUNGRATSU | 8730957062 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **102** | SHISAAJEM | SUNGRATSU | 9378166163 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **103** | LONGJEM | SUNGRATSU | 9612690256 | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1000KG |

| SL.NO | NAME OF THE SHG | LOCATION | CONTACT DETAILS | TOTAL NO OF REGISTERED MEMBERS | PRODUCES/ PRODUCTS MANUFACTURED | MARKETING DETAILS OF PRODUCES/PRODUCTS | SCALES OF PRODUCTION (IN MT) |
|---|---|---|---|---|---|---|---|
| **104** | MULON GAJEM | SUNGRATSU | | NO | ANISHI/NUOSHI CAKE | BASED ON ORDERS | 1T 500 PACKETS (RS 20/ PACKET) |
| **105** | ESA | LONGJANG | 8837211448 | NO | BISCUITS | SALES DAY IN THE VILLAGE ITSELF | 1,200 PACKETS (RS 20/PACKET) |
| **106** | ALIMAN GJANG | LONGJANG | | NO | PICKLES | SALES DAY IN THE VILLAGE ITSELF | 320 PACKETS (RS 20/ PACKET) |
| **107** | YIMSON GKONG | LONGJANG | | NO | BISCUITS | SALES DAY IN THE VILLAGE ITSELF | 5000 PACKETS (RS 20/ PACKET) |
| **108** | UNITED | LONGJANG | 8837429539 | NO | CAKES, BISCUITS, PICKLES | BASED ON ORDERS, SALES DAY | 350 CAKES (RS 100/CAKE), 480 PACKETS (RS 20/ PACKET) |
| **109** | SIMON | CHAMI | 9612825890 | NO | PICKLES, CHIPS | BASED ON ORDERS, SALES DAY | 3500 PACKETS (RS 60 OR 100/ PACKET) |

### xiii. Sale of this product to other districts, states and exported to other countries

Out of the total coffee processed in the district of Mokokchung almost 70-80% is sold into domestic market while 20-30% is exported to South Africa & Dubai.

### xiv. Mapping the value chain aspects




Coffee growers take production of coffee in the district. After that Primary processing occur in the district itself. Harvesting, cleaning, pulping with dry or wet method, soaking in the water & drying in the yards are the activities involved in primary processing. It occurs it the district itself. Then Dry cherry & parchment coffee is sold to either local traders or agent from Naga coffee. Then it goes to Dimapur district for further secondary processing. And after that it goes for export market or domestic market for consumption.

### xv. Understanding the Infrastructure constraints faced by Micro Enterprises:

There are some Infrastructure constraints which household, small, micro enterprises are facing are they badly require warehouses cold and normal, coffee processing is labour intensive process, require both skill & unskilled labours. Training is essential to workers to adopt new technology. Drying yards, new machinery for the processing of coffee is required. Lack of good quality road is the basic infrastructure constraint in the area.
We tried to summarize all the constrains in below table:

| Infrastructure | Up-gradation proposals |
|---|---|
| **A) Public Infrastructure** | Due to poor quality of roads it becomes difficult to reach the product outside the district & state. This is also restricting innovative growers to enter into processing activities. To overcome this issue state and central government should build/construct good roadways to connect nearby districts as well as states, which will reduce the transportation loss and encourage growers, SHGs, FPOs to enter into processing activity. |
| **B) Common facilities** | In present situation, minimal processing happens in the district. Coffee bean extractor, Centrifuge can be made available through common infrastructure. |
| **C) Testing facilities** | Due to poor public infrastructure and common infrastructure facilities scale of the industry is small and there is no testing facilities available in district due to above reason. Once above suggested plan (Point A and B) is implemented then there will be more processors, will actively involve incoffee processing and then they will show interest on testing the product to Market their produce in competitive way and also to sustain in market because every consumer will look whether the product is tested or not. Yes, there is a need for laboratories and equipments for testing the product in future. |
| **D) Safety standards** | Regular safety standard and quality check for processed product is required to ensure about the quality of product produced to consumers. |

### xvi. Mapping the market potential of FPI micro enterprises

Mokokchung district has potential for coffee processing, as most of the product is sent to Dimapur district for further processing. If the processing facilities have increased in the district itself then there is no need to go outside for processing.

## D. Mapping the Firm level issues

| Issue | Remark |
|---|---|
| **Lack of Awareness** | Farmers need to aware about schemes available from MOFPI & coffee board to boost up coffee cultivation in the state. People in the district are even unaware of the concept of ODOP. Hence people are unable to take advantage of schemes & subsides by government in coffee cultivation & processing. |
| **Common infrastructure facilities** | Access to common facilities such as grading, sorting, packaging, cold chain facilities etc. Almost 86% respondent mentioned that government should make available common infrastructure facilities like warehouses, cold storage. Machines for grading, sorting, packaging should be there. Drying yards to be there for processing. Climate and local infrastructure (electricity and water supply) play a crucial role in the quality of the post-harvest process. The small growers in the region lack proper storage facilities. Further, the storage and transportation conditions being the major concern has an influence on the quality of green beans as it can increase the moisture content and also resulting whitening the beans. |
| **Testing facilities** | Need to improve testing facilities required for good quality coffee beans. |
| **Skilled workers** | Coffee cultivation & processing both are labour intensie activities. To increase the productivity, it is necessary to train labours in the district. Almost 1125 workers are involved in coffee processing in the district. |
| **Financial assistance** | Almost every respondent mentioned the need of finance for buying new machineries, adoption of new technology, expansion of existing unit. |

# II. Detailed cluster study:

## 1. Industry and Market Analysis

### 1.1 Introduction

Coffee is an important commercial crop of the tropics and is the native of tropical rain forests of Ethiopia and Central Africa. It is of great significance in the world economy as the largest single commodity entering the international trade, after petroleum and petroleum products and it is being grown in more than 80 countries. The reports of International Coffee organization detail that coffee is supporting millions of small farmers and creates enormous employment opportunities in rural areas. The importance of coffee as an export driven commodity can be judged from the fact that a major quantity of world production of coffee is diverted towards worlds exports.

Botanically, coffee belongs to the family Rubiaceae. Two important economic species of coffee grown across the world are Arabica (*Coffea arabica*) and Robusta (*Coffea robusta*) which accounts for more than 70 percent of world production. Major Coffee growing countries have been distinguished under four regions: Africa, North and Central America, South America, Asia and Oceania regions.

### 1.2 Nutritive Value & Health Benefits of the product

Many of the nutrients in coffee beans make their way into the finished brewed coffee.

A single cup of coffee contains (21):

- Riboflavin (vitamin B2): 11% of the Reference Daily Intake (RDI).
- Pantothenic acid (vitamin B5): 6% of the RDI.
- Manganese and potassium: 3% of the RDI.
- Magnesium and niacin (vitamin B3): 2% of the RDI.

Other health benefits of coffee are enlisted below:

- Can Improve Energy Levels
- Can Help to Burn Fat
- Can Improve Physical Performance
- May lower risk of Type 2 Diabetes
- May protect from Alzheimer's Disease and Dementia
- Can Fight Depression
- Doesn't Cause Heart Disease and May Lower Stroke Risk

### 1.3 Global Market for the Product:

Brazil ranks first globally, in case of both acreage & production of coffee while Vietnam is at second position in production due to its high productivity. India is at seventh position in terms of production.

**Table 14: Global Coffee Production and Acreage**

| Country | Production (Tons) | Acreage (Ha) | Yield (Kg/Ha) |
|---|---|---|---|
| **Brazil** | 3019051 | 1994761 | 1514 |
| **Vietnam** | 1460800 | 597597 | 2445 |
| **Colombia** | 745084 | 865889 | 861 |
| **Indonesia** | 639305 | 1228512 | 520 |
| **Ethiopia** | 469091 | 700475 | 670 |
| **Honduras** | 362367 | 382662 | 947 |
| **India** | 348000 | 397000 | 877 |
| **Peru** | 277760 | 383973 | 723 |
| **Guatemala** | 236145 | 274177 | 861 |
| **Uganda** | 203535 | 383496 | 531 |

### Global Coffee Exports

India’s coffee exports for 2021-22, USDA said, are estimated at 5.68 million bags (3.40 lakh tonnes) due to robust demand from Europe and the United States. This export increase will lead to tighter stocks, the USDA said.

Coffee imports for re-exports are also seen higher at 1.42 million bags (85,200 tonnes) compared with 1.39 million bags (83,400 tonnes) in 2020-21.USDA estimates India’s domestic coffee consumption to be marginally higher at 1.2 million bags (72,000 tonnes) during 2021-22, driven by at-home consumption as the hospitality sector remains closed due to Covid-19 lockdown measures. The domestic consumption stood at 1.18 million bags (70,800 tonnes) during 2020-21, USDA said.

Worldwide coffee exports from all countries totaled US$31.4 billion in 2020, increasing by 3.6% over the five-year period starting in 2016 when globally exported coffee was worth $30.3 billion. Year over year, the value of globally exported coffee gained 5.8% from 2019 to 2020.

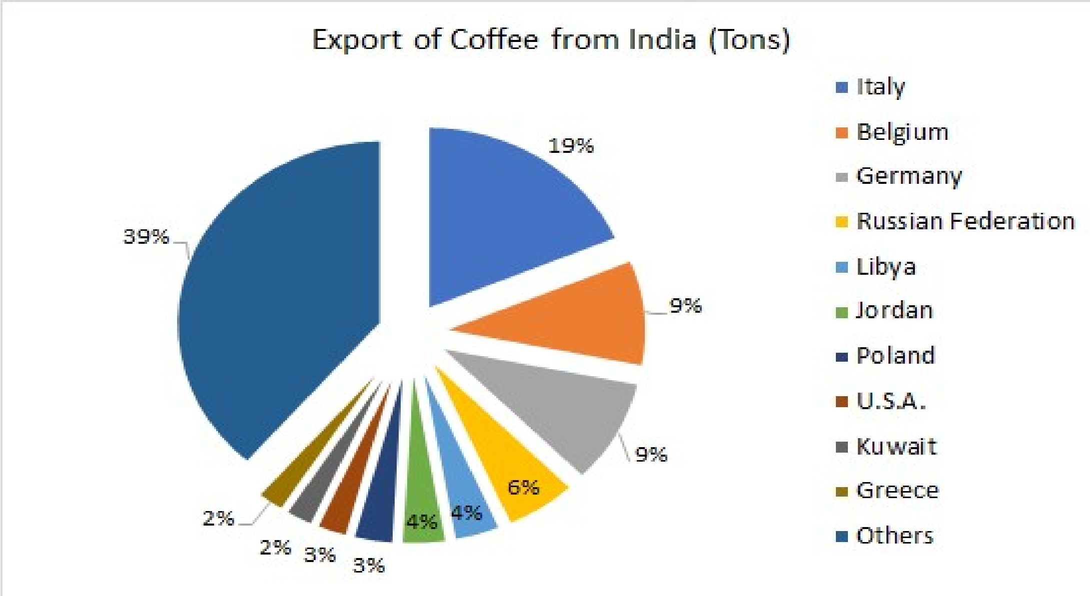
The 5 biggest coffee shippers (Brazil, Switzerland, Germany, Colombia, Vietnam) account for almost half (48.8%) of all exported coffee in the latest annual reporting period.

From a continental perspective, Europe sold the highest dollar value worth of exported coffee on international markets in 2020 with total shipments valued at $12.6 billion or 40.1% of the overall value. Close behind in second place at 34.9% was Latin America excluding Mexico but including the Caribbean, ahead of coffee suppliers in Asia at 13%.

Smaller percentages were generated by providers in Africa (6.4%), North America (5.2%), and Oceania (0.5%) led by Papua New Guinea then Australia.

| Country | Value | % Share |
|---|---|---|
| **Brazil** | US$5 billion | 15.9% of total coffee exports |
| **Switzerland** | $2.9 billion | 9.10% |
| **Germany** | $2.6 billion | 8.20% |
| **Colombia** | $2.5 billion | 8.00% |
| **Vietnam** | $2.3 billion | 7.50% |
| **Italy** | $1.7 billion | 5.40% |
| **France** | $1.5 billion | 4.80% |
| **Honduras** | $1.1 billion | 3.50% |
| **Belgium** | $904.8 million | 2.90% |
| **Indonesia** | $821.9 million | 2.60% |
| **Netherlands** | $810.7 million | 2.60% |
| **Ethiopia** | $795.8 million | 2.50% |
| **United States** | $785.6 million | 2.50% |
| **Guatemala** | $653.3 million | 2.10% |
| **Peru** | $640.7 million | 2.00% |

**Figure 6: Country-wise export of Coffee during 01/01/2021 TO 15/07/2021 from India**




Source- Coffee Board
Italy (19%) is the major contributor in export of Indian coffee followed by Belgium (10%)

## 1.4 Indian Market & Valuation for the Product

Indian coffee is known for the world's best shade-grown 'mild' coffees since most of the coffee cultivation is under shade in India. Unlike in Mexico, Brazil, Uganda where coffee is cultivated under open conditions 'Sun coffee'. It occupies a place of pride among plantation crops in India. Coffee grown here is typically mild and not too acidic and possesses an exotic full-bodiedtaste with a fine aroma. In spite of huge domestic consumption, a large amount, 75 percent of the coffee produced in India is annually exported to the international markets mainly to Europe, Far East and North America.

In India, coffee is the second most important beverage crop next only to tea. In the international market, Indian coffee has created a niche for itself. The Indian Robusta is highly preferred for its excellent blending quality. However, India contributes only a small portion of the world's coffee production (around 2.5%). The two main varieties in India are Coffee Arabica and Coffee Robusta - with 49% and 51% share of cultivation area respectively.

Favorable topography and climatic conditions have enabled the growth of coffee beans in the Southern and North-east regions of the country.

Over a 50-year period, coffee has made significant contribution to the Indian economy among other plantation crops. Currently, there are over 52,000 coffee gardens generating employment opportunities to 2.5 million persons.

Tata coffee, owned by Tata Global Beverages is the one of the key market players in the coffee sector. The company which is a subsidiary of Tata Group owns 19 coffee estates in South India and is one of the largest coffee plantation companies in Asia. Tata coffee's partnership with Starbucks and acquisition of Eight O'clock Coffee in the US has paved way for the growth of Indian coffee internationally.

While coffee consumption in the country grew at an average rate of 2 percent per annum in the 50 years leading up to 2000, it has since picked up and has been growing at about 5 percent per annum since the turn of the century. It is estimated that India now consumes 120,000 tons of coffee per year.

Coffee consumption in India would double during the next five to six years, with this growth being led by out-of-home consumption. Moving forward, the rise of coffee-related businesses may see this drink's consumption surge even further cap coffee's growth. Consumption at home, too, could see exponential growth.

### 1.5 Manufacturing Process

Processing of coffee in India is accomplished using two methods,

a) Dry processing - Dry processing is the traditional method of drying in the sun which is retains flavor producing fruit characteristics.

b) Wet processing - In the wet processing method, coffee beans are fermented and washed, which is the preferred method for improved yields. As to the wet processing, the beans are subject to cleaning to segregate defective seeds. The beans of different varieties and sizes are then blended to derive the best flavor.

The next procedure is to roast either through roasters or individual roasters. Then the roasted coffee is ground to appropriate sizes.

If the beans have been processed by the wet method, the pulped and fermented beans must now be dried to approximately 11% moisture to properly prepare them for storage. These beans, still inside the parchment envelope (the endocarp), can be sun-dried by spreading them on drying tables or floors, where they are turned regularly, or they can be machine-dried in large tumblers. The dried beans are known as parchment coffee, and are warehoused in jute or sisal bags until they are readied for export.

Before being exported, parchment coffee is processed in the following manner:

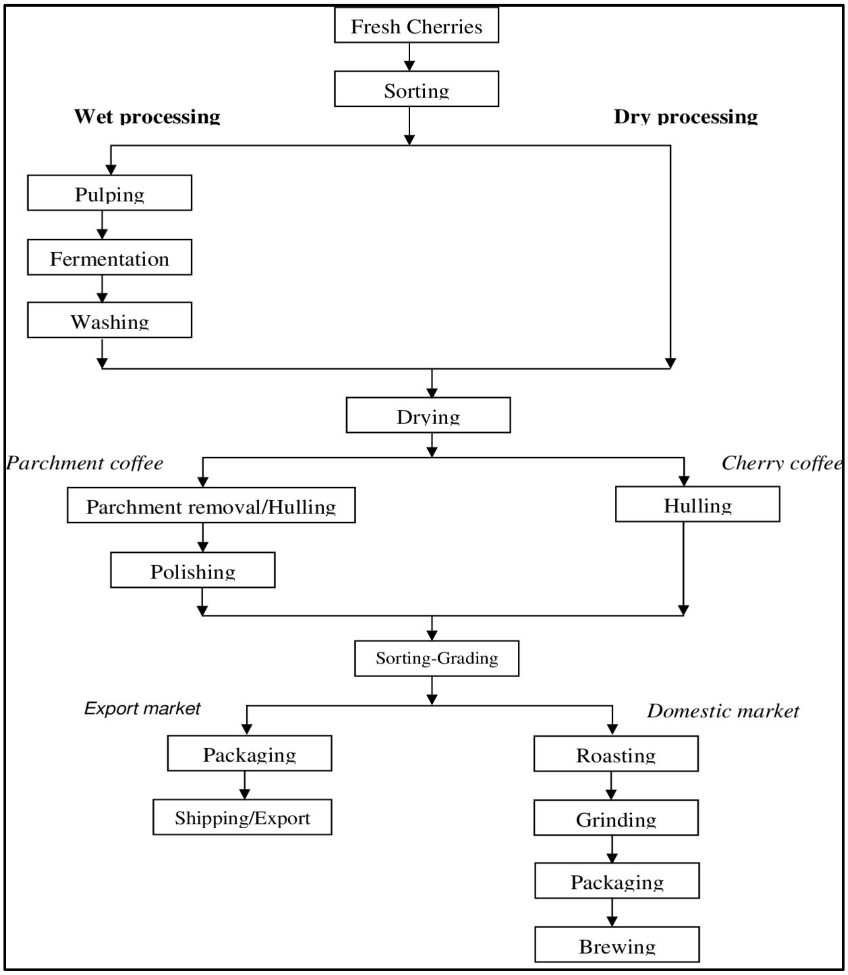
Hulling machinery removes the parchment layer (endocarp) from wet processed coffee. Hulling dry processed coffee refers to removing the entire dried husk — the exocarp, mesocarp and endocarp — of the dried cherries. Polishing is an optional process where any silver skin that remains on the beans after hulling is removed by machine. While polished beans are considered superior to unpolished ones, in reality, there is little difference between the two.

Grading and Sorting is done by size and weight, and beans are also reviewed for color flaws or other imperfections.

Beans are sized by being passed through a series of screens. They are also sorted pneumatically by using an air jet to separate heavy from light beans.

Typically, the bean size is represented on a scale of 10 to 20. The number represents the size of a round hole's diameter in terms of 1/64's of an inch. A number 10 bean would be the approximate size of a hole in a diameter of 10/64 of an inch, and a number 15 bean, 15/64 of an inch. Finally, defective beans are removed either by hand or by machinery. Beans that are unsatisfactory due to deficiencies (unacceptable size or color, over-fermented beans, insect-damaged, unhulled) are removed. In many countries, this process is done both by machine and by hand, ensuring that only the finest quality coffee beans are exported**.**

### Processing Flow Chart




**Machinery required for coffee powder:**

**Coffee powder: Capacity 40 MT/ per year**

| S. No | Equipment | Capacity | Quantity | Unit cost | Amount (Lakhs) |
|---|---|---|---|---|---|
| **1** | Coffee beans extractor | 4 Kg/Hr | 4 | 47500 | 1.90 |
| **2** | Centrifuge | 20 Kg/hr | 2 | 56000 | 1.12 |
| **3** | Coffee bean roaster | 20 Kg/Hr | 2 | 500000 | 10 |
| **4** | Grinder | 15 Kg/Hr | 2 | 85000 | 1.70 |
| **5** | Packaging machinery | 2000 Pack/hr | 1 | 650000 | 6.5 |
| **6** | Miscellaneous | | | 40000 | 0.40 |
| | **Total** | | | | **21.62** |

**Source- PMFME training material**

### 1.6 Test done for the Product – Collected by interactions with FSSAI personnel.

Quality of coffee is referred in respect to color, size, appearance, and flavor with acidic aroma. The quality of the final product depends upon the pre-harvesting and postharvestingactivities. Taste of coffee is affected firstly by altitude, shade, variety and soilat the pre-harvest level. However, there are also important issues regarding diseases andinsects having a great effect on the product quality obtained at the end. Also, Harvest andpost-harvest process has a strong influence on the generic quality of the coffee beans.Depending on the maturity of the fruit; the final taste of the product is affected. Thepicking of ripe fruits or slightly over-ripe fruits brings a fruity taste to coffee.At the post harvest level, practices adopted like sorting, pulping, fermentation, washing,drying, storage, packing and processing including hulling and grading activities have adirect bearing on the final quality of coffee. Often, the beans produced are washed orhulled in the plantations and mostly dried or semi-dried beans are sold to the agents or thecuring works.

In the recent years, the safe moisture content is essential to maintain thequality which otherwise results in mould contamination. The mould contamination hasbeen to be toxic to the human health mainly the kidney. The optimum moisture content inthe dry cherry and parchment is up to 12 to 13 percent(Coffee Board) Also, the berryborer infected beans affect the quality and does not fetch any value in the market.

Furthermore, the fermentation process as well as the cut of the beans resulting whilepulping of cherries might avoid the coffee with good intrinsic qualities. Indeed, thequality of coffee not only depends on management practices during the production butalso on the uniformity in environmental conditions coupled with best practices in theharvesting and post-harvesting process.

Chemical testing for coffee includes ochratoxin A, caffeine, nutrient analysis, microbiological analysis, and pesticides. Other tests that may be performed on roasted coffee are caffeine, chlorogenic acids, lipids, carbohydrates, total polyphenols, total proteins, and mycotoxins.

## 2. District Profiling

There are 105 Grampanchayat in the district. There are almost 17 units of coffee processing in the district. Out of which most of the located at Khar village as it is highest coffee producing village in the district. However, there is no specific farmers organization or cluster for coffee processing in the district.

### 2.1 and 2.2 Demographic and Socio- economic profiling

According to the 2011 census Mokokchung District has a population of 1,93,171. Mokokchung has a sex ratio of 925 females for every 1000 males, and a literacy rate of 92.68 %.

| Sr No | Particular | Year | Unit | Statistics |
|---|---|---|---|---|

| Sr No | Particular | Year | Unit | Statistics |
|---|---|---|---|---|
| **1** | Geographical features | | | |
| **A** | Geographical Data | | | |
| | i) Latitude | | | 26.20 and 26.77 degrees north latitude |
| | ii) Longitude | | | 94.29 and 94.76 degrees east |
| | iii) Geographical Area | | Hectares | 161500 |
| **B** | Administrative units | | | |
| | i) Sub Divisions | | | |
| | ii) Tehsil | | | 6 |
| | iii) Sub-Tehsil | | | |
| | iv) Patwar circle | | | 8 |
| | v) Panchayat Simitis | | | |
| | vi) Nagar Nigam | | | |
| | vii) Nagar Palika | | | |
| | viii) Gram Panchayats | | Nos | 105 |
| | ix) Revenue Villages | | Nos | 105 |
| | x) Assembly Area | | Nos | 10 |
| **2** | Population | | | |
| **A** | Sex wise | | | |
| | i) Male (Urban) | 2011 | Nos | 29701 |
| | ii) Female (Urban) | 2011 | Nos | 25953 |
| **B** | i) Male (Rural) | 2011 | Nos | 70528 |
| | ii) Female (Rural) | 2011 | Nos | 66989 |
| **3** | Agriculture | | | |
| **A** | Land Utilization | | | |
| | i) Total Area | 2011 | Ha | 161500 |
| | ii) Forest cover | | Ha | 28976.79 |
| | iii) Non Agriculture Land | | Ha | 129011.21 |
| | iv)Cultivation Barren Land | | Ha | 35120 |
| **4** | Forest | | Ha | 28976.79 |
| | **Railways** | | | |
| | i) Length of rail line | 2010-11 | Kms | Nil |
| | **Roads** | | | |
| | a)National Highway | 2010-11 | Kms | 135 |
| | b) State Highway | 2010- | Kms | 129 |

| Sr No | Particular | Year | Unit | Statistics |
|---|---|---|---|---|
| | | 11 | | |
| | c) Main District highway | 2010-11 | Kms | 301 |
| | d) other district | 2010-11 | Kms | 311.50 |
| | e) Rural Road/Agriculture marketing Board Roads | 2010-11 | Kms | 165.83 |
| | f) Kachacha Road | 2010-11 | Kms | 928.30 |
| | **Communication** | | | |
| | a)Telephone connections | 2010-11 | Nos | 45628 |
| | b)Post offices | 2010-11 | Nos | 55 |
| | c) Telephone Centre | 2010-11 | Nos | 6 |
| | d) Density of Telephone | 2010-11 | Nos/1000 person | 45.63 |
| | e) Density of Telephone | 2010-11 | Nos/KM | N/A |
| | f) PCO | 2010-11 | Nos | 5400 |
| | g) PCO-STD | 2010-11 | Nos | 4561 |
| | h) Mobile | 2010-11 | Nos | 64235 |
| | **Public Health** | | | |
| | a)Allopathic Hospital(District Hospital) | 2010-11 | Nos | 1 |
| | b) Beds in Allopathic Hospital | 2010-11 | Nos | 398 |
| | c)Ayurvedic Hospital | 2010-11 | Nos | Nil |
| | d) Beds in AyurvedicHospital | 2010-11 | Nos | Nil |
| | e) Unani Hospitals | 2010-11 | Nos | NA |
| | f) Community Health centre | 2010-11 | Nos | 3 |
| | g) Primary Health Centre | 2010-11 | Nos | 14 |

| Sr No | Particular | Year | Unit | Statistics |
|---|---|---|---|---|
| | h)Dispensaries | 2010-11 | Nos | 2 |
| | i)Sub-Health centre | 2010-11 | Nos | 51 |
| | j)Subsidiary Health Centre | 2010-11 | Nos | Nil |
| | k)Private Hospitals | 2010-11 | Nos | NA |
| | **Banking commercial** | | | |
| | a)Commercial Bank | 2010-11 | Nos | 14 |
| | b)Rural Bank products | 2010-11 | Nos | 1 |
| | c)Co-operative bank products | 2010-11 | Nos | 3 |
| | d)PLDB Branches | 2010-11 | Nos | NA |
| | **IX)Education** | 2010-11 | Nos | |
| | a)Primary School | 2010-11 | Nos | 94 |
| | b)Middle Schools | 2010-11 | Nos | 86 |
| | c)Secondary & senior Secondary Schools | 2010-11 | Nos | 47 |
| | d)Colleges | 2010-11 | Nos | 2 |
| | e) Technical University | 2010-11 | Nos | 1 |

### Industrial Profiling

In Mokokchung district there are altogether around 134 industrial units. Small scale industries provides employment to 1254 people, while large & medium industries provide employment to 270 people.

## 3. Cluster Analysis

- Coffee cultivation & processing occurs in Mokokchung, Zuheboto, Wokha, Mon and Kohima district. Based on 2019-20 data, Mokokchung is the largest producing district with production of 4455 kg parchment coffee which is negligible i.e.0% of the total agriculture production in the district.

- In the Mokokchung district almost 17 coffee producing units are there. Most of the units cater in & around Khar village.
- From plantation point of view, Kohima is doing better than other districts. It has 23,44,551 number of plantations with total 72 villages covered. While processing point of view, Dimapur having advance processing facilities.
- Almost 805 workers in the Mokokchung district are working in coffee processing units
- Coffee from the district is exported to South Africa
- Though coffee is exported from this district, there is less cultivation of coffee in Mokokchung as compared to Kohima. Plantation need to increase in the district so that processing units will also grow proportionally in the district.
- There are schemes from coffee board which supports the coffee growers & processors. However, there is very less awareness about these schemes & subsidies to the people in the district.
- There are clusters available in the district for other commodities, however not for coffee products.

### 3.1 Turnover & Employment

- Average turnover for household unit is about 2.62 lakh, for small unit it is about 2.5 lakh.
- About 17 coffee processing units are there in the district which gives employment to around 805 workers in the district.
- Parchment coffee is sold at around Rs 200 per kg while price for dry cherry is Rs 90-100 per kg

### 3.2 Social Economic Profiles of the ODOP Producers

- It is observed from primary survey that most of the unit owners belongs to age group of 35 to 60 years and their education level lies from intermediate to post graduation
- Workers age group lies between 20 years to 60 years and they have education up to intermediate.

### 3.3 Infrastructure

Poor quality road is the basic constrain in infrastructure, warehouse for storage, drying yards are other infrastructure requirement in the district. Skilled labour is required for the industry. Training is necessary to the workers. Formal cluster need to formed to gather all processors involved in the coffee processing.

### 3.4 Essential amenities required for the production of the product

**Water-**Water is most essential to process any product and the availability of water is sufficient in the Mokokchung district.

**Electricity-**uninterrupted power supply is witnessed in this district and there is no problem with electricity supply the only problem is tariff.

**Roads-**Good quality roads are not available in the district, this affect the movement of raw material & finished goods.

**Additional infrastructure required**

**Drying Yard-**

Drying is one of the most important steps in the coffee processing. Use of natural sun drying is common method in the coffee processing. Drying is mainly concern for the degradation of the moisture content up to a certain limit 12% (w.b). Drying diminishes the respiration rate of the product and increases the storage time with the minimum possible loss. If the beans are over dried it will be brittle in nature and if moisture content is more than safe storage moisture then there is a probability of mould growth in the beans for further processing. Drying yard is one of the requirement told by respondents in the district.

**Warehouses-**

Warehouses are required for storage of coffee beans. Proper warehouse is essential to get rid of store grain pests.

**Machinery required-**

Most of the respondents mentioned assistance of finance to buy new machineries. Specifically pulping machine need to be there. While advanced technology i.e. latest machineries are also needed to increase the output, quality and to minimize the cost.

**Good quality Roads**

Good quality roads are the basic infrastructure required for any kind of processing industry. This basic infrastructure is lacking in the district. Hence it is required to construct good quality of roads & its proper maintenance.

**The quality parameters being checked for all the raw materials**

- Moisture of Raw Coffee Beans& Moisture of final product
- Yield per Kg

**Whether the raw materials are perishable in nature**

Fresh coffee cherries are perishable in nature, when it is dried then it can be stored up to 4-6 months. Finished product can be stored up to 3 years if it is properly handled & kept in cold storage.

### Production Process

### Harvesting the cherries

Harvesting takes place in two phases. The first cherries will come into harvest in late November and then again after the winter in Ferbuary to March. It take approximately 3 to 4 years for the newly planted coffee trees to bear fruit. The fruit, called the coffee cherry, turns a bright, deep red when it is ripe and ready to be harvested.

Only the ripe cherries are harvested, and they are picked individually by hand. Pickers rotate among the trees every eight to 10 days, choosing only the cherries which are at the peak of ripeness. This kind of harvest is labor intensive but ensure the quality of the coffee is superior.

### Processing the cherries

Once the coffee has been picked, processing must begin as quickly as possible to prevent fruit spoilage. Depending on location and local resources, coffee is processed in one of two ways:

- The Dry Method The freshly picked cherries are simply spread out on huge surfaces to dry in the sun. In order to prevent the cherries from spoiling, they are raked and turned throughout the day, then covered at night or during rain to prevent them from getting wet. Depending on the weather, this process might continue for several weeks for each batch of coffee until the moisture content of the cherries drops to 11%.
- The Wet Method removes the pulp from the coffee cherry after harvesting so the bean is dried with only the parchment skin left on. The parchment is then dried in the sun until it has a moisture content of 12%

### Drying the Beans

If the beans have been processed by the wet method, the pulped and fermented beans must now be dried to approximately 11% moisture to properly prepare them for storage. These beans, still inside the parchment envelope (the endocarp), can be sun-dried by spreading them on drying tables or floors, where they are turned regularly, or they can be machine-dried in large tumblers. The dried beans are known as parchment coffee, and are warehoused in jute or sisal bags until they are readied for export.

### Milling the Beans

Before being exported, parchment coffee is processed in the following manner: Hulling machinery removes the parchment layer (endocarp) from wet processed coffee. Hulling dry processed coffee refers to removing the entire dried husk — the exocarp, mesocarp and endocarp — of the dried cherries. Polishing is an optional process where any silver skin that remains on the beans after hulling is removed by machine. While polished beans are considered superior to unpolished ones, in reality, there is little difference between the two.

Grading and Sorting is done by size and weight, and beans are also reviewed for color flaws or other imperfections.

Beans are sized by being passed through a series of screens. They are also sorted pneumatically by using an air jet to separate heavy from light beans.

Typically, the bean size is represented on a scale of 10 to 20. The number represents the size of a round hole's diameter in terms of 1/64's of an inch. A number 10 bean would be the approximate size of a hole in a diameter of 10/64 of an inch, and a number 15 bean, 15/64 of an inch. Finally, defective beans are removed either by hand or by machinery. Beans that are unsatisfactory due to deficiencies (unacceptable size or color, over-fermented beans, insect-damaged, unhulled) are removed. In many countries, this process is done both by machine and by hand, ensuring that only the finest quality coffee beans are exported.

### Exporting the Beans

The milled beans, now referred to as green coffee, are loaded onto ships in either jute or sisal bags loaded in shipping containers, or bulk-shipped inside plastic-lined containers.

### Roasting the Coffee

Coffee Roasting is the heat process that brings out the aroma, flavour & fragrance that is trapped inside the coffee bean.

Roasting coffee at Nagaland Coffee basically have four critical stages that is:

- Drop in stage (charge temperature)
- Turn around (temperature change)
- Yellow stage (which chemists refer to mailnard reachion)
- Fist. Crack (caramilisation)
- Drop out. (flavour Development)

### Cupping

Cupping is a professional way of testing coffee. Coffee has got four key elements that is aroma, flavor, body, and acidity.

### Grinding Coffee

Each coffee brewing has got its own specific grind size.

The different kinds of coffee grinding methods at Nagaland Coffee Roasters

- Turkish grind : Verify Particles.
- Espresso grind : Fine Particles.
- Mokapot grind : Fairly fine particles.
- Filter coffee : Fairly fine grounded.
- Plunger : Course grind.

## Brewing Coffee

Methods of brewing Coffee at Nagaland Coffee.

- Coffee Espresso Machine.
- Pour Over Methodes.
  - Chemex.
  - Harico Voo.
- Aeropress.
- Plunger.

## Product Range

The most common criterion to decide the product range for export is the classification system based on bean size. In most countries, bean size is determined by passing the coffee over a perforated screen, which retains beans of a certain size while letting smaller beans pass through. The screen size is given in terms of 1/64 of an inch, where screen size 10 is 10/64 of one inch, screen size 12 is 12/64 of one inch, and so on. Screen sizes are also given in metric units below.

| Screen number | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|
| **ISO dimensions (mm)** | 4 | 4.75 | 5 | 5.6 | 6 | 6.3 | 6.7 | 7.1 | 7.5 | 8 |

Source: The Coffee Exporter's Guide

## Technology

Most of the coffee processing units in the district uses wet method to remove the pulp from coffee cherry. By using wet method parchment coffee is obtained & it is sold to Naga coffee agents to fetch good price. Next processing occurs in Dimapur district.

## Marketing

About 20% units sell dry cherry with rate of Rs. 90- 100 per kg & rest 80% units sell parchment coffee with rate of Rs. 200 per kg. Dry cherry and parchment coffee is sold to either local traders or agents from Naga coffee. Agents of coffee board process the beans further & export it to South Africa.

### Human Resource

Abundant human resources are available in the district that takes care of the operations management, labours, accounts, and other departments. Approximately 1125 labours are working in 22 units.

### Skill Development

There is need to develop skill of the workers working in the coffee processing units to increase the output & accuracy. Training requirement is there.

### Testing

Quality parameters are observed while processing coffee beans like its size, grinding, roasting etc.

- Based on Size
- Based on roasting
- Based on grinding
- Based on Aroma &Flavor

### Institutional Support

The Bankers, MOFPI, Coffee Board, Land Resource Department, Horticultural departmet, Marketing departments who are directly and indirectly involved with the micro food processing industry are extending their support for the growth of the industry with the implementation of schemes which are beneficial to unit holders

### Support Infrastructure

Good quality roads, Warehouses, Drying yards, advance machineries is the require supportive infrastructure

### Financial Linkages

Banking and other financial institutions are available in the district to support the industry

### Environmental Impact: no such impact

Most of the units are in the category of household& small scale. As of now there is no adverse impact on the environment.

### Cluster Actors

### No of skilled and semi-skilled Workers

Altogether about 1,00,067 workers available in the district. Out of which 57084 are male & 42983 are female workers available in the district.
Almost 805 workers are engaged in the coffee processing units out of which 512 are male &293 are female workers

### Manufacturers

There are 12 districts in the state. Wokha, Dimapur, Zunheboto, Mokokchung districts have coffee processing units. There are 17 units in the Mokochung district. Most of the coffee processing units are in Khar village.
**Unit Owners** – approximately 17

**Raw Material Supplier- Coffee Growers**

- Coffee growers in the district supplies the fresh berries to the wholesalers or traders in the district to get cash immediately. Growers usually supply raw material in the district itself as there is small volume of production
- Wholesalers or traders supply the material to processing units in the district.
- After primary processing in the district itself, dry cherry or parchment coffee is again supplied to traders or Naga coffee agents.
- Secondary processing occurs in Dimapur & then product is either exported or sold to domestic market.

### Enterprise Promotion Councils

### Coffee Board of India

Coffee board of India promotes special scheme for coffee plantation in north east region. In fact, people are not much aware of the initiatives taken by coffee board.

### Financial Institutions

Nationalize banks are extending loans to purchase the machinery as well as towards working capital to the unit holders.

### Marketing Players

- It is regular practice of coffee growers in the district to send fresh cherries to the local traders or wholesalers
- The traders/agents who collect the raw material from growers in each village supply it to small or big processor
- After primary processing in the district, again there is role of traders or agents start as they buy it & sell it to next processing unit for further & final processing of the produce.
- There is public private partnership player like ‘Naga coffee Pvt Ltd’ which has memorandum of understanding between the Department of Land Resources, Nagaland, and Noble Cause, a South African company
- Naga coffee plays vital role in export of coffee to South Africa

## 4.10 Existing Government Schemes

All schemes from MOFPI, Coffee Board of India & Nagaland government are mentioned in detail in point number 2.1, 2.2 & 2.3 of this document.

## 4.11 Cluster Map

- Based on 2019-20 data, Mokokchung is the largest producing district with production of 4455 kg parchment coffee.This production is 0% of other agriculture production in the district.
- Wokha, Zunheboto, Dimapur districts are also famous for their coffee taste, however there is no formal cluster available for coffee producers in the district.
- Current plantation is quite low in the district hence less availability of raw material required for coffee processing units
- There are almost 17 units of coffee processing in the district including household, small & micro units.
- Almost 805 workers are engaged in the coffee processing activities
- One of the positive thing is that the Coffee from the district is exported to South Africa. There is further scope to increase this export to other countries as well
- Even there is cope for processing, need to increase area under plantation so that ample amount of raw material will be available in the district itself. As well as there should be a formal cluster who will bring together all household, small, micro processing units together from different districts under one cluster.

## 4.12 Value Chain

Coffee growers take production of coffee in the district. After that Primary processing occur in the district itself. Harvesting, cleaning, pulping with dry or wet method, soaking in the water & drying in the yards are the activities involved in primary processing. It occurs it the district itself. Then Dry cherry & parchment coffee is sold to either local traders or agent from Naga coffee board. Then it goes to Dimapur district for further secondary processing. And after that it goes for export market or domestic market for consumption.

### 4.13 Product Cost analysis

The total cost required to produce one kilo of coffee powder is INR 303.5 and processors are selling at a price of INR 400 and getting a net profit of INR 96.5.

| S. No | Particulars | Amount per unit (KG) |
|---|---|---|
| **1** | Raw material | 200 |
| **2** | Packaging material | 2 |
| **3** | Labor | 15 |
| **4** | Manager | 2.5 |
| **5** | Electricity | 1 |
| **6** | Transportation | 1 |
| **7** | Miscellaneous | 2 |
| **8** | Loss in processing | 80 |
| | **Total** | **303.5** |
| **1** | Selling price | 400 |
| | **B:C Ratio** | **1.3** |

### 4.14 SWOT Analysis

| Strength | Weakness |
|---|---|
| • Coffee from the district is popular in the export market.<br>• Coffee board is promoting coffee production in the district through various schemes.<br>• Joint venture between Department of land resources & private company 'Naga Coffee Pvt Ltd' plays very important role to make export market available for the coffee processed in the district. | • Less raw material available in the district as less plantation of the coffee in the district<br>• Less awareness about government support & schemes to the processors in the district<br>• No formal organization or cluster available for coffee processing units<br>• Lack of essential infrastructure like road, drying yards, warehouses etc<br>• Lack of advance machineries. |
| **Opportunities** | **Threats** |
| • There is scope to cater more countries for export of the coffee processed in the district | • Climate change<br>• Competition from other health beverages |

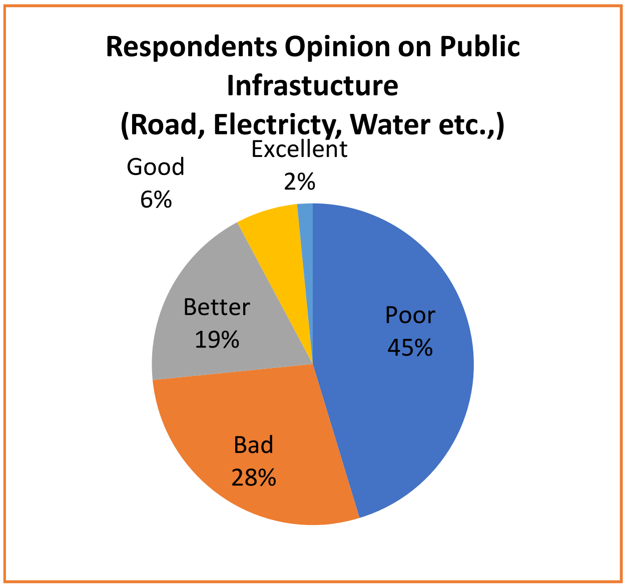
| | |
|---|---|
| • Coffee from this region can be promoted as 'Organic Coffee' | |

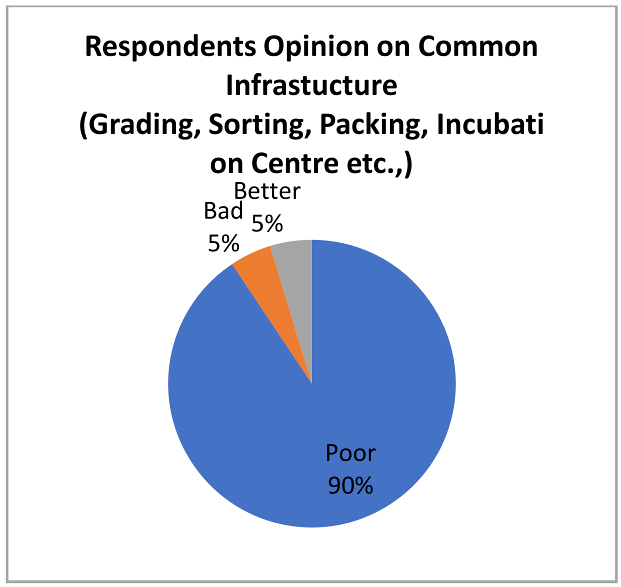
## 5. Stakeholder Consultation

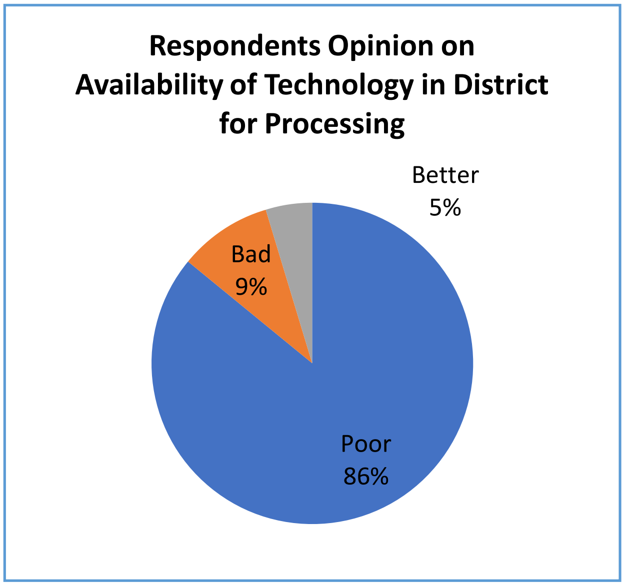
### Individual Meetings –

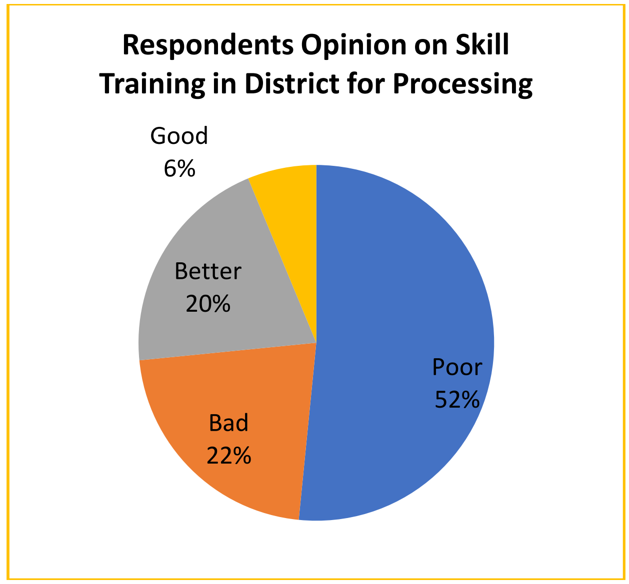
Survey of 17 coffee processing units is done by face to face meetings. To understand their perspective about business & other factors related with processing industries. All the information mentioned in questionnaire is filled in the individual meetings.

Below pie chart is prepared based on the opinion of respondents on existing public infrastructure, common infrastructure, availability of technology and skill training for processing of ODOP products.






## Agenda Points & discussions

Points discussed are;

- Availability of technology
- Scope for processing
- Common Infrastructure facilities
- Logistic
- Branding and Marketing

Minutes of Meeting with Various Stakeholders;

- The processing is happening at very small scale and small processors are adopted traditional method of processing.
- The availability of new technology or modern method of processing (using semi automated and automated machineries) is lacking.
- There is no availability of common infrastructure facilities such as incubation centre, grading, sorting and packing units
- Transportation is huge problem in the district
- The marketing of produce is challenge in the district due to logistic problem
- There is a huge scope for organic pineapple products in the district as well as in nearby districts
- There is a high requirement for skill training and development for micro and small processors
- Majority of the micro and small processors are selling the value added products without brand. They require training and exposure to build the brand, logo and knowledge on labeling and packing of the produce.

## 6. Need Assessment & Gap Study

### Gap Study

| Gap | Remark |
|---|---|
| Raw Material | Coffee plantation in the district is less hence there is less quantity of raw material is available for coffee processors. Government taking initiative to increase the plantation of coffee in the entire north-east region. |
| Technology | Most of the unit owners mentioned that advance machineries required for advance processing. In the district majority processors uses wet dry method to get good quality of parchment coffee. In this method pulper plays important role and processors require financial assistance to buy good quality of machines required in coffee processing.<br>Only primary processing happens in the district due to lack of advance technology. Secondary processing occurs in other districts. If good quality, advance machineries available in the district then hulling, polishing, roasting, grinding processes can happen in the district itself. |
| Infrastructure | Poor quality road is the basic constrain in infrastructure, almost every respondent mentioned about quality & connectivity of roads. Due to poor quality of roads, transportation is getting affected. Warehouse for storage of coffee beans, cold storage, drying yards are other infrastructure requirement in the district. |
| Testing Facilities | There are no proper testing labs in the Mokokchung district and the drawn samples are sent to Dimapur and getting tested there. Not every buyer insists on testing only a few buyers ask for testing. The institutional buyers normally ask for a sample testing report which includes, moisture content, color, % of foreign material, Whole count etc, and also gets test at third party labs. Big players like 'Naga Coffee Pvt Ltd' is having in house testing facilities. The bulk processors & traders who do trade in bulk quantity normally test their product at third party labs. |
| Skill Training | There is shortage of skilled labour in coffee processing industry and there are no proper skill training facilities are available in the district.<br>At present only few skilled labour available in the district and for rest skill development programme need to be conducted. |
| Cluster | Though there is good scope for coffee processing in the district as processors wish to expand their unit with financial assistance, there is lack of formal cluster for coffee processors.<br>There should be a formal cluster who will bring together all household, small, micro processing units from different districts under one cluster. Finished good is already exported to South Africa, if cluster is formed then there is possibility of expanding export market to European countries also. |

### Rating of Response Count (Based on Primary Survey)

**Rating 1 is considered as poor and Rating 5 is considered as excellent.**

| **Sr No** | **Particular** | **Response Count** | | | | | | **Total** |
|---|---|---|---|---|---|---|---|---|
| | Ratings | 1 | 2 | 3 | 4 | 5 | Not Responded | |
| **1** | Public infrastructure such as roads for backward and forward linkages | 4 | 16 | 2 | 0 | 0 | 0 | 22 |
| **2** | Access to common facilities such as grading, sorting, packaging, cold chain facilities etc. | 19 | 3 | 0 | 0 | 0 | 0 | 22 |
| **3** | Access to testing facilities | 20 | 2 | 0 | 0 | 0 | 0 | 22 |
| **4** | Compliance to standards and the frequency of inspections from the safety regulators | 19 | 3 | 0 | 0 | 0 | 0 | 22 |
| **5** | Skill training needs | 1 | 11 | 10 | 0 | 0 | 0 | 22 |
| **6** | Manufacturing practices | 19 | 3 | 0 | 0 | 0 | 0 | 22 |
| **7** | Technologies Available | 21 | 1 | 0 | 0 | 0 | 0 | 22 |
| **8** | Access to finance | 8 | 10 | 4 | 0 | 0 | 0 | 22 |
| **9** | Access to mentorship/ service | 20 | 2 | 0 | 0 | 0 | 0 | 22 |
| **10** | Awareness on Govt Policies among micro /small manufactures | 21 | 1 | 0 | 0 | 0 | 0 | 22 |
| **11** | Awareness on ODOP product of the District | 14 | 8 | 0 | 0 | 0 | 0 | 22 |
| **12** | Marketing / sales facilities | 10 | 9 | 3 | 0 | 0 | 0 | 22 |
| **13** | Facilities to the workers | 21 | 1 | 0 | 0 | 0 | 0 | 22 |

**Public infrastructure such as roads for backward and forward linkages –** Most of the respndents rated it on the scale of 2, it means it is in poor condition & need to look in to it on priority basis.

**Access to common facilities such as grading, sorting, packaging, cold chain facilities etc –** Facilities like drying yards & warehouses are also very essential

**Access to testing facilities –** Majority respondents mentioned there is dire need of testing facilities in the district

**Compliance to standards and the frequency of inspections from the safety regulators –** majority respondents expressed that they are not undergone any kind of inspection with respect to safety regulators.

**Skill training needs**– need of training rated on 2 & 3 rd scale, means there is need of training to the workers engaged in coffee processing

**Technologies Available –** Lack of technology & lack of advance machines in the units.

**Access to finance –** Financial assistance is very important almost for every respondent to expand their existing units as well as to purchase advance machines.

**Access to mentorship/ service –** most of the respondents mentioned need of mentorship to upgrade their business & livelihood.

**Awareness on Govt Policies among micro /small manufactures –**There is no awareness about any government schemes.

**Awareness on ODOP product of the District–**Majorityrespondents are not aware about ODOP in the district.

**Marketing / sales facilities –** Most of them expressed that they need proper training on marketing & branding to improve their business.

## 7. Recommendations

### 7.1 Vision Statement & Key Objectives for SLUP

Vision Statement: To promote Individual units and SHGs to involve in Coffee processing activities.

Objectives:

- Identifying interested stakeholder in coffee processing in Mokokchung district.
- Up-gradation of existing micro processing units is District

### 7.2 Project Strategy & Interventions

**Before devising the intervention strategy, let us understand the context of processing in the district.**

**Context of ODOP Processing (Coffee)**

As per GIS LRD Nagaland, it has been estimated that total of 1040100 ha is suitable for coffee plantation in the state, which is 62.7% of the state's total geographical area of 1657900 ha. Based on 2019-20 data, Mokokchung is the largest producing district with production of 4455 kg parchment coffee.
Currently, no coffee processing is happening in district. But there is a clear possibility in future to form coffee processing units in district because government of Nagaland state is increasing area under coffee and they targeted to 50,000 hectares area under coffee plantation by 2027 as part of its vision 2030 programme. At present, in Mokokchung, Zuheboto, Wokha, Mon and Kohima districts, over 1000 farmers are involved in coffee cultivation.
There is demand for Nagaland coffee in South Africa and Dubai countries and currently coffee farmers are selling the raw coffee to these countries through Naga Coffee Agency.
As part of our primary survey, we have interviewed the above 17 units, whose primary activity is raw coffee beans production. The core business of active units is to produce coffe beans and sell the product within the district to local retail shops, traders and also directly to consumer and also export to South African and Dubai.

**Individual existing** – During primary survey respondents (existing individual and potential units) expressed that they are interested in processing of coffee beans.
Respondents of individual units expressed that they need fund for purchase of new machineries dryer, Coffee pulping machine etc.

**Individual new –** During primary survey we have asked new/potential entrepreneurs (large farmers) if they are willing to enter into processing, and if yes, into which products. New/potential entrepreneurs are expressed that they are interested in coffee powder.

**Groups –** There are no FPOs/ cooperatives and SHGs for ODOP processing in district, but there is a possibility for SHGs to enter into processing activity in future. The fund requirement for new pottential SHG is for purchase of new machineries, skill development, branding and marketing. PMFME scheme can fill this gap.

**Common infrastructure –**Currently, no processing is carried out in district but in future many large farmers, traders, SHGs will enter into processing activities due to demand for the product as well area under coffee plantation will increase. At present coffee processing is carrying out in Dimapur district of Nagaland State.

**Here Proposing for Common Infrastructure Facilities in Mokokchung District.**

*The main reasons are; increase in demand for organic coffee in India as well as outside India (South Africa and Dubai) and Area under coffee plantation is increasing in Nagaland state.*
Coffee Producing Regions in Mokokchung District: Khar village, Khensa, Mangmetong, Changtongya, Kubza, Longkhum, Chuchuyimlang and Imchalu.

Present Coffee Production in District is 4455 kg parchment coffee. By 2025 coffee production may goes upto 10000 kg parchment coffee.
Capacity Utilization of 1000 kg raw coffee beans per month and working hours of 7 to 8 hours per day and recovery rate is 60% to 65%.

| Cost attribute (for each unit) | Investment in Rs. (Lakhs) |
|---|---|
| **1. Land and buildings** | 10 |
| **2. Plant & Machinery** | 18 |
| **3. A/c & other Electrical Equipments** | 2 |
| **4. Furniture & Fittings** | 1.5 |
| **5. Training and skill development** | 2 |
| **6. Misellenous** | 1 |
| **Total** | 34.5 |

### Break of Plant and Machineries

| Particulars | Amount (Rs. in Lakhs) |
|---|---|
| **Coffee Bean Extractor** | 2 |
| **Centrifuge** | 1.5 |
| **Coffee Bean Roaster** | 10 |
| **Grinder** | 2 |
| **Packaging Machine** | 1.5 |
| **Other Miscellaneous** | 1 |
| **Total** | 18 |

**Marketing & branding-** There is a need of mass advertisement and campaigning for ODOP products in the district to create awareness about local products, and here we are specifically talking about Irganic Coffee
Through primary survey observed that majority of the respondents expressed that they are willing to produce coffee powders but they don't have much knowledge on marketing. Once marketing channel is well established more number of new entrepreneurs will enter into processing activity.

- Brand need to establish. There is huge scope and demand for organic coffee across India as well as outside India. For example, Coorg-Coffee, Assam Tea, Coorg Spices etc., like wise Naga-Coffee or Organic-Naga-Coffee brand can establish and sell across India and export too.
- Shops need to open in major cities across India.

**Training and skill development-** Through primary survey we observed that majority of kholar producers are not involved in post processing activities and only they are involved in drying and packing of dried beans. If training on new technologies and modern way of processing which is machine oriented, training and skill development on machineries and equipments, branding and marketing is given then may show interest to enter into processing activities such as kholar bean flour and this can be done through PMPME scheme.

### 7.3 Strategy for Integrated Development

Integration of stakeholders such as agriculture, horticulture, marketing, financial institution, industries, associations, testing agency, traders, farmers and processors are necessary to start cluster.

| Particulars | Requirement | Supporting Department/Agencies |
|---|---|---|
| Marketing | • Training and Skill Development<br>• Packaging, Labelling and Branding<br>• Qualitative and Quantitative Testing | • DIC and Financial Institution should support in Packing, labeling and branding.<br>• Fassi should involved in certification and licensing of the product. |
| Infrastructure | • Coffee processing unit need to establish in district | • Support from DIC, state agriculture department and horticulture department |
| Workers | • Training on Post Harvest Management, Processing Technology and Handling of Machineries | • DIC should train the workers in handling of machineries.<br>• Agriculture, Horticulture and NRLM should train the workers on post harvest management and processing technology. |
| Innovation | • Training and Skill Development on Marketing and Branding<br>• Organic Coffee | • NRLM and DIC should support |

### 7.4 Proposed Interventions

| District | Post Harvest | Marketing System | Market Infrastructure | Any Others |
|---|---|---|---|---|
| **Tuensang** | Training on post-harvest handling and packaging. | Intervention of a. govt. agencies is necessary to minimize the | Grading and Sorting facilities at the production places | Promotion of organic coffee by establishing or opening new |

| | | | | |
|---|---|---|---|---|
| | | involvement of various stakeholder by direct procurement from farmers/farmers' groups. | | retail outlets in major cities across India |
| | | Ensure the availability of logistic services at farm gate so that farmers can come directly to main markets or processing point | Establishment of Warehouse unit at production places | |
| | Training on Machineries, Skill Development, Marketing and Branding | | | Establishment of Coffee Processing unit in district. |

**Proposed Government assistance under the SLUP:**

A total of INR 27.28 Cr. fund is proposed for the Mokokchung district for the up-gradation of 133 existing and potential new units in the district. INR 12.43 Cr. is expected government assistance under the SLUP from the total fund proposed for the up-gradation of the food processing units.

| Intervention | Target No. of units | Total Cost (Cr.) | Subsidy per unit | Govt. assistance (Cr.) |
|---|---|---|---|---|
| Capital Investment in Plant and Machinery (Individual units) | 121 | 16.3 | 35% | 5.70 |
| Capital Investment in Plant and Machinery (FPO/SHG/ Cooperatives) | 12 | 1.63 | 35% | 0.57 |
| Common Infrastructure | 1 | 4 | 35% | 1.4 |

| Intervention | Target No. of units | Total Cost (Cr.) | Subsidy per unit | Govt. assistance (Cr.) |
|---|---|---|---|---|
| Incubation Cum Custom Hiring Centre | 1 | 2.75 | 100% | 2.75 |
| Branding and Marketing (Total no. of Units/group) | | 1.2 | 50% | 0.6 |
| Training and Mentorship (No. of the individual) | 266 | 1.4 | 100% | 1.4 |
| **Total** | | 27.28 | | **12.43** |

## 8. Key Impacts

- Through the establishment of common infrastructure units in production places in Mokokchung district with the support of state and Central Government will generate additional income and employment opportunities in the state and this simultaneously help to generate additional GDP to the state.
- Generation of adequate employment opportunities to those who are unemployed by setting up new units.
- Establishment of grading and sorting unit and warehouse unit at production places will help the producers to get better price in market and also avoid distress sale.
- Promotion of organic coffee by establishing or opening new retail outlets in major cities across India
- Establishment of Coffee Processing unit in district.