Strategic Plan for

Agriculture Development: A Study for Jalgaon District

Submitted to

Office of the District Collector

by

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Foreward

As we stand at the threshold of a new era in agriculture marked by unprecedented technological progress and societal evolution, the importance of strategic planning cannot be overstated. The agricultural landscape of Jalgaon District presents a myriad of opportunities, challenges, and complexities that demand a cohesive and forward-thinking approach. With a rich history steeped in agricultural tradition, Jalgaon has the potential to not only sustain but to meet the evolving regional trends and local needs.

This Strategic Plan for Agriculture Development delves into current state of Agriculture in the District and tries to identify niche areas for improvement, may it be Lad Use Pattern, Irrigation Effectivity, Crop production in Jalgaon District along with block wise trends, potential crops to be produced in particular regions and finally proposes the Initiative to be implemented based on short-medium-long-term Goals. Consequently, this report represents a collaborative outcome of interaction between Team KBCNMU and District Administration stirred by Dynamic District Collector Shri Ayush Prasad (IAS) along with his team in District Planning Office and their associate departments.

The outcome of the report represents a culmination of rigorous research, stakeholder consultations, and data-driven analysis. It not only identifies the key challenges and bottlenecks hindering the growth of agriculture in our district but also presents a roadmap for transformative change. Our vision for Jalgaon District is not just one of increased yields or enhanced profitability, but one of holistic development that empowers farmers, fosters innovation, and ensures environmental sustainability.

I believe that this is the testament of our collective commitment and will certainly be helpful to the district authorities in fostering sustainable growth, enhancing food security, and improving the livelihoods of farmers in Jalgaon.

I extend my appreciation to the members of our team whose dedication, expertise, and passion have been instrumental in the development of this plan. I also extend my appreciation to the farmers, policymakers, researchers, and other stakeholders specially Mr. Vijay Shinde (DPO) and his team whose valuable insights and inputs have enriched the understanding and shaped the recommendation of the university team. Together, let us strive to realize the vision of a thriving and resilient agricultural sector that serves as a catalyst for the overall development and prosperity of Jalgaon District.

Prof. V. L. Maheshwari
Vice- Chancellor
KBC North Maharashtra University, Jalgaon

Message From the Desk of District Collector

In an era characterized by rapid change and evolving challenges, strategic planning is not just a necessity but a fundamental tool for the progress of any district. The proposed strategic plan for agricultural development may serve as a tool to achieve the prime goal of making the economy of the state of Maharashtra $1 trillion by the year 2027, $2.5 trillion by the year 2037, and $3.5 trillion by the year 2047, respectively.

The Agricultural Strategic Plan developed by Team KBCNMU is more than just a compilation of strategies, primarily it is a demonstration of our shared aspirations and determination to create a better tomorrow for Jalgaon district, by reshaping the agriculture landscape of the district. It embodies the insights gleaned from extensive research, stakeholder engagement, and rigorous analysis, thus to aimed at identifying key priorities for agriculture development and charting a progression of district toward achieving sustainable development goals.

As we embark on this journey, it is imperative to recognize that Jalgaon district is not merely a geographical entity, but a tapestry woven from the dreams, aspirations of people of Jalgaon. Therefore, this strategic plan is not just about agricultural or economic growth, but it is about enhancing the quality of life for every individual, fostering inclusivity, and preserving our unique heritage and natural resources for generations to come. This endeavour of achieving excellence through agriculture development is unquestionably possible by reconstructing, reshaping and redesigning the existing policies and schemes pertaining to agriculture, improving total area for cultivation, proper management of water resources, creating required infrastructure and support system along with technology adaptation & innovation in agriculture sector.

For understanding the strength & weakness of district agriculture sector and to propose the initiative for agriculture development, Team KBCNMU thoroughly analysed data on Crop Production, Area Available for Cultivation, Irrigation and Land Use statistics, statics of agriculture allied sectors. Based on the data and direction from district authority, Team mapped suitable objectives for short-medium-long term goals and thus arrived at road-map for agriculture development of Jalgaon District.

In conclusion, I believe that this report serves as a valuable resource for planning and decision-making to advance agricultural development and ensure food security in our district. I am confident that with concerted efforts and collaboration among various stakeholders, we can overcome challenges and realize the full potential of our agricultural sector. I have deepest admiration to the team of experts of KBCNMU who have devoted their time, expertise, and passion to the development of this plan. As we embark on the implementation phase of this plan, I urge all stakeholders to join hands in a spirit of cooperation and commitment.

Ayush Prasad
District Collector Jalgaon

Message From the Desk of District Planning Officer

I extend my deepest appreciation to the dedicated team at Kavayitri Bahinabai Chaudhari North Maharashtra University for their invaluable support in crafting a strategic plan for agricultural development. This collaborative effort is instrumental in contributing to the state's ambitious goal of reaching $1 trillion. The success of our partnership, formalized through a Memorandum of Understanding (MoU), has been exceptionally rewarding, underscoring the effectiveness of our joint commitment to agricultural progress.

The detailed report provided by the Kavayitri Bahinabai Chaudhari North Maharashtra University team holds immense importance in shaping road-map for meeting Maharashtra's $1 trillion target. The team thorough their analysis, insightful observations, and sound recommendations serve as the cornerstones for our future plans. We commend the professionalism and commitment demonstrated by the Kavayitri Bahinabai Chaudhari North Maharashtra University team throughout our partnership. Their precise work and attention to detail have elevated the quality of our action plan.

We eagerly look forward to sustaining this partnership, collaborating closely with the KBCNMU team to realize our economic objectives. This collaboration certainly bring out the significant progress that can be achieved when a shared vision is combined with effective teamwork. Once again, a big thank to the team for their exceptional contributions to our collaborative endeavours.

Shri. Vijay Shinde
District Planning Officer, Jalgaon

Acknowledgment

We extend our deepest gratitude to all those who contributed to the completion of this strategic planning report for agricultural development. Without their support, expertise this Plan would not have been possible.

First and foremost, we would like to extend our heartfelt gratitude to **Prof. V. L. Maheshwari, Vice-Chancellor, Kavayitri Bahinabai Chaudhari North Maharashtra University** for his insightful support and encouragement to undertake the work of preparation of strategic plan. The vision and guidance by him was instrumental in steering this project towards completion, his unwavering commitment to fostering research excellence and innovation has served as a catalyst for our endeavors, inspiring us to strive for excellence in every aspect of our work.

We are deeply thankful to the **Mr. Ayush Prasad, District Collector, Jalgaon** for his steadfast support and collaboration. His insights into the local agricultural landscape and proactive engagement with stakeholders have enriched our understanding of the challenges and opportunities facing the agricultural sector in Jalgaon, enabling us to develop targeted and effective strategies for its advancement.

Furthermore, we would like to thank **Prof. S. T. Ingale, Pro Vice-Chancellor, KBCNMU** for his special support. His commitment to promoting local partnership and collaboration, which has enriched the quality and relevance of our work. His support has enabled us to leverage the diverse expertise and perspectives within our university to address the multifaceted challenges of agricultural development of Jalgaon.

We express our special thanks to **Mr. Vijay Shinde, District Planning Officer**, for his detailed contributions, which have been invaluable in shaping the outcomes of our research and advancing our collective mission of promoting agricultural prosperity and resilience of Jalgaon. We are thankful to his entire team at District Planning Office for their support, cooperation, and providing inputs throughout the course of this strategic Plan. We also acknowledge the support of **Mr. Shashikant Marathe** who has provided all the required information, relevant reports, factual data, other required resources and offered valuable feedback at various stages of this project.

In addition, we express our sincere appreciation to the agricultural experts, stakeholders who generously shared their insights, experiences, and valuable perspectives throughout the planning process. Their input has been instrumental in shaping the strategies outlined in this report and ensuring their relevance and effectiveness in addressing the challenges and opportunities facing the agricultural sector.

Last but not least, we extend our heartfelt thanks to our families for their unwavering encouragement, understanding, and patience throughout the duration of this project. In conclusion, we recognize and appreciate the collective efforts of all those involved in the development of this strategic planning report for agricultural development. It is our sincere hope that the initiative and action plan outlined herein will contribute significantly to the advancement and prosperity of the agricultural sector, benefiting farmers, communities of Jalgaon district.

Consultant Team of KBCNMU
Prof. Anil Dongre, Dr. Rajesh Jawlekar
Dr. Ujwal D. Patil, Dr. R. R. Chavan and Mr. Manoj Patil

Executive Summary

Over the past decade, the District Strategic Abstract has highlighted a piercing trends specifically in declining contribution of the agriculture sector to the Gross Domestic District Production (GDDP) of Jalgaon District. This decline, from 18.95% in 2012 to 12.81% in 2022 accentuates the district's increasing reliance on external sources for essential agricultural produce. Notably, this percentage falls below the national average, where agriculture contributes around 20% to India's GDP. Several factors contribute to this challenge, including stagnant cultivation, sub-optimal crop intensity, under-utilization of water resources, and inadequate training facilities for farmers.

To address these challenges, District Collector Shri. Ayush Prasad (IAS) and Honourable Vice Chancellor Prof. V. L. Maheshwari initiated a collaborative effort between the University and Local Government. This partnership aims to leverage academic expertise to inform policy decisions and rejuvenate the district's agricultural sector.

The Strategic Action Plan for Agriculture Development in Jalgaon District is a collaborative endeavor involving academia, government agencies, local communities, and stakeholders. Team KBCNMU conducted an extensive analysis of the district's agriculture landscape, beginning with a SWOC analysis. Utilizing data from various sources, including the District Strategic Abstract, Strategic Extension Plan (ATMA), and District Agriculture Office, the team assessed the status of individual agricultural components from 2018 to 2023.

According to the current state of the components of the agriculture, Team then set forth the Short-Medium-Long term goals as per direction from district planning office and identified the corresponding objectives in tune the goals and mapped it with SDG's. Further study has been carried out to understand the support schemes availed by the farmers from State and Central Government.

The study revealed a downward trend in the agriculture sector's contribution to the district's GDDP. In response, the team delved deeper into the underlying causes, examining crop cultivation patterns, production figures, land use statistics, soil types, irrigation infrastructure, and governmental support schemes.

Key findings highlighted opportunities for improvement, such as enhancing crop intensity, optimizing water resource utilization, and maximizing land use efficiency. Building on these insights, the team formulated a series of initiatives aimed at revitalizing the district's agriculture sector. By implementing these strategies, we aspire to build a resilient and prosperous agricultural sector that not only sustains our district's economy but also contributes to the broader well-being of our state.

Chapter 1

Agricultural & Demographic Profile of Jalgaon District

1.1 Introduction

India is mostly an agricultural nation. In India, agriculture and industries based on it offers the majority of jobs, and majority of important industries rely on the agriculture for inputs. For many Indian families, agriculture is the primary source of income. More than 58% of rural households rely on agriculture as their primary source of income.

Over last twenty years, India's agriculture has experienced a swift shift because of the policies of globalization and liberalization, which have created new opportunities for agricultural modernization. Due to huge investments in it, sector has resulted not only in commercialization and diversification but also in a number of technological and institutional breakthroughs.

Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP). In India, agriculture contributes about 16% of total GDP and 10% of total exports. Over 60% of India's land area is arable making it the second largest country in terms of total arable land (District Socio-Economic Analysis).

1.2 Demographic Profile: Jalgaon District

1.2.1 History

Several locations are referred to as Gomti, Mandaka, Khanda, Vidarbha, and Rupavahika in the Mahabharata's Bhishmaparva. Khanda has also been read as Khandesh by Western historians. The name Khandesh originates from Malik, the second Farooq monarch of the region, who was given the title of Khan by Sultan Ahmed I of Gujarat. In summary, the area that presently comprises the districts of Dhule and Jalgaon was referred to as Khandesh throughout the Middle Ages and was governed as a single district out of the Dhule headquarters. But in 1906, Khandesh was split into East Khandesh and West Khandesh, two districts for administrative purposes. Ten talukas and three pethas made up the East Khandesh district, which had Jalgaon as its capital. Parola Peth, followed by Bhadgaon and Edalabad (Muktainagar) in 1917, Parola Peth and then Bhadgaon and Edalabad (Muktainagar) Peths were given the status of Taluka.

The Maharashtra government changed the name from East Khandesh to Jalgaon District on 10.10.1960. The Maharashtra government's department of revenue and forest. In accordance with a notice dated June 23, 1999, Bhusawal and Erandol talukas were divided to form two new talukas, Bodwad and Dharangaon. As a result, as of June 23, 1999, there are 15 talukas in the Jalgaon district as opposed to 13. The Maharashtra government's Urban Development Department announced on March 30, 2003, that Jalgaon Municipality will henceforth be known as Jalgaon City Municipal Corporation.

1.2.2 Geography

The Jalgaon area is incredibly diverse in nature and is part of the Deccan Plateau. The lush and level Tapi Basin is made up of forested and mountainous regions that might be irrigated. It is separated into the Satpura region (very wooded in the north), the Sadhan Tapi Valley belt in the middle, and the irrigation facilities of the hills in the south and southwest. The Ajantha Ranges region is located in the north.

- The three mountain ranges that make up the Jalgaon district are Satpuda in the north, Hatti in the southeast, and Ajintha (Satmala) in the south. Some peaks in the Satpura range reach heights of 900 meters, whereas much of the range is between 650 and 700 meters high. However, the Satmala Range is 180 meters, and the Hatti Range is 1250 meters.
- The Jalgaon district's principal river, Tapi, runs from east to west. With the tall and expansive Satpura mountain range to the north and the Ajintha range to the southwest, the district's core section is a lush area of Tapi lowlands. The district's locations range in elevation from 175 to 325 meters above sea level.
- The Jalgaon district lacks valuable main minerals, but it does have several minor minerals that are important for building, such as sand, stone, and murum (District Strategic Abstract)

1.3 Demographic and Socioeconomic Characteristics

According to the census data of 2011, Jalgaon Taluka has a sub-district code of 3966, with a total area of 822.22 km2. The rural area covers 753.98 km², while the urban area is 68.23 km2. The population of Jalgaon Taluka is 6,76,041, with 2,15,813 residing in rural areas and 4,60,228 in urban areas. The population density of Jalgaon Taluka is 822.21 people per square kilometer, and it has a total of 1,46,342 households, including 46,981 rural households and 99,361 urban households (Table 1.1) Jalgaon has a sex ratio of 913, which is the ratio of the number of females per 1,000 males in both rural and urban areas. The sex ratio for the rural population is 912, while that of the urban population is 913. In terms of literacy, 74.24% of the population in Jalgaon Taluka is literate, with 78.02.

Table 1.1: Talukas of Jalgaon District

Taluka	No. of Villages	Taluka	No. of Villages
Amalner	146	Erandol	64
Bhadgaon	59	Jalgaon	87
Bhusawal	50	Jamner	158
Bodwad	51	Muktainagar	79
Chalisgaon	143	Pachora	127
Chopda	112	Parola	114
Dharangaon	94	Raver	114
Yawal	89		
		Total Villages	**1487**

Table 1.2: Jalgaon Block Demography of Household

Type	Area	Households	Population Density
Rural	753.98 km^2	46,981	286.23
Urban	68.23 km^2	99,361	6,744.26
Total	**822.22 km^2**	**1,46,342**	**822.21**

[1]

1.4 District Area, Households, and Population Density

Area, Households, and Population Density are important demographic indicators of a district. The total area of a district is the physical land area within its boundary, while households are units of people living together under the same roof. Population density is the average number of people living in one square kilometres of a district. Jalgaon District is located in the north-west region of the state of Maharashtra. Jalgaon formerly known as East Khandesh is a northern district in the state of Maharashtra in India part of the Nasik Division. It is bounded by Satpuda mountain ranges in the north, Ajanta Mountain ranges in the south. The district lies between 20 degrees to 21 north latitude, and 74.55 degrees to 76.28 degrees east longitude.

Towards the northeast lies the border Madhyapradesh and towards the southeast lies Buldana district and towards the south is Aurangabad and in the southwest is Nasik district and East West is Dhule district. The east west stretch of the study region is 120 kms and North South extension of the region is 110 km. Jalgaon district has an area of 11765 sq. km. and a population is 42299171 (2011) and density is 359 persons per sq. kms. There are 1487 villages in the district (Table 1.1), and it is sub divided into 15 taluka's majority of the population at 68 % lives in rural areas. Cultivators and agricultural labours together area major class of the workers in the district.

1.5 Agricultural Profile: Jalgaon District

1.5.1 Importance of agriculture in the district

Agriculture plays a significant role in the economy and livelihoods of people in Jalgaon district, as it does in many other regions of India. The growth of the agriculture sector in any district, including Jalgaon, can have wide-ranging implications for overall development and well-being of the community.

Agriculture serves as the backbone of Jalgaon's economy. The district heavily relies on the income generated from farming activities, contributing significantly to the overall economic development. Agriculture is a primary economic activity in Jalgaon district, contributing significantly to the district's GDP. The cultivation of various crops and allied activities generate income for a large portion of the population.

[1] **Source:** Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India

- **Main source of Engagement:** Agriculture is a major source of income in Jalgaon district. A significant percentage of the population is engaged in farming, including both small-scale farmers and agricultural laborers. This sector provides livelihoods for a substantial part of the rural population.
- **Diverse Crop Cultivation:** Jalgaon is known for the cultivation of a variety of crops, including bananas, cotton, wheat, Jowar (Sorghum), and pulses. The diversity of crops grown in the region adds to the economic stability of farmers, as they are not solely dependent on a single crop.
- **Contribution to Food Security:** Agriculture in Jalgaon contributes to the local and regional food security by producing a range of food crops. This helps in meeting the dietary needs of the local population and ensures a stable and sufficient food supply.
- **Agro-Based Industries:** The agricultural produce from Jalgaon serves as raw material for various agro-based industries. For example, the production of banana has led to the establishment of banana processing units and related industries, contributing to the overall industrialization in the region.
- **Export Opportunities:** Depending on the crops cultivated, Jalgaon may contribute to export activities. Certain crops, such as bananas or other fruits, may have export potential, bringing in foreign exchange for the region and the country.
- **Livestock and Dairy Farming:** In addition to crop cultivation, agriculture in Jalgaon also involves livestock and dairy farming. This diversification provides additional sources of income for farmers and contributes to the overall agricultural productivity of the region.
- **Rural Development:** The prosperity of the agricultural sector is closely linked to rural development. Investments in agriculture, infrastructure, and allied activities contribute to the overall development of rural areas in Jalgaon district.

The significance of the agriculture sector for Jalgaon extends beyond economic contributions to include social, cultural, and environmental dimensions. It plays a pivotal role in shaping the livelihoods, identity, and overall well-being of the community

1.5.2 Agricultural Characteristics of Jalgaon District

From the perspective of agriculture as a crucial foundation for industrial development, it is necessary to understand both the negative and positive aspects of agricultural characteristics in Jalgaon district. The total geographical area is 11,765 square kilometres, out of which 8,777 square kilometres is cultivable area.

Due to the lack of technical knowledge and incentives, agriculturalists in Jalgaon district have been slow to adopt new cultivation methods. However, there is significant potential for agriculture in the region, supported by numerous irrigation facilities. Despite severe challenges, prasiable agricultural development is expected in the near future due to the following factors:

- The region's soil composition is suitable for tree crops and fruit culture. If systematically exploited, along with industrialization and improved road transport,

fruit growing is expected to expand by 27%. This could position Jalgaon district as the leading banana-producing region in India. Slopes on barren and undulating hills could be utilized for growing grapes, bananas, pomegranates, and other fruit trees.

- The climate in the region is conducive to banana and cotton cultivation. With improvements in irrigation facilities (Water Shortage Management), large-scale cultivation of these crops can be undertaken. In 2010-11, the percentage of net sown area to the geographical area in Jalgaon district was 75.03%, compared to 65% in Maharashtra. This is due to good soil, irrigation, and positive climatic conditions for cultivating cotton, a major cash crop covering 70% of the area under cultivation.

- Pulses are grown in the winter season, and oil-seeds are major crops in the study region.

- Due to favourable soil and climatic conditions, Raver Tahsil has a higher status in banana fruit farming. (District Strategic Abstract)

1.6 Cropping Patterns of Jalgaon District

As per as cropping pattern is concern in the district varieties of crops cultivated in 15 talukas and it majorly includes Wheat, Jowar, Bajra, Maize, Gram, Tur, Moong, Udid, Math/Matki and Groundnut. Additionally, horticultural crops such as pomegranate, Sweet lime, jujube, and guava hold substantial importance. Over the past three years, maize has emerged as a prominent cereal crop, supplanting jowar, owing to its superior yield potential.

In horticulture, custard apple exhibits promising prospects in the scarcity zone, while amla cultivation holds considerable promise, particularly in calcareous soils. Among vegetables, brinjal, and onion are major contributors, while ladyfinger, cucumber, and chilli find markets in Mumbai and neighbouring states.

The climate of the district is split into two zones that is the Scarcity zone, encompassing 5 blocks, and the Assured rainfall zone, covering 10 blocks. In these areas, the cropping patterns vary. Presently, Jalgaon district is recognized as the primary hub for cotton and banana cultivation in the state, with 5.77 lakh hectares dedicated to cotton and 59,178 hectares to banana crops in year 2023. These two crops serve as the primary cash crops, contributing significantly to labour opportunities and shaping the district's economic landscape.

Recent years have witnessed an expansion in the cultivation area of cotton, maize, and soybean crops, coupled with a decline in cereals, groundnut, Cotton, safflower, and sesame crops. Moreover, there has been a notable increase in the cultivation area of wheat and gram, owing to improved irrigation facilities during the rabi season. (Strategic Research & Extension Plan (ATMA - Jalgaon))

1.6.1 Major Crop Cultivated and Area under Cultivation

Identifying which crops are cultivated in which area, helps district to plan production, distribution, and storage to meet domestic needs. Besides this, understanding of crop cultivation, contributes significantly to a district economy. Identifying major crops and their cultivation areas allows policymakers to focus on supporting these sectors, creating jobs, and boosting income.

The table 1.3 delineates the Major Crop Cultivated & area under Cultivation. The area under Cultivation portrays significant fluctuations. The total area occupied for cereal production peaking at 329,971 hectares in 2020. A remarkable surge is noted in maize production, reaching 285,746 hectares in 2022. However, challenges persist in groundnut and soybean production, with figures ranging from 1,102 to 24,419 hectares. Despite variations, the net area under cultivation remains stable at 777,142 hectares in 2023.

Table 1.3: Crop wise Area under Cultivation (Area in Hectare - Normal)

Crops - Years	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Wheat	35244	20701	77133	75035	95832	51414
Jowar	83500	58631	85114	82276	117953	60576
Bajra	11237	11507	11896	9345	15522	5654
Maize	104470	100118	155294	60070	285746	74406
Total Cereals	236108	193554	329971	310165	304559	193813
Gram	58155	36202	71507	85812	96738	80015
Tur	20336	14106	12750	11528	18165	10425
Moong	28793	26121	24795	23027	37741	15863
Udid	23366	23087	20360	21201	36727	15598
Math/Matki	0	0	0	0	0	377
Total Food grains	366758	294668	460157	452172	457436	316795
Total fruits and vegetables	58790	51213	82309.4	82333.8	120650	117920
Groundnut	2864	1977	1513	1898	1819	1102
Soybean	24014	20928	18852	24419	16965	17506
Net area under cultivation	**757088**	**779759**	**812045**	**836543**	**859686**	**777142**

[2]

Thus the trends depicts that there is urgent focus need to be concentrate on promoting crop diversification and sustainable practices to optimize the district's agricultural potential. The crops like groundnut and other cereals like tur, soya been shown less area under cultivation shall have potential to increase their crop intensity.

Apart from cereals and food grains Jalgaon district bestowed with cultivation of different seasonal crops as well due to its suitable climatic condition. The table 1.4 shows the Season-wise Crops and Area of Production for the year 2023 in Jalgaon District present a diverse and dynamic agricultural landscape. Major crops such as Banana

[2] **Source:** District Planning Portal & Team own Study(Retrieved from DSP -2018-2023)

(Lagan and Khodawa), Paper Lemon, Mosambi, and Khodwa Cane significantly contribute to the total cultivated area of 92,253.34 hectares.

Fruit cultivation emerges as a robust sector, with Pomegranate, Mango, Papaya, and Citrus fruits covering substantial areas. Banana cultivation, encompassing both Lagan and Khodawa varieties stands out with a combined area exceeding 78,000 hectares.

The district also focuses on specialty crops such as Amla, Bamboo, Dragon Fruit, and Aloe Vera, indicating efforts towards diversification in agriculture. Furthermore, forest crops like Teak, Subabhul, and Sandalwood contribute to the overall cultivated area, showcasing a balance between traditional agriculture and forestry initiatives. Emerging trends are evident in the cultivation of high-value horticultural crops like Dragon Fruit and Aloe Vera. Additionally, conservation efforts are reflected in the cultivation of forest crops and plantations such as Mahogany, Eucalyptus, and Acacia, suggesting a conscious commitment to environmental sustainability.

Table 1.4: Season wise Crops and its Area of Production (In Hectare – Year 2023)

Sr.	Crop name	Area	Sr.	Crop name	Area
1	Banana (Lagan)	70096.903	36	Panwells/Nagvels	4.13
2	Banana (Khodawa)	8264.6894	37	Link Address	3.96
3	Paper Lemon/Lemon	4361.6422	38	Subabhul (For Tea)	3.54
4	Mosambi	3126.8558	39	Mahogany (Forest Crop)	3.4051
5	Khodwa Cane	1011.7477	40	Eucalyptus	2.72
6	Cane Started	778.8779	41	Anjan (Forest Crop)	2.47
7	Peru	719.2114	42	Lily	2.35
8	Pomegranate	583.3524	43	Betel Nut	2.21
9	Mango	552.5411	44	Grape	2.18
10	Papaya	496.6541	45	Ain (Forest Crop)	2.12
11	Shewga	484.3579	46	Eucalyptus (Forest Crop)	2.04
12	Citrus	433.5528	47	Oil Palm (Granule)	1.78
13	Adsali Sugarcane	236.4217	48	Orchid	1.5713
14	Edlimbu	233.1828	49	Rose	1.57
15	Preseason Cane	222.8212	50	Gavati Tea	1.49
16	Teak (Forest Crop)	130.6275	51	Kavath	1.29
17	Subabhul (Forest Crop)	83.1033	52	Bamboo (Forest Peak)	1.25
18	Chiku	77.3728	53	Miledubia	1.2
19	Mulberry/Mulberry	59.89	54	Hirda (Forest Peak)	1.08
20	Oranges	56.1895	55	Madhukamini	1
21	Bore	41.714	56	Guinea Gawat	0.98
22	Purple	37.017	57	Ramphal	0.9
23	White Ain (Forest Peak)	1.8	58	Mhow (Forest Peak)	0.7
24	Ambe Hald	20.025	59	Kinjal (Forest Peak)	0.65
25	Amla	17.26	60	Tonality	0.5
26	Bamboo	12.41	61	Moh (Forest Peak)	0.5
27	Coconut	11.16	62	Rakta Chandan	0.485
28	Tamarind	9.945	63	Bibba (Forest Peak)	0.265
29	Dragon Fruit	9.1075	64	Agarwood	0.14
30	Aloe Vera	8.39	65	Khirani (Forest Peak)	0.11

Table 1.4: Season wise Crops and its Area of Production (In Hectare – Year 2023)

Sr.	Crop name	Area	Sr.	Crop name	Area
31	Acacia (Forest Crop)	6.44	66	Cedar (Forest Peak)	0.1
32	Sandalwood	5.73	67	mallet	0.06
33	Sandalwood	5.051	68	Apta (One Peak)	0.02
34	Fig	4.29	69	Wood-apple tree-fruit	0.02
35	Neolimba	4.215			
				Total Area : 92253.34 Hectare	

[3]

The comprehensive total cultivated area of 92,253.34 hectares underscores the district's dedication to diverse and sustainable agricultural practices, providing valuable insights for strategic planning and development initiatives.

1.6.2 Production of Major Crop: An overview of Jalgaon District

The livelihood of majority of population of the Jalgaon district is based on of variety of crops but because of abundance of volcanic, black, red and sandy soil, the major crop produced in the district is cotton, maze, jowar and soyabean etc. Table 1.5 describes the Production of Major Crop and provides statistics on different crops cultivated Kilogram per Hectare over the years 2019 to 2023.

Table 1.5: Production of Different Crops Cultivated (Kilogram/Hectare)

Crops – Years	2019	2020	2021	2022	2023
Rice	0	0	0	0	0
Jowar (Kharif)	21356	7935	25253	12623	26201
Bajra	9065	7010	10885	5266	10677
Nachni	0	0	0	0	0
Maize	34431	13310	48066	29863	48127
Toor	6789	7400	10925	8106	11502
Udid	8111	8662	4588	3136	8472
Moog	8028	8640	4175	3777	8313
Groundnut	8499	7577	9596	6394	8826
Sesame	2711	2105	1995	763	1662
Niger Seed	0	0	0	0	0
Sunflower (Kharip)	0	0	0	0	0
Soybeans	18590	6833	18807	8031	21346
Cotton	4911	7423.5	6880	3661	6123
Wheat	30870	33319	34399	37411	2348.00
Gram	15649	19837	19196	22338	1285.00
Safflower	0	0	0	0	0
Tobacco	0	0	0	0	0
Linseed	0	0	0	0	0

[4]

[3] **Source:** E- Pik Pahani 2023 (Government of Maharashtra)
[4] **Source: Compiled by Team** (Retrieved from District Strategic Plan 2018-2023)

Based on the availability of data presented in the table 1.5, notably rice cultivation shows no production across all years, indicating potential challenges or non-cultivation of rice in the region. Jowar (Kharif) displays fluctuating production, with a significant increase in 2023, reaching 26,201 kilograms per hectare. Maize exhibits a positive trajectory, culminating at 48,127 kilograms per hectare in 2023, suggesting successful cultivation practices or increased demand. Soybeans show a substantial increase in 2023, reaching 21,346 kilograms per hectare. Cotton production fluctuates, with a dip in 2023. Wheat production, however, sees a notable decrease in 2023, highlighting a potential area for investigation or concern. Gram production shows a decline in 2023, indicating challenges in chickpea cultivation. These figures point out the importance of understanding the factors influencing crop production and implementing strategic measures to enhance productivity and address potential challenges in Jalgaon District.

1.6.3 Largest Production of Particular Crop

Knowing which crops are produced in abundance in particular areas help the local authorities, farmers, and policymakers to plan effectively. One can plan agricultural policies and distribution systems accordingly. Further if a specific crop is essential for the population's diet, identifying its largest production areas becomes vital. All along the data pertaining to productions of the crops in particular areas help the district authorities in terms of efficient allocation of resources-such as water, fertilizers, and land, by directing resources appropriately. Farmers can maximize the yields and minimize waste. It also helps the farmers to know in which area crop is predominantly grown allows for better risk management. For instance, if a particular region faces adverse weather conditions or pest outbreaks, alternative sources can be tapped to prevent shortages. Consequently, identifying major crop producers' areas helps in understanding market dynamics. It enables traders, processors, and exporters to strategize supply chains, negotiate prices, and ensure consistent availability. In harmony with this benefits Table 1.6 depicts the talukas with largest production of particular crop.

Table 1.6: Talukas with Largest Production of Particular Crop (2023) [5]

Sr. No.	Taluka	Particular Crops	Highest Production in District (Kg/Hectare)
1	Yawal	Maize	4975.00
2	Raver	Gram	1415.00
3	Bhusawal	Groundnut	1377.00
		Soyabean	2948.00
4	Jalgaon	Sesame	446.00
		Sugarcane (Ton/Hectare)	196.00
5	Erandol	Cotton	537.00
		Wheat	2505.00
6	Bhadgaon	Tur	1074.00
		Udid	818.00
		Moog	845.00
7	Chalisgaon	Jowar	1869.00
		Bajra	1575.00
		Groundnut	2010.00

The above data table 1.6 on Talukas with the largest production of particular crops in 2023 provides valuable insights for the Jalgaon District Strategic Plan. Yawal emerges as a significant contributor to maize production, leading with 4,975 kilograms per hectare. Raver leads in gram production with 1,415 kilograms per hectare, highlighting its strength in pulse cultivation. Bhusawal stands out for both groundnut (1,377 kilograms per hectare) and soybean (2,948 kilograms per hectare) production, showcasing its diverse agricultural prowess. In Jalgaon Taluka, sesame production reaches 446 kilograms per hectare, and it dominates in sugarcane production with an impressive 196 tons per hectare. Erandol excels in cotton production (537 kilograms per hectare) and wheat production (2,505 kilograms per hectare).

Bhadgaon emerges as a hub for pulses, leading in tur (1,074 kilograms per hectare), udid (818 kilograms per hectare), and moog (845 kilograms per hectare). Chalisgaon demonstrates strength in multiple crops, leading in jowar (1,869 kilograms per hectare), bajra (1,575 kilograms per hectare), and groundnut (2,010 kilograms per hectare). These figures underscore the distinct agricultural profiles of each Taluka, emphasizing the importance of tailored strategies for each region within the district for optimal agricultural development and productivity.

1.7 Land Use Statistics

Land use statistics play a crucial role in understanding how district machinery plan for effective management of lands for cultivation and irrigation. As matter of facts land use data enables district planning authorities to assess biodiversity and ecosystem impact. By monitoring changes over time, authorities can assess how alterations in land use affect biodiversity and ecosystems.

In extension it enables the policy makers for optimal resource allocation. Understanding land cover dynamics driven by population demands and natural factors enables efficient land management (www. mdpi. com). By tracing land usage, we can recognise areas that need preservation. It's essential for protecting wilderness, conserving habitats, and maintaining ecological balance (ourworldindata. org/land-use). Table 1.7 depicts the current status of land use in Jalgaon District

Table 1.7: Total Geographic Area and Cultivated Land Area (In Hectare)

Taluka	**Total Geog. Area**	**Not Available for Agriculture**	**Barren Land Apart from Land Not Cultivated**	**Land Not Cultivated**	**Net Area**	**Total Area Under Cultivation**
Chopda	115422	5025	8277	1801	64524	78057
Yawal	95000	8583	7182	1456	48836	53090
Raver	91036	3962	1881	1406	43756	63404
Muktainagar	63934	3155	2410	883	36113	41214
Bodwad	37231	1821	1343	707	28721	30020
Bhusawal	45343	5507	634	556	27103	29035
Jalgaon	82222	4791	3013	2010	57868	70501

Table 1.7: Total Geographic Area and Cultivated Land Area (In Hectare)

Taluka	Total Geog. Area	Not Available for Agriculture	Barren Land Apart from Land Not Cultivated	Land Not Cultivated	Net Area	Total Area Under Cultivation
Erandol	51329	1287	3256	554	34556	39159
Damgaon	50198	3886	380	913	41796	47129
Amalner	79893	3521	4020	760	66183	71175
Parola	78422	17119	9002	1136	52727	54159
Bhadgaon	49134	3182	6183	1214	34113	36928
Chalisgaon	121092	7846	3079	3993	86183	88193
Pachora	81278	4090	2242	1377	60631	64496
Jamner	134968	7871	2116	3331	96649	104653
Total	**1176502**	**81646**	**55018**	**22097**	**779759**	**871213**

[6]

The table 1.7 provides a comprehensive overview of land utilization in Jalgaon District, crucial for strategic planning. The data highlights that the district's total geographic area is 1,176,502 hectares, with 77.38% (871,213 hectares) utilized for various purposes. The talukas with significant agricultural activity include Chopda, Raver, Jalgaon, and Chalisgaon, with net cultivated areas of 78,057, 63,404, 70,501, and 88,193 hectares, respectively. Importantly, Parola taluka faces a considerable challenge, with 17,119 hectares not available for agriculture.

Overall, these statistics provide a comprehensive understanding of land use patterns, enabling the formulation of targeted strategies for sustainable development, agricultural productivity, and conservation initiatives in Jalgaon District.

1.8 Operational Land Holdings and Land use pattern

Comprehensions data about different size classes of holdings and patterns helps in planning and implementing land reforms. It enables policymakers to formulate policies and programs that benefit small and marginal farmers (mospi). Interpretation of operational holdings—distinct from ownership holdings along with land use pattern is essential. This information guides welfare initiatives for farmers, ensuring their well-being and livelihoods. Clear picture of holding of lands shown by table 1.8 and Land use pattern shown by table 1.9 .

Table 1.8: Information on Operational Land Holdings

Block	Geographical Area (Hectare)	Cultivatable area	Total No. of holding (Farmers)	Total Area in Acres
Jalgaon	82222	70,501	35052	51344

[6] **Source:** District Socio-Economic Analysis-2023

Table 1.8: Information on Operational Land Holdings

Block	Geographical Area (Hectare)	Cultivatable area	Total No. of holding (Farmers)	Total Area in Acres
Bhusaval	45343	29035	15773	25683
Yawal	95000	53090	28041	42456
Raver	91036	63404	34766	54828
Muktainagar	63934	41214	17525	29399
Bodvad	37231	30020	22199	34549
Pachora	81278	64496	46151	70895
Bhadgaon	49134	36928	23952	36934
Chalisgaon	121092	88193	47319	72388
Jamner	134968	104653	54914	82940
Amalner	79893	71175	53745	77978
Chopda	115422	78057	36825	57506
Dharngaon	50198	47129	35372	52596
Erandol	51329	39159	19862	31292
Parola	78422	54159	37972	56389
Total	**1176502**	**871213**	**509468**	**777177**

[7]The table 1.8 provides a detailed overview of the distribution of operational land holdings in Jalgaon District, essential for understanding the agricultural landscape. The district's total geographical area is 1,176,502 hectares, with 77.38% (871,213 hectares) identified as cultivatable. Across the 15 blocks, a total number of 509,468 operational land holdings are reported, accommodating 777,177 acres of farmers' land. Jalgaon and Chalisgaon blocks emerge as the major contributors, with 35,052 and 47,319 holdings, respectively. Notably, Amalner and Jamner blocks exhibit a high holding ratio, indicating larger operational land holdings. The data, sourced from the Strategic Research & Extension Plan (ATMA - Jalgaon), emphasizes the need for targeted agricultural extension programs and support services to maximize the efficiency and productivity of these operational land holdings, thereby contributing to the overall agricultural development of the district.

Table 1.9: Land use pattern in the Jalgaon District

Sr. No.	Name of the block	Forest Reserved	Pasture	Non agri. Use	Land for plantation	Waste land
1	Jalgaon	925	2541	1921	472	3013
2	Bhusaval	3460	307	742	327	634
3	Yawal	1223	6346	1359	836	7182
4	Raver	29588	4062	630	87	1881
5	Muktainagar	780	5862	2251	1020	2410
6	Bodvad	810	1612	809	80	1343
7	Pachora	1836	1995	1636	215	2242

[7]**Source:** Strategic Research & Extension Plan (ATMA - Jalgaon)

Table 1.9: Land use pattern in the Jalgaon District

Sr. No.	Name of the block	Forest Reserved	Pasture	Non agri. Use	Land for plantation	Waste land
8	Bhadgaon	1272	2883	1272	576	6183
9	Chalisgaon	16935	2242	739	-	3079
10	Jamner	4723	4170	3148	112	2116
11	Amalner	1230	3135	2023	945	4020
12	Chopda	18213	7361	2815	1016	8277
13	Dharngaon	1065	2334	790	385	380
14	Erandol	2198	2876	572	420	3265
15	Parola	7562	1312	5841	1512	9002
	Total	**91820**	**49038**	**26548**	**8003**	**55027**

[8]

The table 1.9 provides valuable insights into the utilization of land across various blocks, essential for informed strategic planning. The total forest reserved area in the district is 91,820 hectares, demonstrating a significant commitment to environmental conservation. Notably, Raver, Chalisgaon, and Chopda blocks have substantial forest reserved areas, emphasizing the need for sustainable land management practices.

Pasture lands, essential for grazing and animal husbandry, are prevalent across several blocks, with Raver and Muktainagar standing out on the top. Non-agricultural use, encompassing areas for residential, industrial, or commercial purposes, is notably present in Mukatainagar, Parola, and Jamner blocks, reflecting urbanization trends.

Land designated for plantation, a key aspect of agroforestry and horticulture, is observed in several blocks, with Muktainagar, Amalner, and Chopda displaying notable figures. Waste lands, which may have potential for reclamation or alternative use, are distributed across various blocks, with Jalgaon, Bhadgaon and Yawal having substantial areas.

The comprehensive data, sourced from the Strategic Research & Extension Plan (ATMA - Jalgaon), offers a holistic understanding of the land use dynamics, guiding effective planning for sustainable development, environmental conservation, and optimizing land utilization in Jalgaon District.

1.9 Soil Distinctive of Jalgaon District

Soil is a support system for cultivation and growing the crops on the farmland. It anchors roots, holds water, and stores nutrients & stores organic carbon. It's home to earthworms, termites, and countless microorganisms that fix nitrogen and decompose organic matter. Soil provides plants with essential nutrients for growth. It's like a nutrient reservoir, ensuring healthy vegetation along with water regulation. Thus, knowing nature of soil is very pertinent for agriculture development of particular area. Table 1.10 displays information about types of Soils in Jalgaon District and Table 1.11 show types of crops suitable for soil.

[8] **Source:** Strategic Research & Extension Plan (ATMA - Jalgaon)

Table 1.10: Types of Soils in Jalgaon District

Sr. no.	Name of the Block	Black Area (ha)	Red Soil Area (ha)	Sandy Looms Area (ha)
1	Jalgaon	45408	0	4125
2	Bhusaval	27747	0	5176
3	Yawal	62035	4772	4772
4	Raver	64415	4678	3743
5	Muktainagar	32305		9692
6	Bodvad	26818	0	0
7	Pachora	41020	0	4925
8	Bhadgaon	26164	0	2907
9	Chalisgaon	73058	7305	8523
10	Jamner	74840	5453	5443
11	Amalner	65000	0	6753
12	Chopda	82632	6680	1909
13	Dharngaon	34765	0	2781
14	Erandol	36662	0	1022
15	Parola	43516	0	0
	Total	**736385**	**28888**	**61771**

[9]

The above Table 1.10 demonstrates a detailed overview of the soil composition across different blocks, providing crucial information for agricultural planning and land use strategies. The district showcases a diverse soil profile, with a substantial expanse of black soil, totalling 736,385 hectares, which is well-suited for crops like cotton, soybeans, and cereals. Yawal and Raver blocks present a mix of black and red soils, contributing to agricultural diversity.

Bodvad block displays a significant area of black soil, while Chopda exhibits a diverse composition, including black, red, and sandy loam soils. Jamner and Amalner stands out with a substantial expanse of black soil, highlighting its potential for specific crop cultivation.

The total area of red soil is 28,888 hectares, which can influence crop choices and agricultural practices. Sandy loam soils, covering 61,771 hectares, present unique considerations for water management and crop selection.

This comprehensive soil data, sourced from the Strategic Research & Extension Plan (ATMA - Jalgaon), serves as a valuable resource for tailoring agricultural practices, selecting appropriate crops, and implementing sustainable land management strategies in Jalgaon District.

Table 1.11: Types of Crops Suitable for Soil

Types Soil	Types of Crops
Black	Cotton, Soybeans, Pigeon Peas (Tur), Sorghum (Jowar), Groundnut
Red oil	Sorghum (Jowar), Cotton, Millets (Bajra), Pulses like Chickpeas (Chana), Oilseeds like Sunflower

[9] **Source:** Strategic Research & Extension Plan (ATMA - Jalgaon)

Table 1.11: Types of Crops Suitable for Soil

Types Soil	Types of Crops
SandyLooms	Vegetables like Capsicum, Tomato, and Okra, Pulses like Green Gram (Moong) and Black Gram (Urad), Melons such as Watermelon and Muskmelon, Sesame (Til), Pearl Millet (Bajra)
Alkaline	Wheat, Barley, Gram (Chickpeas), Lentils (Masoor), Mustard

1.10 Irrigation Topography of Jalgaon District

Irrigation plays a crucial role in enhancing agricultural productivity and ensuring optimal crop growth and productivity. Consistent and suitable irrigation water supply can lead to substantial improvements in agricultural production and economic vitality within a region. Enhancement of Crop Yield is directly proportional to Irrigation facilities as it enables farmers to cultivate more than one crop in most regions. The fallow land can be brought under cultivation, expanding agricultural output.

1.10.1 Irrigation and Water Extraction Facilities

Dams, reservoirs, and other water extraction facilities play a vital role in irrigation as it offers reliable water supply, reducing dependence on erratic rainfall patterns. Moreover, these facilities assist in flood control and provide water for hydropower generation. Irrigation also helps in controlling droughts and famines by ensuring crops receive adequate water during dry spells. It also relieves in soil restoration in arid regions with below-average rainfall. Table- 1.12 depicts irrigation and water extraction facilities of the district. (Reference Year 2021)

Table 1.12: Jalgaon District Irrigation and Water Extraction Facilities

Irrigation facilities (Number)		**Total**
Major projects		2
Medium projects		14
Minor irrigation projects	State	104
	Local Level	11
Pazar Lake / Village Pond		754
Kolhapur Barrage		184
Storage dam		2933
Lift Irrigation Scheme		7
Irrigation wells		6007
Total number of irrigation wells		81632
Agricultural pumps (Number) Installed on wells in use	Diesel pumps	3298
	Electric pumps	65679
Gross Area Under Irrigation for Harvesting (Ha)		268147
Gross Area Under Cultivation		871213
% of area under Irrigation for Harvesting to area under cultivation[10]		30%

[10]**Source:** Compiled by Team (District Socio-Economic Analysis-2023)

Table 1.12 outlines the irrigation and water extraction facilities in Jalgaon District as of the reference year 2021. The district boasts a diverse range of irrigation facilities, including 2 major projects, 14 medium projects, and 104 state-level and 11 local-level minor irrigation projects. Additionally, there are 754 Pazar Lakes/Village Ponds, 184 Kolhapur Barrages, 2933 storage dams, 7 lift irrigation schemes, and 6007 irrigation wells, totalling 81,632. The data further indicates that there are 3,298 diesel pumps and 65,679 electric pumps installed on these wells.

The irrigation infrastructure contributes meagre to agricultural practices, with a gross area under irrigation for harvesting measuring 268,147 hectares out of the total gross cultivated area of 871,213 hectares. This represents approximately 30% of the total cultivated area under irrigation, underscoring the district's commitment to sustainable and efficient water management. The compiled information serves as a valuable reference for planning and managing water resources in the region.

1.10.2 Irrigated and Rainfed Area

Data on irrigated and rainfed areas (Table 1.13) helps us comprehend the spatio-temporal distribution of cultivated crops. It reveals how different regions and seasons impact crop choices. For instance, during the Kharif (monsoon) season, rainfed crops thrive due to positive water balance, while the Rabi seasons heavily rely on irrigation to mitigate drought stress. Accurate data allows policymakers and farmers to allocate water resources efficiently. By knowing which areas are rainfed and which require irrigation, we can plan for sustainable water usage. Farmers can make informed decisions based on data about irrigated and rainfed areas. Crop selection, planting schedules, and yield expectations depend on this information.

Table 1.13: Irrigated and Rainfed area in The District Jalgaon

Block	Irrigated area (Source Wise)						Lift	Rainfed area (ha.)	Wells/ Bore wells	Ponds
	Major		Medium		Minor					
	P	A	P	A	P	A				
Jalgaon	-	-	-	-	1150	-	-	496.06	8985	68
Bhusaval	-	-	-	-	860	-	-	287.30	8107	37
Yawal	14520	8284	-	-	-	-	-	406.86	11895	19
Raver	2120	1100	9546	1354	-	-	-	301.46	12075	39
Muktainagar	-	-	-	-	443	-	3360	266.12	9597	76
Bodvad	-	-	-	-	827	-	-	254.12	3684	47
Pachora	-	-	3140	-	5409	-	118	552.90	15194	44
Bhadgaon	10563	10563	1625	296	210	-	-	307.39	9980	42
Chalisgaon	963	963	13465	14470	1332	679	2320	920.70	23855	87
Jamner	-	-	1110	11110	5111	-	-	1018.92	15605	90
Amalner	10259	10259	-	-	416	-	-	591.60	13215	64
Chopda	32258	25258	890	890	-	-	-	615.82	13530	55
Dharngaon	22272	22187	-	-	-	-	-	352.94	3503	14
Erandol	10260	10354	-	-	315	-	-	287.20	13280	24

Table 1.13: Irrigated and Rainfed area in The District Jalgaon

Block	Irrigated area (Source Wise)						Lift	Rainfed area (ha.)	Wells/ Bore wells	Ponds
	Major		Medium		Minor					
	P	A	P	A	P	A				
Parola	2884	2884	8780	372	1895	2180	-	510.45	11107	49
Total	**106099**	**91852**	**38556**	**28492**	**17968**	**2859**	**5798**	**7169.84**	**173612**	**755**

(P- Potential area of the project A- Actual Area Irrigated)

[11]

Table 1.13 provides a comprehensive overview of the irrigated and rainfed areas in the Jalgaon District, categorized by different blocks and water source types. The potential and actual irrigated areas, as well as the rainfed areas, are detailed for each block.

Jalgaon block exhibits a combination of minor and rainfed sources, with 1,150 hectares under minor irrigation and 496.06 hectares designated as rainfed. Bhusaval block shows 860 hectares under minor irrigation and 287.3 hectares as rainfed. Yawal block features 14,520 hectares under major irrigation, 8,284 hectares as the actual irrigated area, and 406.86 hectares as rainfed. Raver block displays 2,120 hectares under major and 1,100 hectares under actual irrigated areas, along with 9546 hectares under medium irrigation and 1,354 hectares as actual irrigated. Muktainagar, Bodvad, Pachora, and others also exhibit similar details. The strategic data source provides valuable insights for effective water resource management and planning in the district. The distribution of irrigated and rainfed areas across different blocks and water sources aids in formulating targeted agricultural strategies and water conservation measures.

As far as taluka wise availability of irrigation facilities are concerned the district has an advantage of having Major, Minor and Medium types of projects. Table 1.14 represent the Blockwise Irrigation Facilities.

Table 1.14: Blockwise Irrigation Projects in the District (State Level Irrigation)

Sr. No.	Block	Minor		Medium		Major	
		Benefit Area (Ha)	Wetland Area (Ha)	Benefit Area (Ha)	Wetland Area (Ha)	Benefit Area (Ha)	Wetland Area (Ha)
1	Chopda	773	619	3708	500	36088	26335
2	Yawal	2061	1649	3198	3739	14888	16760
3	Raver	981	784	13774	23027	2205	4787
4	Muktainagar	1046	1317	0	0	0	0
5	Bodwad	846	1060	0	0	0	0
6	Bhusawal	1925	2192	0	0	3807	1152
7	Jalgaon	3879	3050	0	0	17332	1619
8	Erandol	630	376	2831	1120	19131	10264
9	Dharangaon	0	0	0	0	41496	13127
10	Amalner	1073	927	25657	1620	19114	2717
11	Parola	2847	2900	11395	3567	5373	757

[11] **Source:** Strategic Research & Extension Plan (ATMA - Jalgaon)

Table 1.14: Blockwise Irrigation Projects in the District (State Level Irrigation)

Sr. No.	Block	Minor		Medium		Major	
		Benefit Area (Ha)	Wetland Area (Ha)	Benefit Area (Ha)	Wetland Area (Ha)	Benefit Area (Ha)	Wetland Area (Ha)
12	Bhadgaon	754	544	3844	0	19680	6650
13	Chalisgaon	9436	6119	23700	9542	1794	8390
14	Pachora	10036	12683	10762	12934	0	4602
15	Jamner	12650	14637	2075	1763	26172	525
Total District		**48937**	**48857**	**100944**	**57812**	**207080**	**97685**

[12]

The data presented in Table 1.13 offers a comprehensive overview of irrigation facilities at the state level in the Jalgaon District. The table outlines the benefit area and wetland area associated with minor, medium, and major irrigation projects across various blocks in the district. Notably, major projects in Jalgaon, Erandol, and Dharangaon exhibit substantial benefit areas, with Dharangaon having a particularly significant wetland area. Chalisgaon and Pachora stand out among the blocks with extensive minor and medium irrigation projects, contributing significantly to the overall benefit area. The total figures for the district underscore the substantial scale of irrigation infrastructure, with a combined benefit area of 207,080 hectares.

Understanding these figures is crucial for the district's strategic plan, as it highlights the existing irrigation potential and areas where further development or optimization of irrigation resources can be prioritized to enhance agricultural productivity and water use efficiency.

[12] **Source: District Socio-Economic Analysis-2023**

Chapter 2

Vision, Mission, and Values

2.1 Introduction

A well-defined mission provides a purpose and direction for agricultural initiatives. It outlines the core objectives and the desired impact on farmers, communities, and the environment. A strong mission guide, decision-making, resource allocation, and policy formulation. In same way, compelling vision paints a picture of the desired future state of agriculture. It inspires stakeholders, including policymakers, researchers, and farmers, to work towards a common goal. A clear vision helps align efforts, foster innovation, and drive sustainable development. Mission and vision statements serve as the foundation for strategic planning. They help identify priorities, allocate resources effectively, and measure progress.

2.2 District Mission &Vision for Agricultural Development

2.2.1 Mission

Empowering agricultural development in Jalgaon district through collaborative efforts, that aim to enhance farmers productivity, promote sustainability and elevate livelihoods, ensuring a prosperous future for farmers and community of Jalgaon.

2.2.2 Vision

To foresee a future where every farmer is equipped with the knowledge, resources and support necessary to maximize yield, minimize environmental impact and enhance livelihoods, thereby ensuring food surplus, economic prosperity, and societal well-being for generations to come that will bestow agricultural excellence of Jalgaon district. Thus, obvious vision is to position Jalgaon District as a model for agricultural excellence, fostering innovation, and sustainable practices to ensure food security, economic growth, and environmental harmony.

2.2.3 Value statement

To prioritize the well-being, needs and aspirations of farmers, striving to provide them with access to quality inputs, market linkages, and support services that lift the household income of farmers. It would be an obligation in fostering collaboration and rendering services among farmers, stakeholders, and local communities to collectively drive agricultural development of Jalgaon.

2.3 Mission statement outlining the goals and objectives.

1. Promote crop diversification and efficient water management to elevate the agricultural sector to new heights of productivity and sustainability. Aim to make the district a leading producer of Banana and Cotton.
2. Work towards making the district the highest manufacturer of edible oil and processed food for both domestic consumption and the export market.
3. Foster a conducive environment for business, attract investments, and support diverse industries. Focus on Ease of Doing Business (EoDB) initiatives.
4. Promote sustainable practices, conservation efforts, and green initiatives to maintain ecological balance. Ensure clean water bodies, sustainable agriculture, and a greener district for the present and future.
5. Foster research, innovation, and collaboration with university for knowledge-based growth in the district.
6. Build a transparent, efficient governance framework that catered on citizen needs. Streamline processes, promote e-governance, and responsibly manage resources for sustainable growth in the district.

2.4 Core Values Guiding the Strategic Plan

The strategic plan for the agricultural development of Jalgaon District is anchored in the following core values:

- **Sustainability:** Commitment to practices that ensure the long-term viability of agricultural activities, environmental conservation, and economic stability.
- **Innovation:** Encouraging continuous improvement, embracing new technologies, and fostering a culture of innovation in all aspects of agriculture.
- **Inclusivity:** Ensuring that the benefits of agricultural development are shared equitably, fostering inclusivity among all stakeholders, and addressing social and economic disparities.
- **Transparency:** Striving for openness, accountability, and transparency in governance, decision-making, and resource allocation.
- **Collaboration:** Promoting collaboration and partnerships among government agencies, private enterprises, research institutions, and local communities to achieve common goals.
- **Citizen-Centric:** Placing the needs and aspirations of the citizens at the forefront of all initiatives, ensuring that the agricultural sector contributes to the overall well-being of the community.

Chapter 3

Methodology of the Study

3.1 Brief overview of the strategic plan

The proposed district strategic plan is a blueprint to communicate the goal of Jalgaon district for agricultural development. This plan outlines district mission, vision, and strategic initiatives (focus) for the next five to twenty years from now. The existing strategic plan will strengthen operations and ensure that, district authorities and all concern stakeholders are working toward common goals of district. Thus, district goals for agricultural development are aligned with state's main goal is to make the economy of the state of Maharashtra $ 1 trillion by the year 2027, $ 2.5 trillion by the year 2037 and $ 3.5 trillion by the year 2047.

On the occasion of the Amrit Mahotsav of Independence, the Government of India has resolved to develop India by the year 2047 as "Vikasit Bharat 2047". It has announced the goal of taking India's economy to $5 trillion by 2025-26. The Government of India intends to achieve the Sustainable Development Goals by 2030. While achieving these goals of a developed India, the states of India also need to be fully developed by the year 2047. For this, focusing on the "District as a Fulcrum of Growth" will enable the development of thoughtful and specific strategies for economic development and such development will be inclusive and help to achieve the Sustainable Development Goals. Under this, a District Strategic Plan will be prepared specifically for agriculture development of Jalgaon district, taking into consideration the condition of agriculture studied from data provided by the district planning office (Jalgaon.gov.in).

3.2 Purpose and scope of the strategic plan

The objective of the proposed strategic plan is to assess not only the current status of agriculture and its allied sectors in the Jalgaon district but also to evaluate potential for value addition resulting in economic growth of the region. The study aims at evolving a Time-bound Short, Medium, and Long-term **'Strategic Plan for Agriculture Development of Jalgaon District'** .

The scope of the study span across the three sectors of the economy of the district that mainly considered the growth and aspirational areas of the agriculture sector. Though few areas are mentioned below in the table 3.1 the initiatives proposed for the development of the agriculture are very comprehensive in nature.

Table 3.1: Economic Sectors and Aspirational Development Areas

Sector	Growth	Aspirational
Primary	• Agriculture- Banana, Cotton and Millets • Animal Husbandry	• Post Harvest Management • Agricultural Waste Recycling • Fishing and Aquaculture
Secondary	• Cotton Ginning Industry • Banana allied product Processing • Food Processing Industry • Milk Co-operative	• Cotton Processing Industry • Banana Food Processing • Millet Based Industries • Wood Processing • Pulse Processing
Tertiary	• Agriculture Services providers • Distribution and Transportation	• Travel and Agro-tourism • Religious Tourism

3.3 Jalgaon District Strategic Goals for Agricultural Development

Strategic goals are accompanied by action objectives, which are implemented, monitored, and adjusted throughout the year. These actions align with Maharashtra state's aim to achieve a $1 trillion economy by 2027 and beyond. The team concentrates on three strategic goals for district agricultural transformation, ensuring inclusive agricultural acceleration.

3.4 Key Strategic Goals and Corresponding Objectives

For developing the strategic plan for agriculture development team set forth three goals that is Short, Medium, and long term Goal and its corresponding two to four Objectives.

I) Short Term Goal

Goal-1: To Enhance the Annual Agricultural Productivity of the Jalgaon

Objectives:

1. Effective Water Management
2. Enhancing Agro Cooperative Initiatives
3. Value Addition in Existing Practices for enhancing Productivity.

II) Medium Term Goal

Goal-2: To Promote Rational Utilization of Agriculture Inputs Mainly Seeds, Fertilisers, Machinery and Labour

Objectives:

1. Transforming Agriculture from Traditional to Mechanized, Modernized Outlook
2. Evolving Sustainable & Continuous Support Mechanism

III) Long Term Goals

Goal-3: Building Sustainable Agricultural Ecosystems for Prosperity and Innovation

Objectives:

1. To increase the Fisheries Production
2. To Enhance the growth rate Sericulture, Poultry Management, Goat Farming, Honey Production, Oil Extraction Production
3. To create Agriculture Support Ecosystem
4. To Strengthen Banana Production
5. Robust Implementation of Millet Mission

Goal-4: Entrepreneurship and Sustainable Agri-Business Development

Objectives:

1. To Create Agro-Industries Ecosystem
2. To Established support systems pertaining to Organic Food Processing, Organic Manures, Bio-pesticides etc.
3. To form the Agriculture Export & Import Information Data Bank

3.5 Research Methodology

The KBCNMU Team carried out field visits and held meetings and discussions with various stakeholders in the district. Major interactions included the Collector and other key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and others.

This study is based on secondary data collected from official data sources such as the Census of India, Directorate of Economics and Statistics (GoHP), Brief Industrial Profile of Jalgaon district (Ministry of MSME, Govt. of India), National Sample Survey (NSS), and data from the periodic Economic Census, Agriculture Census, specialised govt and trade bodies, etc. Data, research papers and media reports from different govt. and private websites have also been referred for analysis. In nutshell team adopted following methodology the study provided in table 3.2

Table 3.2: Research Details and Methodology

Sr. No.	Details	Research Method
1	Research Design	Descriptive, Comparative and Analytical Research
2	Nature of Data Collection	Secondary Data Collection
3	Population	DPO and Allied Department
4	Sampling Technique	Convenience Sampling
5	Sample	DPO and Allied Departments
6	Type of Data	Primary/Secondary data
7	Data Collection Method	Field Visit & Personal Interviews

Chapter 4

Proposed Strategic Initiatives for Agriculture Development

4.1 Introduction

A developed agricultural system is characterized by increasing crop yields per unit of land. However, increasing yields comes with a price: extreme vigilance and the adoption of better farming techniques. In terms of technology, the agriculture sector in Jalgaon District lacks market integration, smart irrigation systems, crop diversification, research and development, infrastructure assistance, education and training, and even financial support. The consulting team first determined the short, medium, and long-term goal and then mapped it with relevant objectives, existing schemes, and budgetary provision that has already prevailed and based on the analysis, team has proposes the various initiatives based on the requirements of areas of attention for the development of the agriculture of Jalgaon district.

4.2 SWOC Analysis

The SWOC analysis table 4.1 provides a comprehensive overview of the Agricultural Sector, highlighting its internal strengths and weaknesses, as well as external opportunities and challenges. The sector's strengths include climatic diversity, fertile soil, the cultivation of prominent crops, and its strategic location with excellent connectivity. However, it faces weaknesses such as irregular rainfall, a drought-prone belt, labor challenges, a high reliance on agriculture for employment, and a lack of entrepreneurial spirit.

Table 4.1: SWOC Analysis of the Agricultural Sector

Strength	Weakness
Climatic Diversity Fertile Soil Prominent Crops Strategic Location and Connectivity	Irregular Rainfall Drought-Prone Belt Labor Challenges High reliance on agriculture for employment. Lack of entrepreneurial spirit
Opportunity	**Challenges**
Technology Adoption Crop Diversification Industry Linkages Market Access	Climate Variability Crop Productivity Economic Viability Inculcating entrepreneurial spirit

On the opportunity side, the Agricultural Sector can leverage technology adoption, explore crop diversification, establish industry linkages, and enhance market access.

Despite these opportunities, the sector grapples with challenges like climate variability, issues related to crop productivity, ensuring economic viability, and the need to foster entrepreneurial spirit. The SWOC analysis serves as a valuable tool for strategic planning, aiding stakeholders in making informed decisions to capitalize on strengths and opportunities while addressing weaknesses and challenges in the agricultural landscape.

4.3 Proposed Initiatives for Short Term Goal and Corresponding Objectives

The team's proposed initiative was primarily based on the observation of the last five to six-years data, including the cultivated area for crops produced during the Kharif and Rabi seasons, the underutilization of water resources and land for the production of foodgrains, the contribution of agriculture to the GDDP, and other tactical issues discussed during one-on-one meetings with various district authorities.

Table 4.2: Percentage Area of Food Grains and Fruits/Vegetables Cultivation

Years	Food Grains Area (ha)	% Food Grains	Fruits/ Vegetables Area (ha)	% Fruits/ Vegetables	Net Area (ha)
2018	366,758	48.44	58,790	7.77	757,088
2019	294,668	37.79	51,213	6.57	779,759
2020	460,157	56.67	82,309.4	10.14	812,045
2021	452,172	54.05	82,333.8	9.84	836,543
2022	457,436	53.21	120,650	14.03	859,686
2023	316,795	40.76	117,920	15.17	777,142

[1]

The Table 4.2 clearly indicates that, the land usage for cultivation of foodgrains, fruits and vegetables is underutilized as it shows cultivation occurred only on average 48 percentage of total land available. If the district authority wants to improve the productivity, then they must have to encourages the farmers of the district to increase their land use pattern for cultivation. The land available for such cultivation is around 1,58,851 Hectare (Refer Table No 1.7 and 1.9) . Even there is huge gap in seasonal cultivation of around 63%, which can be minimised and rational balance can be procured between Kharif & Rabi Cultivation.

[1] **Source:** Team Own Study (Retrieved from Table-3)

Table 4.3: Irrigated Area Covered by Various Projects

Sr. No.	Project Type	Project Name	Blocks covered	Area Irrigated in (Ha.) Projected	Actual	Underutilized Capacity
1	Major	Girana	Chalisgaon, Bhadgaon, Pachora, Erandol	57209	22365	34844
		Hatnur	Raver, Yawal, Chopda	37838	21354	16484
		Waghur	Jalgaon, Bhusawal	38570	4181	34389
2	Medium	Aner	Choapda	7180	375	6805
		Manyad	Chalisgaon	4864	1493	3371
		Suki	Raver	5128	12804	-7676
		Bori	Parola	4553	875	3678
		Agnavati	Pachora	605	522	83
		Ambhora	Raver	1115	2239	-1124
		Bhokar	Parola	1205	340	865
		Tondapur	Jamner	1060	983	77
		Mor	Yawal	2055	1915	140
		Hivara	Pachora	2231	1641	590
		Bahula	Pachora, Jalgaon	4047	-	4047
		Magrula	Raver	1683	2490	-807
		Anjani	Erandol, Dharn-gaon	3100	105	2995
		Gul	Chopda	3025	220	2805
		Niman Tapi	Amalner	43600	1620	41980
		Panzan	Chalisgaon, Nandgaon	12141	2246	9895
				231209	**77768**	**153441**

[2]

The table-4.3 provides valuable information on the underutilized capacity of irrigation projects in Jalgaon District, categorized by project type, project name, blocks covered, projected area irrigated, actual area irrigated, and the underutilized capacity.

Major irrigation projects such as Girana in Chalisgaon, Bhadgaon, Pachora, and Erandol have a projected area of 57,209 hectares, but the actual area irrigated is 22,365 hectares, leaving an underutilized capacity of 34,844 hectares. Similarly, Hatnur and Waghur projects also exhibit significant underutilization. Among medium projects, Suki in Raver and Ambhora in Raver have a negative underutilization, indicating that they are overutilized compared to the projected area. However, other projects like

[2] **Source:** Compiled by Tean (Retrieved from Strategic Research & Extension Plan(ATMA - Jalgaon)

Aner, Manyad, Bori, Agnavati, and others show varying degrees of underutilization.

The data compiled by the team sheds light on the need for optimizing the utilization of existing irrigation infrastructure to enhance agricultural productivity. Addressing the underutilized capacity in these projects could lead to more efficient water resource management and improved agricultural outcomes in the region.

Table 4.4: Trends of Gross District Domestic Product of Jalgaon District (@Current Price)

Years	Total GDDP of District (In Rs. Cores)	Primary Sectors & Allied Sector (Total In Rs. Cores)	Agriculture (Only in Rs. Cores)	% Agriculture to Total GDDP
2011-12	29,564	7,729	5,601	18.95
2012-13	31,864	6,492	4,672	14.66
2013-14	37,285	8,304	7,040	18.88
2014-15	40,071	8,348	6,872	17.15
2015-16	43,166	7,620	6,105	14.14
2016-17	49,812	10,225	8,285	16.63
2017-18	52,179	9,682	7,441	14.26
2018-19	54,563	9,163	6,267	11.49
2019-20	56,805	10,997	7,089	12.48
2020-21	58,202	13,058	8,968	15.41
2021-22	65,428	12,951	8,382	12.81

[3]

The Gross District Domestic Product (GDDP) data of Jalgaon District is provided in table-4.4 reflects the economic landscape of Jalgaon District, with figures presented at current prices. The table spans a decade, showcasing trends in the district's economic performance. Agriculture plays a pivotal role in the district's economy, contributing significantly to the total GDDP. Notably, the percentage of agriculture to the total GDDP fluctuates over the years, ranging from a low of 11.49% in 2018-19 to a high of 18.95% in 2012-13. The overall GDDP shows a positive trajectory, increasing from Rs. 40,878 crores in 2012-13 to Rs. 65,428 crores in 2021-22.

The contribution of primary sectors and allied sectors, thus showing decreasing percentages of contribution to GDDP which is far below the National Level which around 20% to total GDP of the nation. Thus, district Policymakers and stakeholders need to concentrate on these issues while formulating the strategies for sustainable economic growth, with a focus on enhancing the productivity and resilience of the agricultural sector.

The team proposed to district administration to focus these challenges initially and thus considered these issues to be prioritises in Short Term Goal. The initiatives proposed under Short Term Goal initially for five years, the nature of **few of the initiatives are continuous and hence they can be the part of other goals as well.**

Short Term Goal - 1

To Enhance the Annual Agricultural Productivity of the Jalgaon District

[3] **Source:** District Strategic Abstract (2023)

- **Key Performance Indicator** : Productivity Increase Year on Year by 10%
- **Bases for KPI (Current Status)** : FY'22-23 at Kharif cultivated area is 7.70 lakh hectors and at Rabi is 2.88 lakh hectors. Almost 63% is under-utilized. (Source: Agri. Productivity Review Report 22-23 and 23-24); Underutilized Irrigation resources; Lower percentage land utilized for foodgrain cultivation and decreasing percentage of Agriculture to GDDP.
- **Deliverable after Five Years (Milestone)** :
  1. To increase "Cropping Intensity" by 10% resulting in 3.61 lakh hectors cultivation in Rabi Season (Increasing cropping intensity from137% to 147%).
  2. Proper utilization of water resources increases in area under irrigation.
  3. Increase in share of agriculture to GDDP close to national level contribution of agricultural to GDP that is around twenty percentage.
- **Objectives:**
  1 . Effective Water Management
  2 . Enhancing Agro Cooperative Initiatives
  3 . Value Addition in Existing Practices for enhancing Productivity.

Table 4.5: Proposed Initiatives for Achieving Short Term Goal

Sr.	Initiative (Actions)	Sr.	Initiative (Actions)
1	Increasing area under Cultivation along with increasing the number of Artificial Ponds in agriculture fields by subsidizing the creation of Artificial ponds (Shet Tala) which will retain natural rainwater.	11	Improving **Climate Resilience Based Cultivation Practices and Cropping** Pattern
2	Rejuvenating the Natural Ponds with the Help of Social Activists / NGOs and a Motivational Reward Scheme from the District Administration.	12	**Capacity Building / Demo Plot** for improved cultivation technology to Diversify Farmers Towards High Value Crops Production
3	**Irrigation Efficiency Training Program** (IETP)- Skill Training	13	Promotion of Precision Farming Technology through demo plots / extension programs.
4	Increase the area under Drip Irrigation and Fertigation Facility by extending subsidy schemes	14	Technical Support by Providing ICT Tools in terms of identifying high-value crops and their cultivation practices etc. as per the geographical conditions.
5	Participative involvement of Local Bodies/Gram Sabha in Watershed Management under MANAREGA & NGO& CSR	15	Networking and strengthening the SHGs in order to Increase Income of SHGs

Table 4.5: Proposed Initiatives for Achieving Short Term Goal

Sr.	Initiative (Actions)	Sr.	Initiative (Actions)
6	Setting up of crop wise **Agro. Gram Vikas Committee at Village level (AGVC)** under the aggies of District Collectorate.	16	District Level Agriculture Trade Programs/workshop/conference
7	Increasing the cluster (Market Infrastructure and Institutions) of APMC/NAFED and other similar marketing agencies viz Farmers Producers Companies in order to create better **Market linkages / Buy-back arrangements** (Contract Farming)	17	**Jalgaon Agri. Partnership Program -JAPP** (Development of taluka-wise Contract Farming)
8	APMC of Jalgaon should be upgraded with facilities like Cold Storage, Installation Of Solar Dryers, Construction of Market Shops, and **Drying Yards** for minimal processing (Grading and Cleaning)	18	Financial support (incentives/ subsidies) etc. for cultivation of **High-Value Crops for Fruits, Vegetables And Banana**
9	Introducing Improved Cultivation Practices like INM/IPM/ICM- Demo Plots with package	19	Price Assurance through tie-ups with processing industries. Contract Farming
10	**Awareness Campaigning for Organic Farming** and INM through IDK. Promoting Integrated pest & disease management (IPM & IDM)	20	Subsidy Scheme for adoption of Precision Farming

[4]

4.4 Proposed Initiatives for Medium Term Goal and Corresponding Objectives

The proposed initiative suggested by the team based mainly on the observations emerges out of discussion with district authorities. As per as adaptation of promoting the rational utilization of agriculture inputs along with mechanization in farmland of the district is concerned the data and information revealed that, Farmer lacking in access to high-quality seeds, in fact private player are the major suppliers of the seeds (Table - 4.6). They have constraints to use certified seeds that exhibit desirable traits such as disease resistance, high yield potential, and adaptability to local conditions.

Apart from this, farmers of the district have very less propensity towards crop rotation and intercropping and thus depriving of enhancing soil health and reduce pest pressure.

[4] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

Table 4.6: Seeds Distribution by Sector and Year (in '000 Quintals)

Sector-Year	2018	2019	2020	2021	2022
Public	20.398	22.97	17.44	14.25	11.9
Private	56.607	113.61	102.26	119.23	116.88
Total [5]	**77.005**	**136.58**	**119.7**	**133.48**	**128.7**

Awaking the farmers about the right balance of nutrients (nitrogen, phosphorus, potassium) is again niche area that requires immediate attention. It is imperative for the district machinery to encourage the farmers for soil testing and to develop the mechanism to support the farmers for customized fertilizer recommendations that can prevent overuse or underused. Table-4.6 & 4.7 aggregated exposed that, farmers in the district succumb to overuse of chemical fertilizer as compared to organic and bio-fertilizers. Team suggests that farmers shall be encouraged for the use of organic and bio fertilizers to improves soil health and minimizes environmental impact and also compel them adopt modern techniques like precision agriculture allow targeted fertilizer application, reducing wastage.

Table 4.7: Organic inputs used in the District Jalgaon

Sr.	Year	Type of Input	Sources of Availability	Quantity Used (MT)
1	2016-17	FYM	Pvt & Dept.	105000
		Vermicompost		37500
		Bio-fertilizer		25000
2	2017-18	FYM	Pvt & Dept.	125000
		Vermicompost		42500
		Bio-fertilizer		27500
3	2018-19	FYM	Pvt & Dept.	128000
		Vermicompost		42750
		Bio-fertilizer		28200

[6]

Table 4.8: Distribution of chemical fertilizers (MT for 2023)

	Complex	Mixture	Other	Total
Kharif	69729	2234	200842	272805
Rabi	59902	2117	136220	198239
Aggregate	128631	4351	347062	471044

[7]

Table-4.8 presents the distribution of chemical fertilizers in metric tons (MT) for the year 2023 in the Jalgaon district. The aggregate distribution for the year reached 2022-2023 is about 4, 71,044 MT, with 128,631 MT of complex fertilizers, 4,351 MT of mixture fertilizers, and 347,062 MT of other fertilizers. From the available data of 2019 we can conclude that, there is around fifty percent more use of chemical fertilizer which about 471044 MT to that of 173570 MT of organic fertilizer. This data is crucial for assessing

[5] **Source:** District Strategic Abstract (2023)
[6] **Source:** Strategic Research & Extension Plan(ATMA - Jalgaon)

the nutrient supply to crops in different seasons, aiding in optimizing fertilizer usage and promoting sustainable agricultural practices in the district.

Jalgaon district farmers also lacking in farm mechanization which is necessary for enhancing efficiency and reduces labour-intensive tasks. Tractors, harvesters, and planters enable timely operations but very farmers having access to it. Total numbers of holding (Farmers) in the district are 509468 (Refer Table -1.8) but beneficiaries of farm mechanization are 470 and total number of beneficiaries altogether are 87369 in number who received mechanization support altogether which are very meager (Refer Table 4.9, PoCRA)

Table 4.9: Beneficiary details for farm mechanization & allied activities under PoCRA

Sr. No.	**Activity Name**	**Number of Beneficiary**	**Amount** (in Lakh)
1	Apiculture	8	9.81
2	Backyard Poultry	95	11.55
3	Compost (Vermicompost / NADEP / Organic input production unit)	26	1.83
4	Drip Irrigation	69820	55021.35
5	Farm Mechanization	470	285.66
6	Farm Pond (Individual)	224	386.04
7	Farm Pond Lining	73	64.70
8	FFS host farmer assistance / Promotion of BBF technology/ Zero Tillage Technology etc.	813	22.17
9	FPO - Others		0.00
10	Horticulture Plantation / Agroforestry	2423	691.48
11	Inland Fisheries	33	7.01
12	Pipes	3961	740.17
13	Planting material in Polyhouse / Shadenet house	212	152.52
14	Polyhouse/ Poly tunnels	6	142.61
15	Recharge of open dug wells	40	2.93
16	Saline and Sodic lands (Farm ponds/ Sprinklers / Water pump/ FFS)	1169	160.84
17	Seed Production	1702	127.48
18	Sericulture	572	280.33
19	Shade Net House	332	5166.59
20	Small ruminants	1842	633.93
21	Soil and Water Conservation Practices		0.00
22	Sprinkler Irrigation	994	196.66
23	Water Pumps	2541	341.30
24	Well	13	30.00

Table 4.9: Beneficiary details for farm mechanization & allied activities under PoCRA

Sr. No.	Activity Name	Number of Beneficiary	Amount (in Lakh)
	Grand Total	**87369**	**64476.98**

[8]

The team proposed to district administration to focus these challenges initially and thus considered these issues to be prioritises in Medium Term Goal. The initiatives proposed under Medium Term Goal initially for ten years begins from the year 2027, the nature of **few of the initiatives are continuous and hence they can be the part of goal number one and three as well since its commencement.**

Medium Term Goal – 2

To Promote Rational Utilization of Agriculture Inputs Mainly Seeds, Fertilisers, Machinery and Labour

- **Key Performance Indicator** : Increase Beneficiaries by 3-4 times as per PoCRA Scheme.
- **Bases for KPI (Current Status)** : Number of Beneficiaries under PoCRA Scheme (81639): Drip Irrigation (67473), Pipes(3932), Water Pumps (2535), Horticulture Plantation / Agroforestry (1936), Seed Production (1634), Saline and Sodic lands (Farm ponds/ Sprinklers / Water pump/ FFS) (1160), Sprinkler Irrigation (944), FFS host farmer assistance / Promotion of BBF technology/ Zero Tillage Technology etc. (765), Farm Mechanization(463), Shade-net House (300), Planting material in Polyhouse (192), Farm Pond (Individual) (188), Farm Pond Lining (65), Recharge of open dug wells (24), Well (12), Compost (Vermi compost / NADEP / Organic input production unit) (11), Polyhouse/ Poly tunnels (5)
- **Deliverable after Five Years (Milestone)** : To increase number of beneficiaries by i. e. from 81639 to Approx. 300000 by 2037. There is paucity of beneficiaries in some of the schemes as per the area available for cultivation, hence it is suggested that priority will be given to such schemes.
- **Objectives:**
  1. Transforming Agriculture from Traditional to Mechanized, Modernized Outlook
  2. Evolving Sustainable & Continuous Support Mechanism

[8] **Source:** PoCRA (01/11/2023)

Table 4.10: Proposed Initiatives for Achieving Medium Term Goals

Sr. No.	Initiatives	Sr. No.	Initiatives
1	Strengthening / Modernization and expansion of **Soil, Water and Food and Testing Laboratories** at the district level by procurement of High-End Analytical Instruments in collaboration with Educational Institutions in the vicinity	6	**Subsidy for Farm Mechanization** to Minimize labour cost by using farm machineries (For Individual Farmer)
2	**Establishment of Seed Bank and Research Centres**	7	Establish **Farm Mechanization Bank for farmer group** for farm equipment facility (For Group)
3	Promote a **Mobile Plant Health Clinic and Advisory Services.**	8	Establish **Cold & Dry Chain Facilities in district**
4	Organization of Training & Workshop for farmer to aware about **Crop Rotation and Intercropping**	9	Establishment of Taluka wise **Soil Testing Centre** & Developing village level mechanism for soil collection
5	Financial Support for Organic & Bio-fertilizer Plant and village-based Training programmes	10	Establishment of **Custom Hiring Centres** at Taluka Level for providing mechanization support

[9]

4.5 Proposed Initiatives Long-Term Goal and Corresponding Objectives No. 1

The key to a future where we can nourish a growing district population is lies in sustainable agriculture that also ensure the well-being of farmers and the environment. Robust agriculture ecosystem involves presence of culture of knowledge sharing, collective bargaining, and resource pooling among farmers. By doing so farmers can access better seeds, fertilizers, and machinery, and collectively address the challenges such as market access and climate resilience. Team observed that, the district faces the problems of Farmers Networks And Cooperatives, insufficient Extension services such as information, training, and technical support for best practices and efficient crop management to farmers.

Farmers of the district are also deprived of access to Robust Research and Development support which essential for improving the crop varieties, pest-resistant seeds, and sustainable farming practices. The farmers also confront the issues of post-harvest losses thus they require to connect to markets to ensures fair prices, thus there is requirement of mechanism for Market Linkages and Value Chains; Skill development programs to empower farmers with knowledge on sustainable practices (Capacity Building and Training).

[9] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

For availing agroecological benefits like nutrient cycling, soil health, and overall ecosystem services. There is need of evolving and boosting the ecosystem of Allied Agriculture Sectors like Integrated Fish Farming (IFF); Sericulture Integration; Milching and Floriculture and Jalgaon District shows great potential for development of this allied sectors (**Refer Table No** 4.11, 4.12, 4.13 and 4.14)

Table 4.11: Jalgaon District Groundwater Fisheries Info

River Length (km)	Fisheries Friendly Areas (ha)		Total Area Under Fisheries (ha)	Groundwater Fish Production (MT)	Fish Price to Producer (Rs. lakh)	Fisheries Cooperatives(No.)
750	522	29224	16835	5453	1635.90	104

[10]Table-4.11 provides groundwater fisheries information for Jalgaon District, sourced from the District Socio-Economic Analysis-2023. The district features a river length of 750 km and encompasses 522 fisheries-friendly areas, including ponds, lakes, and reservoirs. The total area brought under fisheries measures 29,224 hectares, contributing to a substantial groundwater fish production of 16,835 metric tons.

The table indicates that the price of the fish caught benefits the producer, and there are 104 Fisheries Cooperatives actively involved in this sector. This information highlights the significant role of groundwater fisheries in the district's economy and emphasizes its potential for further growth and development.

Table 4.12: Jalgaon District Milch Animals and Total Number of Veterinary Facilities

Total Livestock (Number)	Total Poultry Birds Number	Veterinary clinics (number)	Veterinary Dispensaries (State & Local)	Veterinary First Aid Centre (No.)	Veterinary Colleges (Number)	Total number of veterinary facilities
846407	987452	7	89	85	2	183

[11]Table-4.12 provides data on milch animals, and the total number of veterinary facilities centres based on the 2019 Livestock Census in the Jalgaon district. According to the census, the total livestock count stood at 846,407, accompanied by 987,452 poultry birds. The district is supported by 7 veterinary clinics, 89 veterinary dispensaries (State and Local Level), 85 veterinary first aid canters, and 2 veterinary colleges, making up a total of 183 veterinary facilities. These facilities play a crucial role in ensuring the health and well-being of the livestock population, but it indicate insufficient need to be enhanced in future.

[10]Source: District Socio-Economic Analysis-2023
[11]**Source:** District Socio-Economic Analysis-2023

Table 4.13: Total Cultivated & Harvested Land for Banana (In Hectare)

Taluka	2020 **Banana**		2021 **Banana**		2022 **Banana**		2023 **Banana**	
	AUC	AUH	AUC	AUH	AUC	AUH	AUC	AUH
Chopda	4365	4365	2987	2987	3973	3973	4920	3973
Yawal	7698	7698	7379	7379	10633	10633	11519	10633
Raver	21583	21583	21018	21018	22320	22320	23667	22320
Muktainagar	5412	5412	3218	3218	6589	6589	9724	6589
Bodwad	58	58	85	85	94	94	94	94
Bhusawal	674	674	730	730	730	730	889	730
Jalgaon	1749	1749	3030	3030	2886	2886	2886	2886
Erandol	166	166	214	214	584	584	677	584
Dharangaon	309	309	112	112	112	112	112	112
Amalner	96	96	82	82	34	34	67	34
Parola	8	8	48	48	55	55	55	55
Bhadgaon	869	869	393	393	750	750	824	750
Chalisgaon	320	320	686	686	695	695	745	695
Pachora	829	829	934	934	1109	1109	1109	1109
Jamner	550	550	620	620	1890	1890	1890	1890
Total	**44686**	**44686**	**41536**	**41536**	**52454**	**52454**	**59178**	**52454**

[12]

The table 4.13 provides a comprehensive overview of banana cultivation across various talukas in Jalgaon District. The data, retrieved from the District Strategic Plan 2018-2023, highlights the area under banana cultivation and the corresponding harvested area for the years 2020, 2021, and 2022. In 2020, Raver taluka leads in banana cultivation with 21,583 hectares, followed by Yawal and Chopda. The total cultivated and harvested land for banana in the district is 44,686 hectares.

In 2021, Raver continues to dominate banana cultivation with 21,018 hectares, maintaining its leading position. Yawal and Chopda follow closely in the second and third positions. The total cultivated and harvested land for banana in the district slightly decreases to 41,536 hectares.

In 2022, the trend persists, with Raver taluka leading in banana cultivation with 22,320 hectares, followed by Yawal and Chopda. The total cultivated and harvested land for banana in the district increases to 52,454 hectares, indicating a growth in banana cultivation over the years.

This information is crucial for understanding the distribution of banana cultivation across talukas, allowing for targeted agricultural interventions and strategic planning to support and enhance banana production in Jalgaon District and also for planning to establish allied value-added industries.

[12] **Source:** Compiled by Team(Retrieved fromDistrict Strategic Plan 2018-2023)

Table 4.14: Total Cultivated & Harvested Land for Cotton (In Hectare)

Taluka	2020 **Cotton**		2021 **Cotton**		2022 **Cotton**		2023 **Cotton**	
	AUC	AUH	AUC	AUH	AUC	AUH	AUC	AUH
Chopda	35338	19519	36590	23091	36250	22500	39758	15108
Yawal	21942	7006	21625	8052	22017	8973	23972	9109
Raver	17218	13836	19566	16426	18274	15379	18155	6899
Muktainagar	22699	8620	22441	7676	21702	10926	22463	8536
Bodwad	21234	4745	21637	4619	21387	4690	22104	8400
Bhusawal	16024	5222	16437	6392	17786	6387	18697	7105
Jalgaon	33325	12435	32370	15096	33742	15852	39467	14997
Erandol	22220	9693	26180	13278	26492	13250	28901	10982
Dharangaon	26928	8185	28579	10093	31063	11287	33050	12559
Amalner	47113	7975	50959	13465	51123	13682	53265	20241
Parola	42655	7006	45590	17863	46900	18308	48263	18340
Bhadgaon	25260	16540	25396	15045	24649	14152	26810	10188
Chalisgaon	56028	22549	61038	26586	60871	29420	63724	24215
Pachora	45547	14077	46898	16125	47397	19137	51379	19524
Jamner	74052	21787	75143	22512	77684	27806	87071	33087
Total	**507583**	**179195**	**530449**	**216319**	**537337**	**231749**	**577079**	**219290**

*AUC: Area Under Crop, AUH: Area Under Harvest [13]

The Table 4.14 presents a detailed overview of cotton cultivation across various talukas in Jalgaon District for the years 2020, 2021, 2022, and 2023. The data, retrieved from the District Strategic Plan 2018-2023, sheds light on the area under cotton cultivation and the corresponding harvested area. In 2020, Chopda taluka leads in cotton cultivation with 35,338 hectares, followed by Yawal and Jalgaon. The total cultivated and harvested land for cotton in the district is 507,583 hectares.

In 2021, Chopda maintains its leading position in cotton cultivation with 36,590 hectares, followed by Yawal and Raver. The total cultivated and harvested land slightly increases to 530,449 hectares. In 2022, Chopda continues to dominate with 36,250 hectares, followed by Yawal and Raver. The total cultivated and harvested land further increases to 537,337 hectares. In 2023, Chopda remains the top taluka in cotton cultivation with 39,758 hectares, followed by Yawal and Raver. The total cultivated and harvested land for cotton in the district is 577,079 hectares.

This information is essential for understanding the distribution of cotton cultivation across talukas, aiding in targeted agricultural interventions and strategic planning to support and enhance cotton production in Jalgaon Districtand also for planning to establish allied value-added industries. The consistent growth in cotton cultivation over the years indicates the significance of this crop in the agricultural landscape of the region.

The team proposed to district administration to focus these challenges initially and thus considered these issues to be prioritises in Long Term Goal. The initiatives proposed under Long Term Goal initially for twenty years begins from the year 2037 but

[13] **Source:** Compiled by Team(Retrieved fromDistrict Strategic Plan 2018-2023)

the nature of some of the initiatives are continuous and hence they can be the part of Goals number one and two as well, since its commencement.

Long Term Goal – 3

Building Sustainable Agricultural Ecosystems for Prosperity and Innovation

- **Key Performance Indicator** : Increase Use of Agriculture Information System, increase in supplementary resources to Allied Sectors in almost all 1415 Villages in Jalgaon District, Training & Capacity Building Activities, Insufficiency of Networks and Cooperatives
- **Bases for KPI (Current Status)** : Insufficient supplementary resources for Agriculture based allied sector (Fisheries, Sericulture, Horticulture), Lack of Agriculture Information Network,
- **Deliverable after Five Years (Milestone)** :
  1. Establishment of more Private/Public Hatcheries (Spawn capacity 10Cr) recommended to fulfill demand of seeds for fish production. Establishment of 15 more rearing units (taluka wise) recommended to fulfil demands of fingerlings from 124 Irrigation tanks, ZP percolation ponds, farm ponds etc. all over Jalgaon district.
  2. Promoting Sericulture and Floriculture
  3. Promoting Dairy as value addition / allied business etc.
  4. Increase in Millet's Production
  5. Establishment Agribased value added Industries
  6. awareness about crop varieties, pest-resistant seeds, and sustainable farming practices, organic farming, soil conservation, and integrated pest management etc.
- **Objectives:**
  1. To increase the fish Production
  2. To Enhance the growth rate of Sericulture, Poultry Management, Goat Farming, Honey Production, Oil Extraction Production units.
  3. To create Agriculture Support Ecosystem
  4. To Strengthen Banana Production
  5. Robust Implementation of Millet Mission

Table 4.15: Proposed Initiatives for Achieving Long Term Goals Objectives No. 1

Sr. No.	Initiatives	Sr. No.	Initiatives
1	**Strengthening the Existing Fisheries Society's** by support mechanism for improving the efficiency of underutilized resources.	13	Cottonseed / Soyabean / Other Oil Seeds with **Oil Extraction Units**
2	Encourage formation of **Societies of Fish Farmers** in order to increase fish seed production	14	Arrange **Krishi Mela in Talukas** having potential for sericulture
3	Ensuring Optimum **Fish Fingerling Stocking** in all ponds and tanks in the district. Awareness about by-products from crops (such as **rice bran, wheat flour, etc.) can be processed into fish feed**, while livestock waste serves as feed for fishponds	15	Training Program for New Farmers on **crop varieties, pest-resistant seeds, and sustainable farming practices, organic farming, soil conservation, and integrated pest management**
4	Providing financial assistance for **Well-Equipped Mobile Vans** for the transportation of fingerlings	16	**Farmers' Networks and Cooperatives,** Study Tour for farmers
5	Increasing the **Technical Manpower Resources** for Strengthening the fisheries support mechanism for improving the efficiency of under-utilized resources.	17	Organize And Participate in **Trade Fairs, Exhibitions, and International Expos** to showcase Agri based products. Facilitate interactions between local exporters and potential international buyers.
6	Increase Area Under Sericulture, Flowericulture	18	Capacity program and support for exporters in **Handling Export Documentation**, including customs procedures, certificates of origin, and quality assurance documentation.
7	Installing **Chauki Clearing Centers** to supply Silkworms Larvae to farmer	19	Facilitate the Certification Process for Quality Standards such as GAP (Good Agricultural Practices) & QMS & FSMS for all Crops.
8	Training to farmers on **Poultry Management, Goat Farming**	20	Establish Processing Units for Banana and Other Crops, such as **banana chips, millet flour, and ready-to-eat snacks.**

Table 4.15: Proposed Initiatives for Achieving Long Term Goals Objectives No. 1

Sr. No.	Initiatives	Sr. No.	Initiatives
9	Increase in number of **High Yielding Cows and Buffaloes- Technology** upgradation of frozen Semen lab for production of sex sorted semen.	21	**Banana Fiber Production** : Establish a small-scale unit for extracting and processing banana fibers, which can be used for **textiles, handicrafts**, and other value-added products.
10	Boosting **Quality Feed and Fodder System**	22	Strengthening of Research and Development Facility of fruit crops/ Oil Seeds/pulse. **Pilot plants for extraction of value-added products** (medicinal/ aromatic plants)
11	Floriculture with **Honey Production Units / Perfume industry**	23	Implement E**-Commerce Platforms or Mobile Apps to Connect Local Farmers directly with consumers**, facilitating easier and fairer market access
12	Establish **Nursery of Mulberry Sampling** for new plantation	24	Developing Nutritional Aspect **Handbook for consumption of millet(NHCM)**
		25	Plantation of Medicinal Plants

[14]

4.6 Proposed Initiatives Long-Term Goal and Corresponding Objectives No. 2

Agriculture development is said to be sustainable if it generates employment and contribute to rural development. Consequently, team feels that there must be robustly culture of Agro-Entrepreneurship in the district. In the district there is scope for Agri-Tech Startups and Innovators for providing Technology-driven solutions to enhance efficiency, reduce waste, and promote sustainable practices. Thus, developing entrepreneurial culture draws immediate attention for Private-Sector Innovation; Holistic Approach to Sustainability; Addressing Environmental Challenges; Carbon Removal and Climate Targets, Balanced Regional Development and Wealth Distribution and additionally it requires to increase in the storage capacity of the District which insufficient for meeting the future requirements of storage due to increasing production.

[14] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO.

Table 4.16: Available Warehouses and Capacity

Taluka	Total Number of warehouses (WH)	WH capacity (MT)	Not useful among them		Rented	
			Number of WH	WH capacity (MT)	Number of WH	WH capacity (MT)
Chopda	1	500	0	0	1	600
Yawal	4	1980	1	100	0	0
Raver	4	4200	3	1200	0	0
Muktainagar	3	2380	0	0	0	0
Bodwad	1	1080	0	0	0	0
Bhusawal	7	3700	2	200	0	0
Jalgaon	3	1500	0	0	0	0
Erandol	2	1900	1	100	0	0
Damgaon	4	1800	0	0	0	0
Amalner	2	1000	0	0	0	0
Parola	2	3100	0	0	0	0
Bhadgaon	2	1950	1	150	0	0
Chalisgaon	2	3500	0	0	0	0
Pachora	1	500	1	500	2	1000
Jamner	2	1250	0	0	0	0
	40	**30340**	**9**	**2250**	**3**	**1600**

[15]

Table-4.16 provides a comprehensive overview of warehouse inventory across various talukas in Jalgaon District, highlighting both storage capacity and utilization. The district houses a total of 40 warehouses, collectively capable of storing 30,340 metric tons. However, a noteworthy observation is the underutilization of resources, with 9 warehouses having a combined capacity of 2,250 metric tons deemed not useful. This underutilization presents a strategic opportunity for interventions, including optimizing warehouse management, improving coordination among stakeholders, and potentially repurposing or upgrading facilities to align with contemporary storage standards.

This data serves as valuable insight for policymakers. By recognizing the underutilized warehouses, they can formulate targeted strategies to enhance efficiency, maximize resource utilization, and foster a more responsive supply chain. These strategic interventions aim to contribute to the overall agricultural and economic development of the district, aligning with future-oriented goals and ensuring a robust foundation for growth.

The team proposed to district administration to focus these challenges initially and thus considered these issues to be prioritises in Long Term Goal. The initiatives proposed under Long Term Goal initially for twenty years begins from the year 2037 but the nature of some of the initiatives are continuous and hence they can be the part of Goals number one and two and requires immediate attention from year 2024 itself.

[15] Source: District Strategic Abstract (2023)

Long Term Goal – 4

Fostering Agro-Entrepreneurship and Sustainable Agri-Business Development

- **Key Performance Indicator** : Growth of allied sectors through incubation centre by the way of supporting and nurturing Agri-entrepreneurs, Increasing Organic Fertilizer, Biopesticide Manufacturing
- **Bases for KPI (Current Status)** :Insufficient Incubation Centres, Agricultural Promotion Schemes, Limited use of Organic Fertilizer, Bio-Pesticides.
- **Deliverable after Five Years (Milestone)** : 01) Establishment Agri Allied Incubation Centres, Agro. Based Start-Up, Emergence Bio Pesticides, Organic Manure Industries, Employment Generation, Increase in Exports, Establishment of Agro-Service Based industries.
- **Objectives:**

  1 . To Create Agro-Industries Ecosystem

  2 . To Established support systems pertaining to Organic Food Processing, Organic Manures, Bio-pesticides etc.

  3 . To form the Agriculture Export & Import Information Data Bank

Table 4.17: Proposed Initiatives for Achieving Long Term Goals Objectives No. 2

Sr.	Initiatives	Sr.	Initiatives
1	To establish an **Incubation Centre to Support and Nurture Agri-Entrepreneurs**, fostering innovation and the development of new agricultural ventures	10	**Organic Food Processing** : Start-up of a small-scale **Organic Food Processing Units**, focusing on products like jams, sauces, and pickles using organically grown produce.
2	To set up **Clusters of Agri Start-Up Incubation Centers** .	11	Create a market for **Bioenergy Products such as bioethanol, bio-bricks, and bio-coal** by collaborating with industries and facilitating purchase agreements.
3	To establish an Entrepreneurial Set Up for Converting **Agro Waste into Commercial Produce** like brickets, biogas etc.	12	Formation of CCT's/Deep CCT's/Gully Plugging
4	**Agriculture Entrepreneurship Promotion Scheme** to assist agriculture entrepreneurs across the rural areas in the state. Support Agri-preneurs (Agri Entrepreneurs) and farmers in setting up small-scale processing businesses.	13	**Partner With Universities**, Non-Governmental Organizations (NGOs), and research institutions to leverage expertise, share best practices and implement innovative solutions for environmental sustainability.

Table 4.17: Proposed Initiatives for Achieving Long Term Goals Objectives No. 2

Sr.	Initiatives	Sr.	Initiatives
5	**Organic Fertilizer Production (Manure):** Establish a small-scale organic fertilizer production unit utilizing agricultural waste, crop residues, and livestock manure.	14	Provide subsidies or incentives for farmers to integrate trees into their Agricultural Landscapes
6	**Biopesticide Manufacturing** : Develop a biopesticide production unit that utilizes natural substances like neem, garlic, and other plant extracts to create environmentally friendly pest control solutions	15	Encourage **Agroforestry** (Tree plantation) practices to enhance biodiversity, soil health carbon sequestration
7	**Agro-waste Recycling Plant** : Set up a facility to process agricultural waste, such as crop residues and post-harvest leftovers, to produce bioenergy, compost, and other valuable by-products.	16	Establishment of **Agriculture Export & Import Information Data Bank** Improving the **Capacity of Warehouses** (Dry and Cold)
8	**Jalgaon District Export documentation Cell (JDEDC)**	17	**Jalgaon District Port facilitation Centre**
9	Jalgaon District **Inter and Intra network facilitation Center for transporters (IINF)** (rational utilization of transporting resources)	18	**Transporter connectivity using App Development**
		19	Creation of **Jalgaon Allied Industry promotion zone (JAIPZ)**

[16]

4.7 Mapping Short, Medium and Long Term Goals with SDGs

Goal No.	Type	Goal to be Achieve	Duration	Linking with SDG's (Goal No)
1	Short	To Enhance the Annual Agricultural Productivity of the Jalgaon District	2023-27	1, 3, 8, 9, 10, 11, 12, 13, 15, 16, 17

[16]**Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

Goal No.	Type	Goal to be Achieve	Duration	Linking with SDG's (Goal No)
2	Medium	To Promote Rational Utilization of Agriculture Inputs Mainly Seeds, Fertilisers, Machinery and Labour	2028-37	8, 9, 15
3	Long	Building Sustainable Agricultural Ecosystems for Prosperity and Innovation	2037-47	8, 9, 12, 14, 15
4		Fostering Agro-Entrepreneurship and Sustainable Agri-Business Development		8, 9, 11,15, 17

[17]

[17] **Source:** Team Own Compilation SDG Linkages though map in the table with Types of Goals it is particularly map with individual initiatives discuss in table no. ABCD

4.8 Existing State and Central Government Schemes for proposed Initiatives

Table 4.19: Selected Schemes for proposed Initiatives under Short, Medium and Long term Goals

Type of Goal	Goal to be Achieve	Scheme
Short	1. To Enhance the Annual Agricultural Productivity of the Jalgaon District	*Magel Tyala Shet Tale* STRY National Food Security Mission Target for Each Research Centre DPC RKVY/MIDS MGNREGA/MIDS ATMA HOTSAP/CROPSAP/SHC Mission/ PoCRA ATMA
Medium	2. To Promote Rational Utilization of Agriculture Inputs Mainly Seeds, Fertilisers, Machinery and Labour	DPC RKVY/Farm Mechanisation RKVY/Farm Mechanisation/MIDS MIDS
Long	3. Building Sustainable Agricultural Ecosystems for Prosperity and Innovation	PMMSY/DPC DPC MGNREGA/MIDS/Bhausaheb Phunkar DPC PMFME/CMFME/CIF/AIF MSRLM/DPC MGNREGA/MIDS/ PMFME/CMFME/CIF/AIF NGO/MSRLM
	4. Fostering Agro-Entrepreneurship and Sustainable Agri-Business Development	MSRLM/DPC Maanav Vikas RDF/DPC/State RDF/DPC/State DPC NGO/MSRLM
Note the list of the Scheme is not exhaustive		

4.9 Projected Financial Support for Selected Initiatives as per Goals

Goal 1: To enhance the annual agricultiral productivity of the Jalgaon District

Table 4.20: Projected Financial Support for Selected Initiatives of Short Goals (2023-2027)(To enhance the annual agricultural productivity of the Jalgaon district)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Increasing the number of Artificial Ponds in agriculture fields by subsidizing the creation of Artificial ponds (*Shet Tala*) which will retain natural rainwater.	4000	1.5 Lakh per pond	6000
Rejuvenating the natural ponds with the help of social activists / NGOs and a Motivational Reward Scheme from the District Administration.	50 % of Total	1.5 lack per pond	
Irrigation Efficiency Training Program (IETP)- Skill Training	3 training of of 20 farmers 3 days per Tehsil	50k per Traing	22.5
Introducing improved cultivation practices like INM/IPM/ICM- Demo Plots with package	18750 plots per year	7500 per plot per year	1406.25
Technical support by providing ICT tools in terms of identifying high-value crops and their cultivation practices etc. as per the geographical conditions.	1 for each Taluka and Research Centre / KVK/ Colleges(15+7)	5 Lakh per Centre	110
APMC of Jalgaon should be upgraded with facilities like cold storage, installation of solar dryers, construction of market shops, and drying yards for minimal processing (Grading and Cleaning)	All APMC's	50 Lakh per APMC	750
Financial support (incentives/-subsidies) etc for cultivation of high-value crops for fruits, vegetables and Banana	75 Polyhouses	1500000 for each poly house	1125

Table 4.20: Projected Financial Support for Selected Initiatives of Short Goals (2023-2027)(To enhance the annual agricultural productivity of the Jalgaon district)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Capacity Building / Demo Plot for improved cultivation technology in order to diversify farmers towards high value crops. -	75	40000 per Training	30
Awareness campaigning for organic farming and INM through IDK. Promoting Integrated pest & disease management (IPM & IDM)	75 trainings	50000 per training	37.5
District Level Agri Trade Programs/workshop/conference	5	50 Lakh	50

[18]

Goal 2: To Promote Rational Utilization of Agriculture Inputs Mainly Seeds, Fertilisers, Machinery and Labour

Table 4.21: Projected Financial Support for Selected Initiatives of Medium Goals (2028-37)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Strengthening / Modernization and expansion of Soil, Water and Food and Testing Laboratories at the district level by procurement of high-end analytical instruments in collaboration with Educational Institutions in the vicinity	1	2 Cr	200
Establishment of Soil, Water and Food Testing Laboratories at the district level by procurement of high-end analytical instruments in collaboration with Educational Institutions in the vicinity	2	4 Cr	400
Promote a Mobile Plant Health Clinic and advisory services.	5	1 Cr	100
Establish Farm mechanisation Bank for farmer group for farm equipment facility (For Group)	80	8 Cr	800

[18] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

Table 4.21: Projected Financial Support for Selected Initiatives of Medium Goals (2028-37)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Subsidy for Farm Mechanization in order to Minimize labour cost by using farm machineries (For Individual Farmer)	As per Target		
Establish cold chain facilities in district like Dapoli of (For Individual)	5	30 Cr	3000

[19]

Note: Due to non-availability of data in curated forms and statistical constraints for Medium Goals the Projected Financial Support consider for first five year only.

Goal 3 Building Sustainable Agricultural Ecosystems for Prosperity and Innovation.

Goal 4 Fostering Agro-Entrepreneurship and Sustainable Agri-Business Development

Table 4.22: Projected Financial Support for Selected Initiatives Long Term Goals (2037-47)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Strengthening the existing Fisheries Society's by support mechanism for improving the efficiency of underutilized resources.	100 % of Total	50 Lakh	50
Encourage formation of Societies of fish farmers in order to increase fish seed production	5	20 Lakh	20
Ensuring optimum fish fingerling stocking in all ponds and tanks in the district	70 % of Total	10 Lakh	7
Providing financial assistance for well-equipped mobile vans for the transportation of fingerlings	2	15 Lakh	15
Increase area under sericulture	2500 Ha per Year	80000 per Ha	2000
Arrange Krishi Melava in Talukas having potential for sericulture	750 Farmers	75 Lakh	75
Establish Nursery of Mulberry Sampling for new plantation	3 Nursery	21 Lakh	21
Farmers training program for New farmers	15 Program	175 Lakh	175
Study Tour for farmers	05 Tours	125 Lakh	125

[19] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

Table 4.22: Projected Financial Support for Selected Initiatives Long Term Goals (2037-47)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Installing Chauki Clearing Centres to supply Silkworms Larvae to farmer	03 Chauki Rearing Centres	195 Lakh	195
Establish processing units for banana and other crops, such as banana chips, millet flour, and ready-to-eat snacks. Support Agripreneurs (agri entrepreneurs) and farmers in setting up small-scale processing businesses.	10	5 Cr	500
Organize and participate in trade fairs, exhibitions, and international expos to showcase agri based products. Facilitate interactions between local exporters and potential international buyers.	5	50 Lakh	50
Capacity program and support for exporters in handling export documentation, including customs procedures, certificates of origin, and quality assurance documentation.	5	2.5 Lakh	2.5
Floriculture with Honey Production Units / Perfume industry	5	3.75 Lakh	3.75
Strengtheningof research and development facility of fruit crops/ Oil Seeds/pulse. Pilot plants for extraction of value-added products (medicinal/ aromatic plants)	500	10 Cr	1000
Strengtheningof research and development facility of value added products.	2	2 Cr	200
Organic Fertilizer Production (Manure): Establish a small-scale organic fertilizer production unit utilizing agricultural waste, crop residues, and livestock manure.	68	1 Cr/Plant	6800
Biopesticide Manufacturing: Develop a biopesticide production unit that utilizes natural substances like neem, garlic, and other plant extracts to create environmentally friendly pest control solutions	13	1 Cr/Plant	1300
Agro-waste Recycling Plant: Set up a facility to process agricultural waste, such as crop residues and post-harvest leftovers, to produce bioenergy, compost, and other valuable by-products.	13	2 Cr/Plant	2600

Table 4.22: Projected Financial Support for Selected Initiatives Long Term Goals (2037-47)

Initiative (Actions)	Target (In Nos.)	Budget	Total Budget (In Lakh) for 5 Years
Banana Fiber Production: Establish a small-scale unit for extracting and processing banana fibres, which can be used for textiles, handicrafts, and other value-added products.	5	1 Cr/Plant	500
Organic Food Processing: Start a small-scale organic food processing unit, focusing on products like jams, sauces, and pickles using organically grown produce.	5	1 Cr/Plant	500
Create a market for bioenergy products such as bioethanol, bio-bricks, and bio-coal by collaborating with industries and facilitating purchase agreements.	1	70 Lakh	70

[20] **Note:** Due to non-availability of data in curated forms and statistical constraints for Long Term Goals the projected Financial Support consider for first five year only.

[20] **Source:** Major interactions with key officers in the district administration (District Planning Officer and departments of agriculture and horticulture, DIC, PoCRA, Agricultural industries, etc.), selected agricultural allied sector representatives and Available Reports from office of DPO

Chapter 5

Proposed Ideation for Agricultural Development

5.1 One Crop One Block

Team has proposed **One Crop One Block (OCOB),** which is a strategic approach in agriculture sector of Jalgaon district, that emphasizes growing a single major crop in a specific geographical area or block. It will support the farmers in following ways.
Preservation of Soil and Water Resources:

- **Water Efficiency:** OCOB simplifies irrigation management, reducing water wastage and optimizing water use.
- **Soil Health:** Growing one crop helps in maintaining the soil fertility and structure. By focusing on a single crop, farmers can tailor soil management practices more effectively.

Controlling of Pest and Disease:

- **Reduced Risk:** OCOB minimizes the spread of pests and diseases associated with diverse cropping patterns. Controlling one crop simplifies pest management.
- **Early Detection:** Monitoring a single crop allows for timely identification of any pest or disease outbreaks.

Enhanced Productivity:

- **Specialization:** Farmers can specialize in cultivating a specific crop, mastering its requirements and best practices.
- **Higher Yields:** Focused efforts lead to better crop yields, contributing to food security and economic stability.

Market Access and Value Chain Development:

- **Market Demand:** OCOB aligns production with market demand. A concentrated supply of a single crop facilitates efficient marketing and distribution.
- **Processing and Value Addition:** Concentrating on one crop enables investment in processing facilities and value-added products.

Minimization of Risk:

- **Climate Resilience:** OCOB reduces vulnerability to climate fluctuations. Farmers can adapt practices based on the specific crop's resilience.

Team identifies few crops which are cultivated in limited hectares of lands in the districts. These crops are cash crops but due to lower cultivation it requires to be procure from other district or other regions. Hence team proposes to the district authorities to encourage the farmers and provides the support for OCOB (Refer Table – 32, 33 and subsequent)

Table 5.1: Special Crop Cultivation Area: Overview of Jalgaon(Area in Hectare)

Crops-Years	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chilly	1105	1120	970	1623	1319	1610
Garlic	0	70	76	290	288	305
Other Spices	581	0	1	1762	2350	2239
Citrus Class (Lemon, Mousambi)	3912	2148	11786	8439	7598	7598
Onion	14964	4246	24081	17763	23668	14104
Brinjal	610	610	1003	1224	1176	1331
Tomato	337	253	124	294	353	119
Other Medicine & Drugs	0	0	0	7	29	29
Total Fodder Crop	**2038**	**247**	**560**	**1087**	**1148**	**1148**

[1]

Table-5.1 offers valuable insights into the cultivation of special crops in Jalgaon district over the period from 2018 to 2023. Notably, chilly cultivation exhibited a fluctuating pattern, peaking at 1,623 hectares in 2021, significantly contributing to the spices industry. Garlic cultivation, absent in 2018, displayed a steady growth trajectory, reaching 305 hectares in 2023. Other spices experienced an upward trend from 2019 onwards, reaching a peak of 2,350 hectares in 2022.

Citrus crops, encompassing lemon and mousambi, demonstrated consistent growth, maintaining a stable 7,598 hectares from 2021 to 2023. Onion cultivation, a major agricultural activity, reached 24,081 hectares in 2020 but witnessed a decline in subsequent years. The data also underscores the significance of brinjal and tomato crops, with varying cultivation areas. The cultivation of other medicinal and drug crops commenced in 2021, showing modest growth by 2023. The total fodder crop area remained relatively stable, highlighting its continued importance in the region.

This comprehensive analysis serves as a valuable tool for the district's strategic planning. It identifies key crops, discerns cultivation trends, and facilitates targeted interventions for sustainable agricultural development in specific areas of the district. The information derived from this analysis can guide policymakers in making informed decisions to promote the growth and sustainability of the agricultural sector in Jalgaon.

Table 5.2: Block wise Land use for Chilly Crop (Area in Hectare - Normal)

Crop	Chilly					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	45	45	169	237	225	330

[1] **Source:** District Planning Portal &Team own Study (Retrieved from DSP -2018-2023)

Table 5.2: Block wise Land use for Chilly Crop (Area in Hectare - Normal)

Crop	Chilly					
Yawal	17	21	52	19	22	18
Raver	12	12	20	12	12	15
Muktainagar	47	47	23	27	45	65
Bodwad	21	17	8	24	27	41
Bhusawal	8	8	26	60	60	70
Jalgaon	58	58	19	6	42	51
Erandol	111	111	65	91	30	33
Dharangaon	58	20	26	32	28	69
Amalner	23	23	150	12	90	95
Parola	20	58	176	272	242	268
Bhadgaon	34	15	24	50	8	19
Chalisgaon	28	28	25	253	260	274
Pachora	0	34	72	42	148	168
Jamner	623	623	115	486	80	94
Total	**1105**	**1120**	**970**	**1623**	1319	**1610**

[2]

Block identified as OCOB for Chilly : Chopda & Chalisgaon

Table 5.3: Block wise Land use for Garlic Crop (Area in Hectare - Normal)

Crop	Garlic					
Taluka	2018	2019	**2020**	**2021**	**2022**	**2023**
Chopda	0	0	0	46	42	48
Yawal	0	0	0	10	6	19
Raver	0	0	0	0	0	8
Muktainagar	0	30	35	23	24	22
Bodwad	0	0	0	6	7	4
Bhusawal	0	15	0	80	80	89
Jalgaon	0	0	0	0	9	8
Erandol	0	10	0	23	13	11
Dharangaon	0	0	0	2	2	8
Amalner	0	0	8	2	21	14
Parola	0	0	0	6	6	5
Bhadgaon	0	0	0	11	5	6
Chalisgaon	0	15	5	50	55	50
Pachora	0	0	24	5	9	7
Jamner	0	0	4	26	9	6
Total	**0**	**70**	**76**	**290**	288	**305**

[3]

Block identified as OCOB for Garlic : Bhusawal

[2] **Source:** District Planning Portal &Team own Study (Retrieved from DSP -2018-2023)
[3] **Source:** District Planning Portal & Team own Study (Retrieved from DSP -2018-2023)

Table 5.4: Block wise Land use for Other Spices (Area in Hectare - Normal)

Crop	Other Spices					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	55	0	0	95	97	90
Yawal	15	0	0	178	180	175
Raver	412	0	0	842	1401	1345
Muktainagar	7	0	0	71	141	145
Bodwad	0	0	0	5	6	5
Bhusawal	6	0	0	34	34	35
Jalgaon	9	0	0	15	30	28
Erandol	0	0	0	19	17	12
Dharangaon	0	0	0	20	58	47
Amalner	4	0	0	16	132	138
Parola	0	0	0	4	5	0
Bhadgaon	7	0	0	11	9	8
Chalisgaon	0	0	0	237	127	137
Pachora	6	0	0	99	88	60
Jamner	60	0	1	116	25	14
Total	**581**	**0**	**1**	**1762**	2350	**2239**

Block identified as OCOB for other Spices : Raver

Table 5.5: Block wise Land use for Citrus Class (Lemon, Mousambi) (Area in Hectare)

Crop	Citrus Class (Lemon, Mousambi)					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	76	72	240	173	261	261
Yawal	14	51	14	27	32	32
Raver	4	39	5	6	5	5
Muktainagar	20	46	61	90	152	152
Bodwad	26	13	40	50	55	55
Bhusawal	9	226	167	255	255	255
Jalgaon	78	109	403	42	194	194
Erandol	75	166	837	1179	1222	1222
Darangaon	75	46	269	246	200	200
Amalner	22	214	219	38	49	49
Parola	37	57	445	571	564	564
Bhadgaon	652	180	2662	1698	2200	2200
Chalisgaon	1007	230	4032	3277	474	474
Pachora	1446	264	2361	696	1817	1817
Jamner	371	435	33	91	118	118
Total	**3912**	**2148**	**11786**	**8439**	**7598**	**7598**

[4]

Block identified as OCOB for Citrus Class (Lemon, Mousambi) : Bhadgaon

[4] **Source:** District Planning Portal & Team own Study (Retrieved from DSP -2018-2023)

Table 5.6: Block wise Land use for Onion (Area in Hectare-Normal)

Crop	Onion					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	3594	2048	5519	3855	2294	2927
Yawal	1318	217	1129	1554	1018	920
Raver	342	41	286	525	104	98
Muktainagar	549	62	578	394	818	483
Bodwad	124	95	434	404	479	200
Bhusawal	1445	163	1492	1032	1155	775
Jalgaon	1254	150	1976	1639	1002	570
Erandol	1329	272	4435	4697	9835	4092
Dharangaon	923	261	813	297	164	140
Amalner	554	75	727	476	1057	618
Parola	301	218	1083	330	895	775
Bhadgaon	278	0	164	25	136	99
Chalisgaon	2164	558	4749	2282	3538	2190
Pachora	256	45	491	137	303	80
Jamner	533	41	205	116	870	137
Total	**14964**	**4246**	**24081**	**17763**	**23668**	14104

Block identified as OCOB for Onion : Bhadgaon

Table 5.7: Block wise Land use for Brinjal (Area in Hectare-Normal)

Crop	Brinjal					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	70	70	104	148	158	244
Yawal	45	45	45	88	90	125
Raver	26	26	12	72	82	109
Muktainagar	28	28	22	37	55	45
Bodwad	16	16	22	14	15	11
Bhusawal	32	32	48	48	48	67
Jalgaon	65	65	211	70	65	72
Erandol	125	125	21	123	82	74
Darangaon	23	23	21	25	30	38
Amalner	12	12	50	5	24	30
Parola	52	52	288	274	227	233
Bhadgaon	16	16	46	50	4	8
Chalisgaon	25	25	11	141	145	152
Pachora	22	22	52	47	91	68
Jamner	53	53	50	82	60	55
Total	**610**	**610**	**1003**	**1224**	**1176**	1331

Block identified as OCOB for Brinjal : Chopda and Parola

Table 5.8: Block wise Land use for Tomato (Area in Hectare-Normal)

Crop	Tomato					
Taluka	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Chopda	26	100	45	42	43	0
Yawal	17	22	5	8	0	0
Raver	13	0	2	67	20	40
Muktainagar	14	10	0	9	12	26
Bodwad	11	20	0	6	5	0
Bhusawal	16	3	0	15	15	0
Jalgaon	25	0	3	4	19	10
Erandol	35	23	0	32	1	1
Dharangaon	7	18	19	18	25	0
Amalner	0	9	0	5	27	0
Parola	45	0	0	13	14	20
Bhadgaon	19	22	42	5	2	0
Chalisgaon	19	16	0	23	125	7
Pachora	17	10	0	21	35	15
Jamner	73	0	8	26	10	0
Total	**337**	**253**	**124**	**294**	**353**	119

Block identified as OCOB for Tomato : Chopda, Muktainagar & Raver

Table-5.2 and subsequent tables, provides a detailed insight into block-wise land use for special crops in Jalgaon district from 2018 to 2023. Noteworthy trends emerge, such as the substantial growth in chilly cultivation, particularly in Chopda and Jalgaon, reaching 330 hectares in 2023. Garlic cultivation shows a significant increase, with Yawal and Bhusawal being prominent contributors, reaching 305 hectares in 2023.

Other spices witness dynamic fluctuations, peaking at 2,350 hectares in 2022, primarily driven by extensive cultivation in Chalisgaon. Citrus crops maintain a consistent presence, with Chopda leading in lemon and mousambi cultivation, reaching 7598 hectares in 2023. Onion cultivation, a vital agricultural activity, sees fluctuations across talukas, with Chopda leading in 2020 but experiencing a decline thereafter. Brinjal and tomato cultivation areas showcase variances, highlighting the diverse crop landscape. The data serves as a valuable resource for district planning, enabling stakeholders to identify strategic interventions for sustainable growth in special crop cultivation as OCOB. Thus team proposes following block for OCBC.

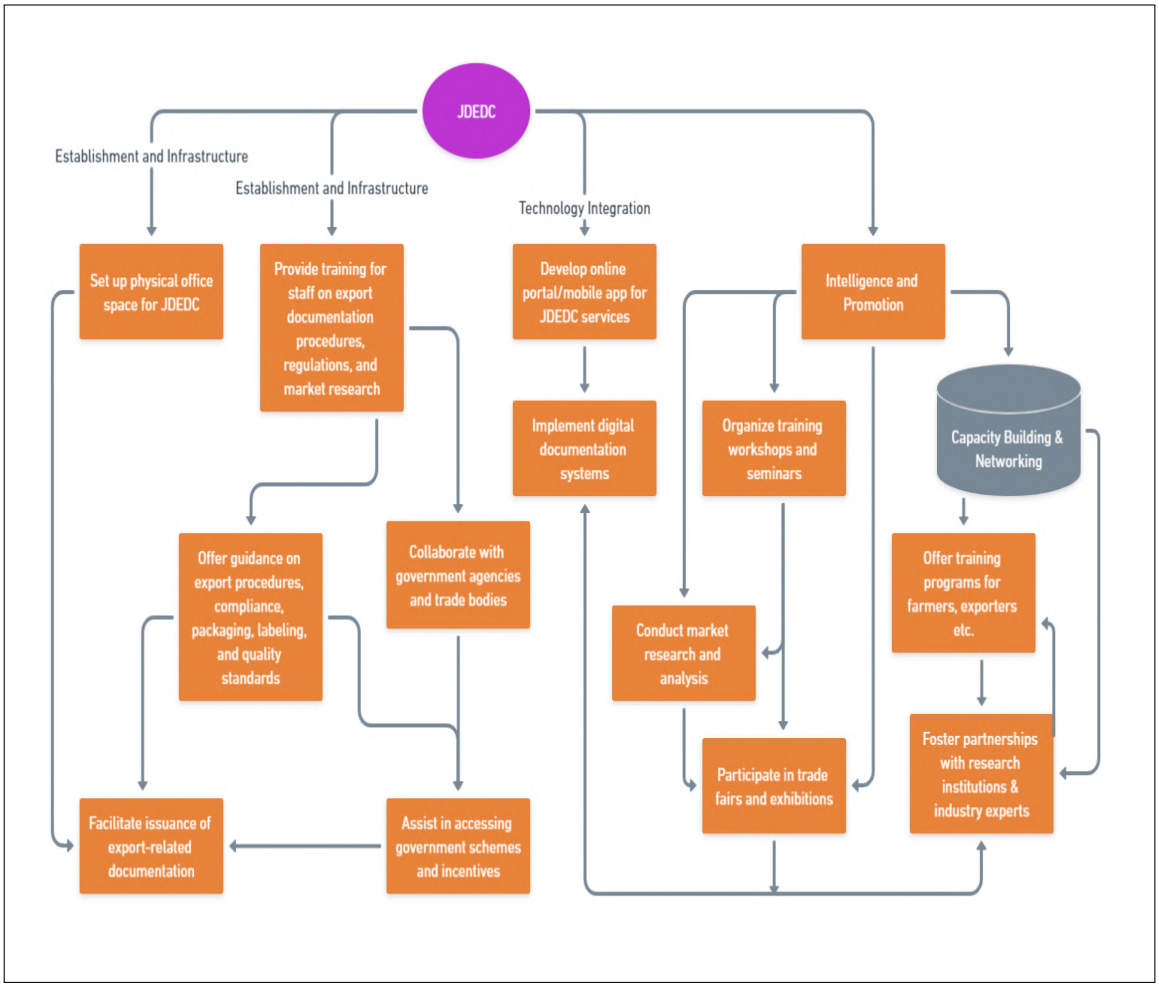
Table 5.9: Blocks identified as OCOB for Various Crops

Corresponding Crops	**Block**
Chilly	Chopda & Chalisgaon
Garlic	Bhusawal
Other Spices	Raver
Citrus Class (Lemon, Mousambi)	Bhadgaon
Onion	Bhadgaon
Brinjal	Chopda and Parola
Tomato	Chopda, Muktainagar & Raver

5.2 Jalgaon District Export documentation Cell (JDEDC)

Creating a Jalgaon District Export Documentation Cell (JDEDC) is a strategic initiative that can significantly enhance the region's agricultural export capabilities. Team proposing following functioning flow chart as ready reckoner for its creation to District Authorities.

Figure 5.1: Prototype for Development of the JDEDC



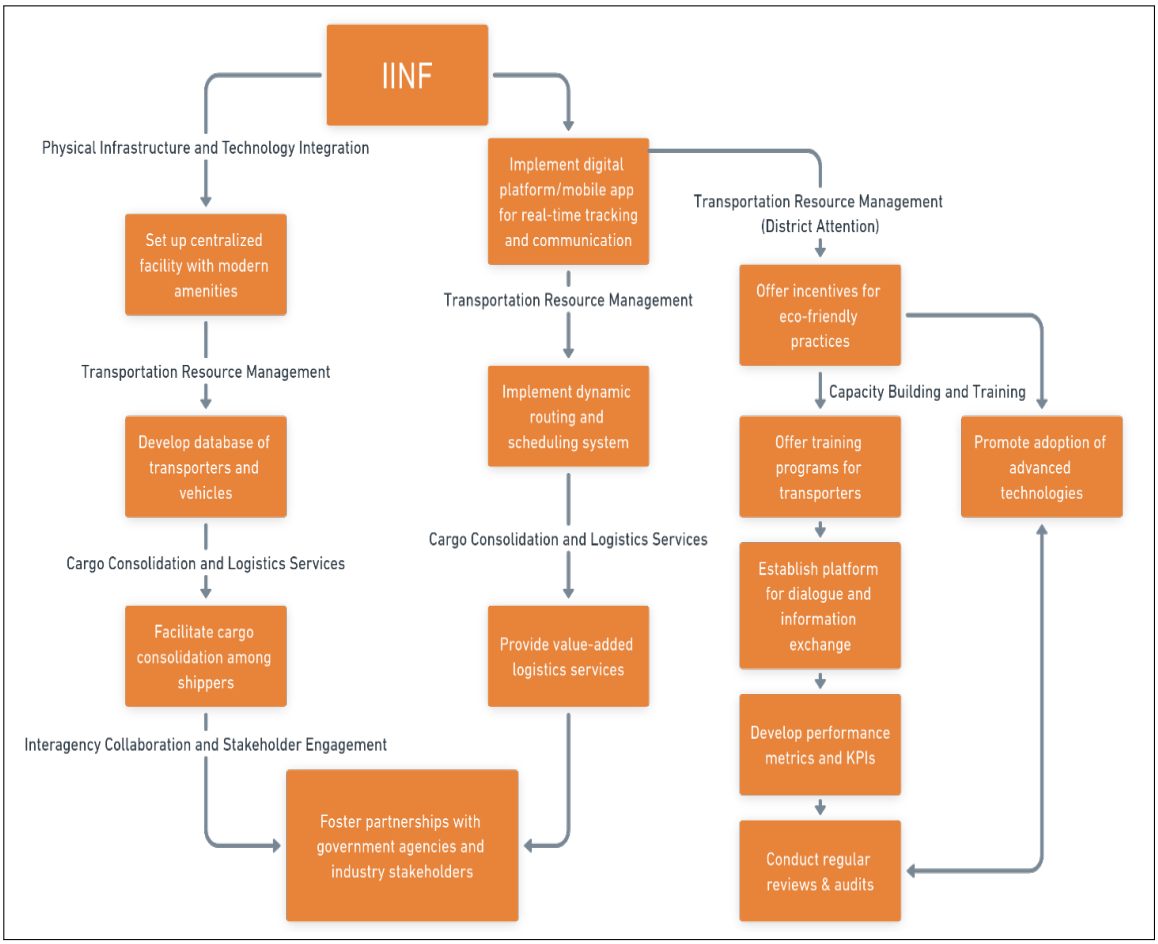
Source : Team's own Conception

By implementing these initiatives through the Jalgaon District Export Documentation Cell (JDEDC), we can strengthen the region's agricultural export ecosystem, enhance competitiveness, and unlock new opportunities for farmers and exporters in the global market.

5.3 Establishing the Jalgaon District Inter and Intra Network Facilitation Centre for Transporters (IINF)

It is a strategic initiative aimed at optimizing the utilization of transportation resources within the district and facilitating efficient movement of goods. Here are some key components and initiatives that we could consider for incorporating into the IINF.

Figure 5.2: Prototype for Development of the IINF



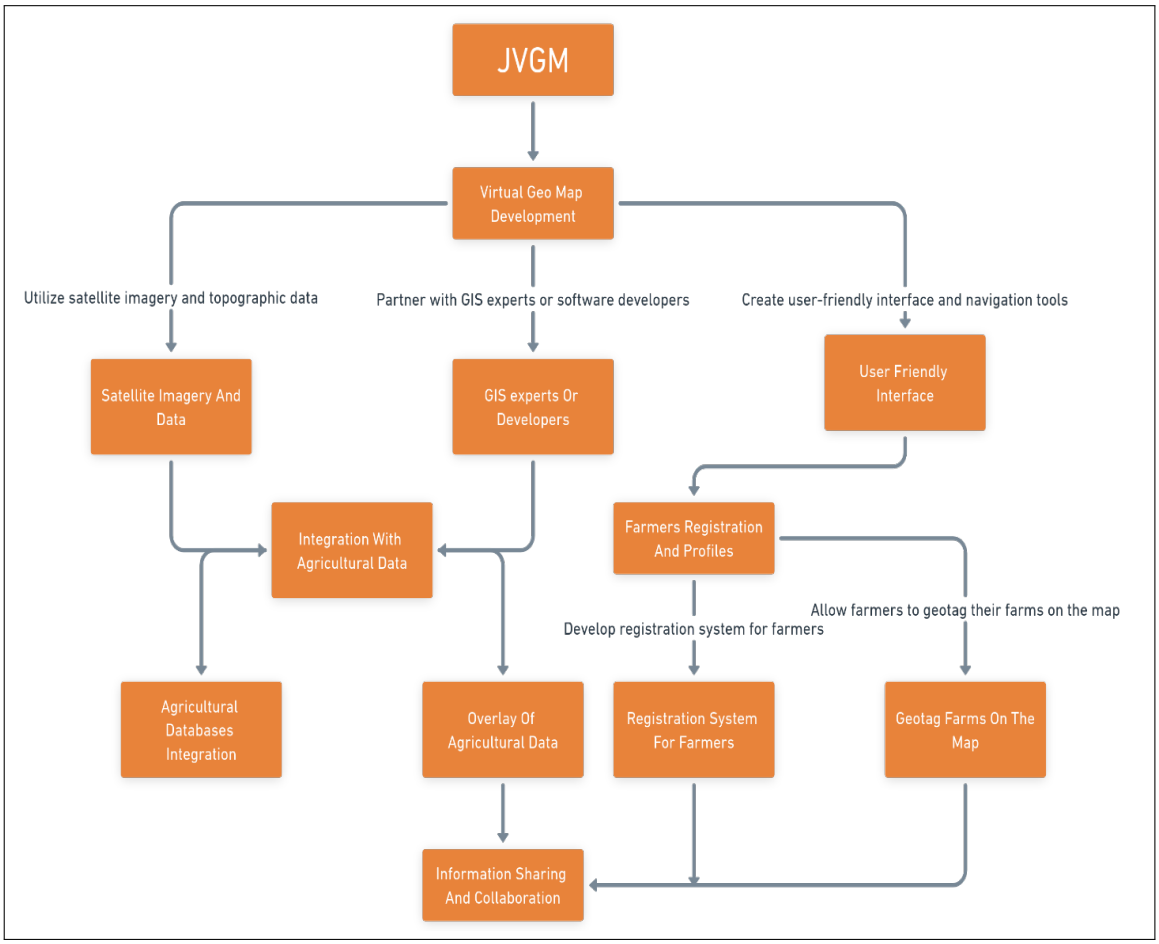
Source : Team's own Conception

By implementing these initiatives through the Jalgaon District Inter and Intra Network Facilitation Centre for Transporters (IINF), we can promote rational utilization of transportation resources, reduce congestion and pollution, and enhance supply chain resilience, and drive economic growth and competitiveness in the region.

5.4 Developing Jalgaon virtual Geo map (JVGM) and connecting it with Farmers across Jalgaon District

Developing a virtual geo map and connecting it with agricultural farmers across Jalgaon district can be a transformative initiative to enhance agricultural productivity, resource management, and farmer connectivity. Here's a comprehensive plan for implementing this initiative:

Figure 5.3: Prototype for Development of the JVGM



Source : Team's own Conception

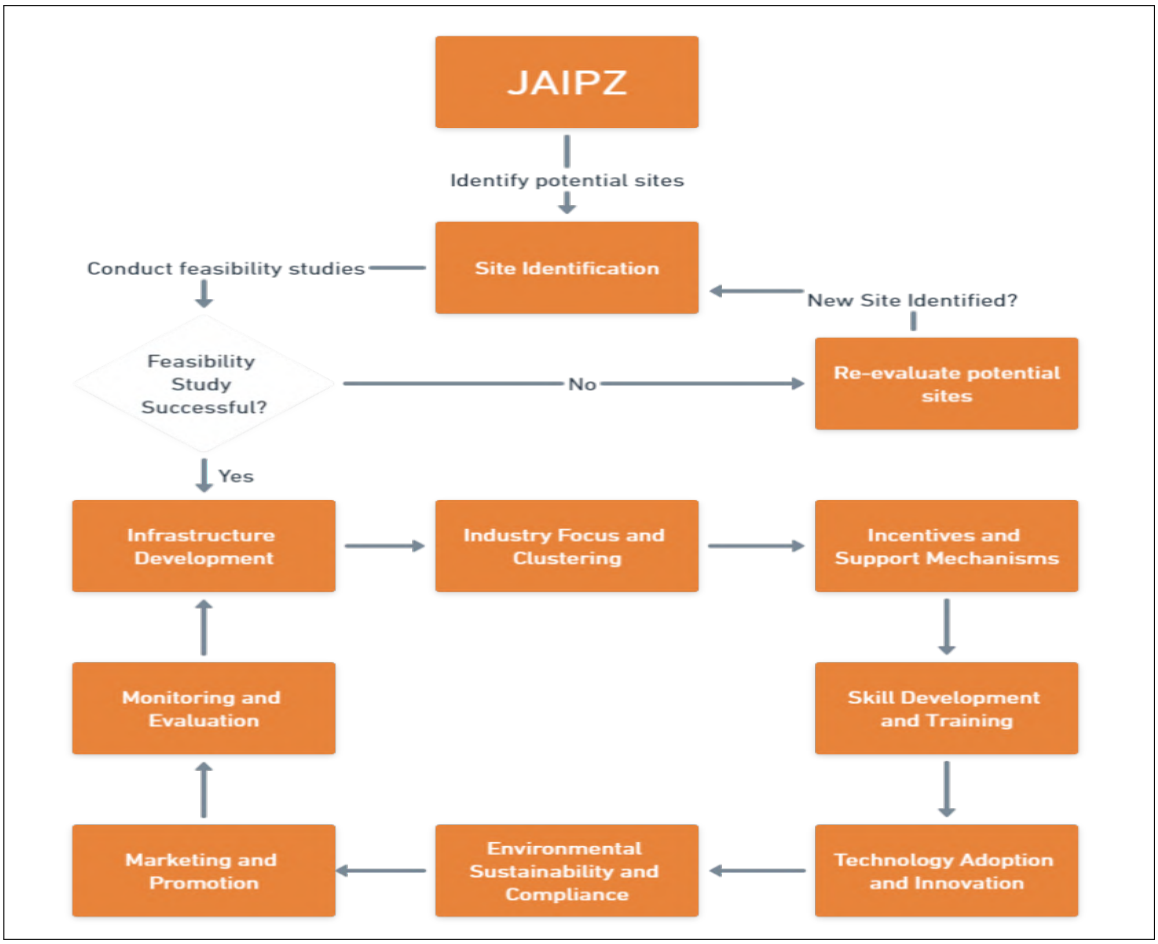
Creating a virtual geographic map and integrating it with farmers in the Jalgaon district can be a transformative endeavor, bringing about improvements in agricultural productivity, resource management, and fostering stronger connections among farmers. The following is a detailed plan for the successful implementation of this initiative:

The establishment of a virtual geo map linked with agricultural practitioners throughout Jalgaon district holds the potential to empower farmers by providing crucial spatial information, decision support tools, and opportunities for collaborative networking.

5.5 Jalgaon Allied Industry promotion zone (JAIPZ)

Creating the Jalgaon Allied Industry Promotion Zone (JAIPZ) is a strategic initiative aimed at fostering the growth and development of allied industries in the Jalgaon district. Here's a comprehensive plan for establishing and operating the JAIPZ:

Figure 5.4: Prototype for Development of the JAIPZ



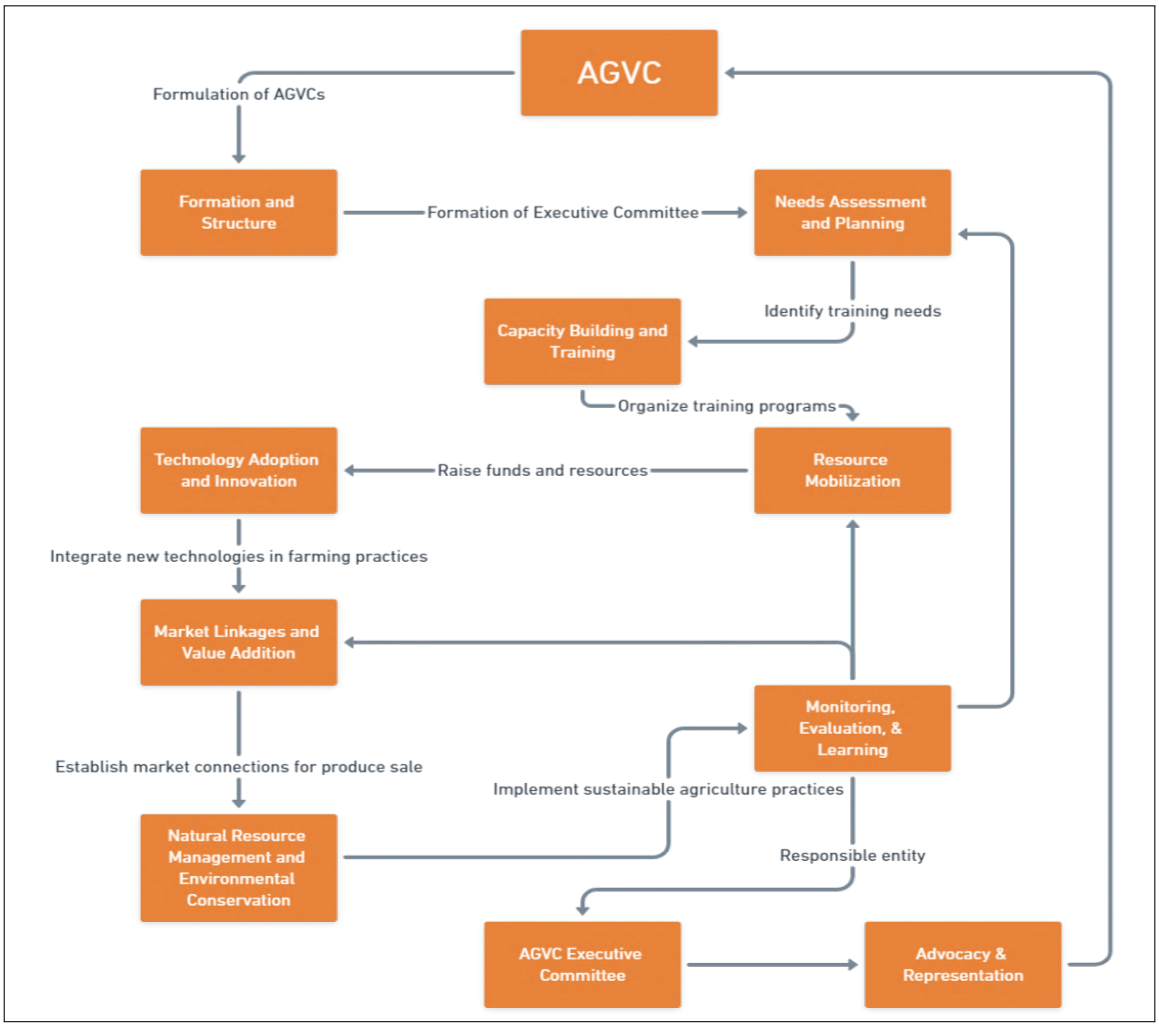
Source : Team's own Conception

By implementing these initiatives, the Jalgaon Allied Industry Promotion Zone (JAIPZ) can serve as a catalyst for economic growth, industrial development, job creation, and sustainable development in the Jalgaon district, while also contributing to the overall competitiveness and prosperity of the region.

5.6 Agro Gram Vikas Committee at Village level (AGVC)

Establishing Agro Gram Vikas Committees (AGVCs) at the village level in Jalgaon district can be a transformative initiative to promote agricultural development, rural empowerment, and community resilience. Here's a comprehensive plan for implementing AGVCs

Figure 5.5: Prototype for Development of the AGVC



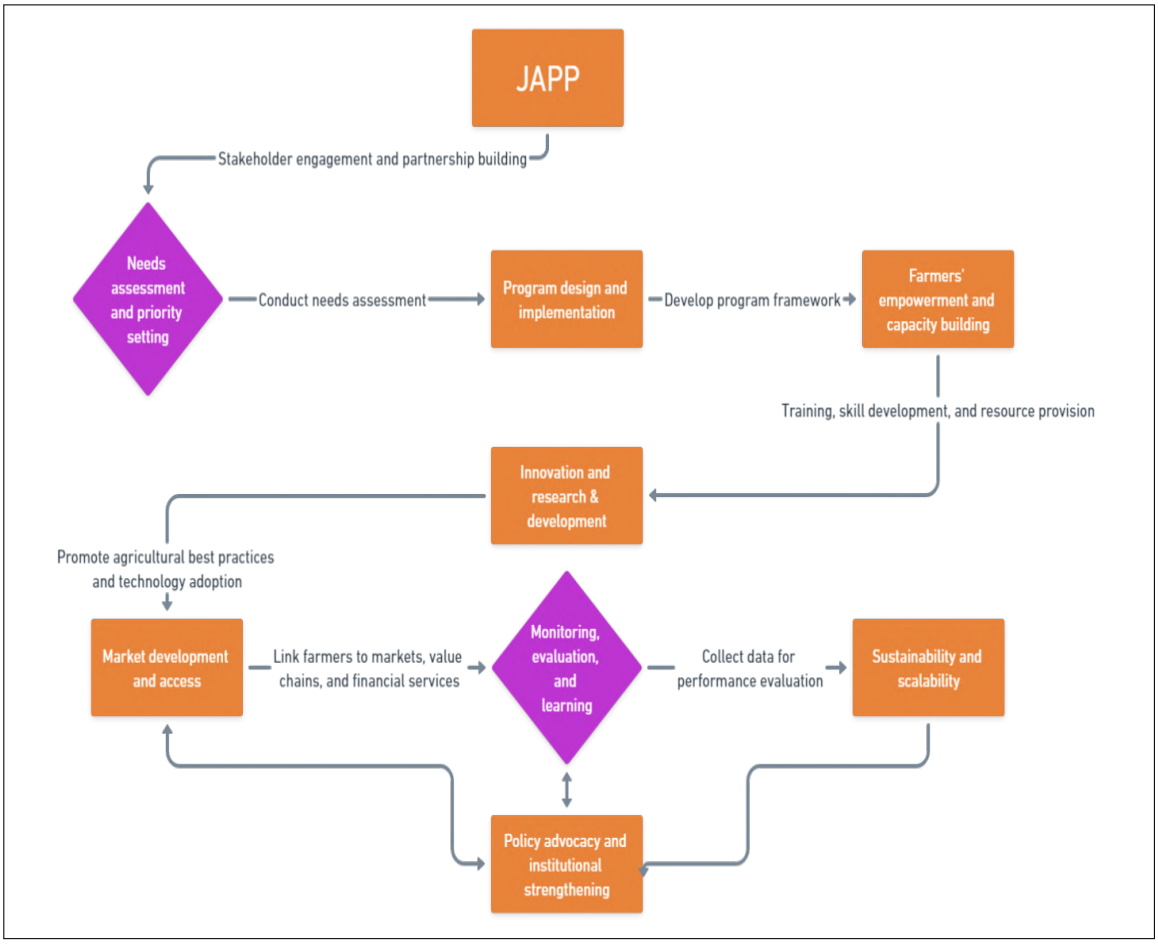
Source : Team's own Conception

By establishing Agro Gram Vikas Committees (AGVCs) at the village level and empowering local communities to drive agricultural development initiatives, Jalgaon district can unlock the potential of its rural areas, strengthen food security, improve livelihoods, and promote sustainable rural development.

5.7 Jalgaon Agri Partnership Program -JAPP

The Jalgaon Agriculture Partnership Program (JAPP) is envisioned as a collaborative initiative aimed at catalysing agricultural development, fostering innovation, and enhancing the livelihoods of farmers in Jalgaon district, Maharashtra. Here's a detailed plan for implementing the JAPP:

Figure 5.6: Prototype for Development of the JAPP



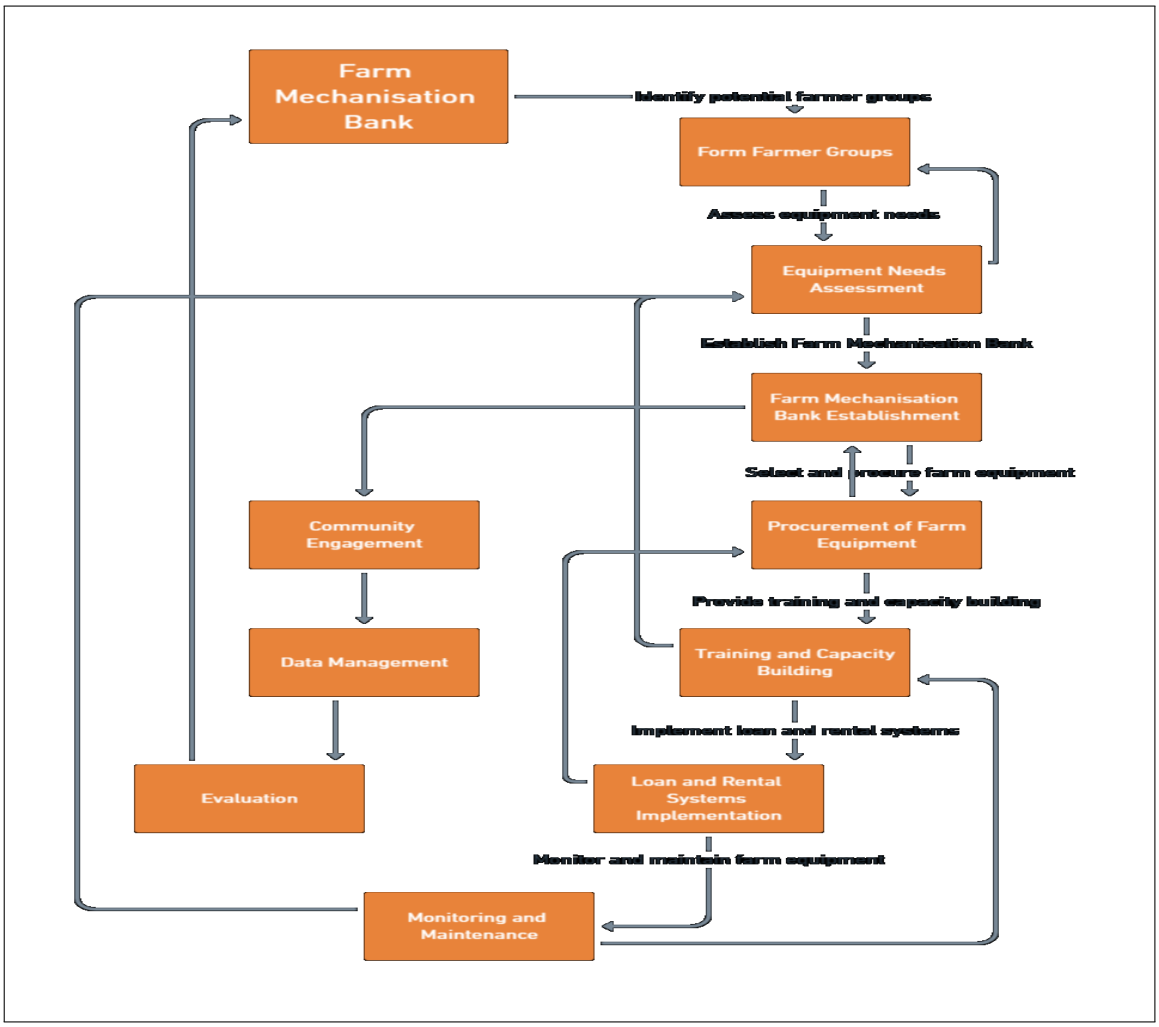
Source : Team's own Conception

By implementing the Jalgaon Agriculture Partnership Program (JAPP) in a collaborative and inclusive manner, the district can unlock the potential of its agricultural sector, improve farmers' livelihoods, and contribute to sustainable rural development and food security.

5.8 Farm Mechanization Bank for Farmer Group for Farm Equipment Facility

Establishing a Farm Mechanisation Bank could significantly contribute to agricultural development by providing farmers with access to modern equipment and machinery. Here's a blueprint for setting up such an institution:

Figure 5.7: Prototype for Farm Mechanisation Bank



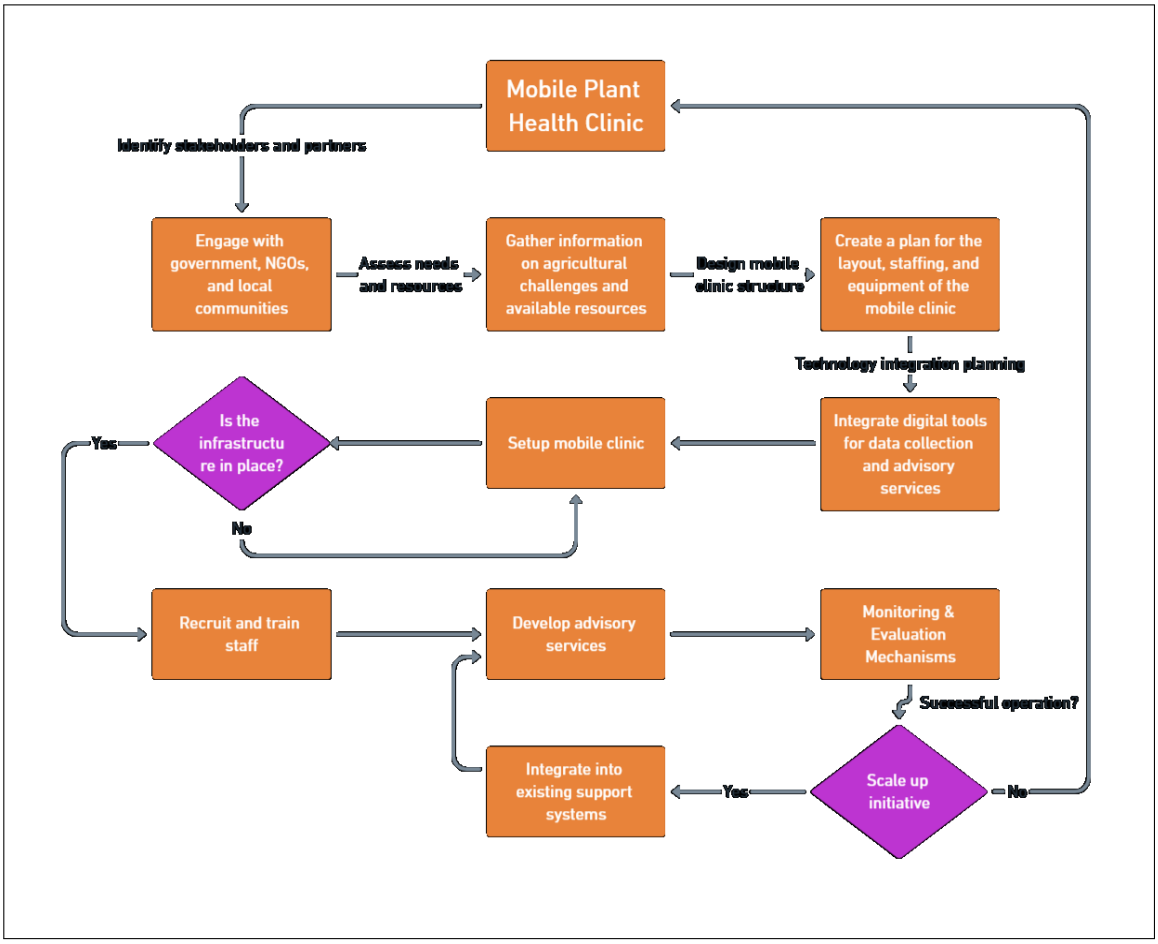
Source : Team's own Conception

Establishing a Farm Mechanisation Bank facilitates access to modern equipment, enhancing farming efficiency, diversifying agricultural activities, mitigating risks, and fostering socio-economic development in rural areas.

5.9 Mobile Plant Health Clinic and Advisory Services

Establishing a Mobile Plant Health Clinic and Advisory Services is an innovative approach to provide farmers in Jalgaon district with timely and accessible agricultural advisory support, diagnostic services, and pest management solutions. Here's a comprehensive plan for implementing this initiative: long-term viability and impact.

Figure 5.8: Prototype for Mobile Plant Health Clinic



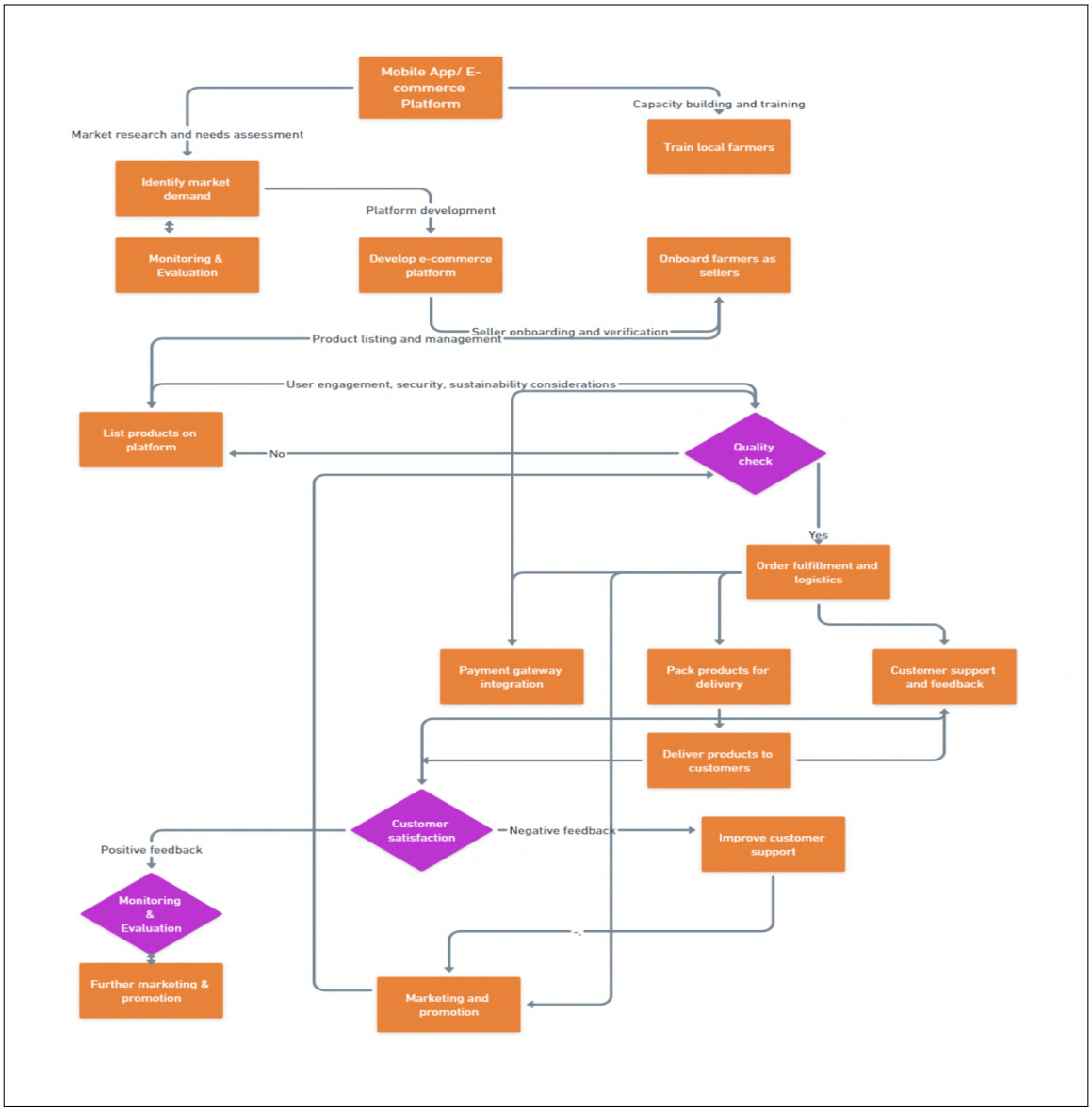
Source : Team's own Conception

By implementing a Mobile Plant Health Clinic and Advisory Services program in Jalgaon district, farmers can benefit from timely access to expert advice, diagnostic services, and pest management solutions, leading to improved crop health, productivity, and resilience in the face of agricultural challenges.

5.10 E-Commerce Platforms or Mobile Apps to Connect Local Farmers

Creating an e-commerce platform or mobile app to connect local farmers in Jalgaon district can revolutionize agricultural marketing, improve access to markets, and increase farmers' income. Here's a comprehensive plan for developing such a platform:

Figure 5.9: Prototype for E-Commerce Platforms



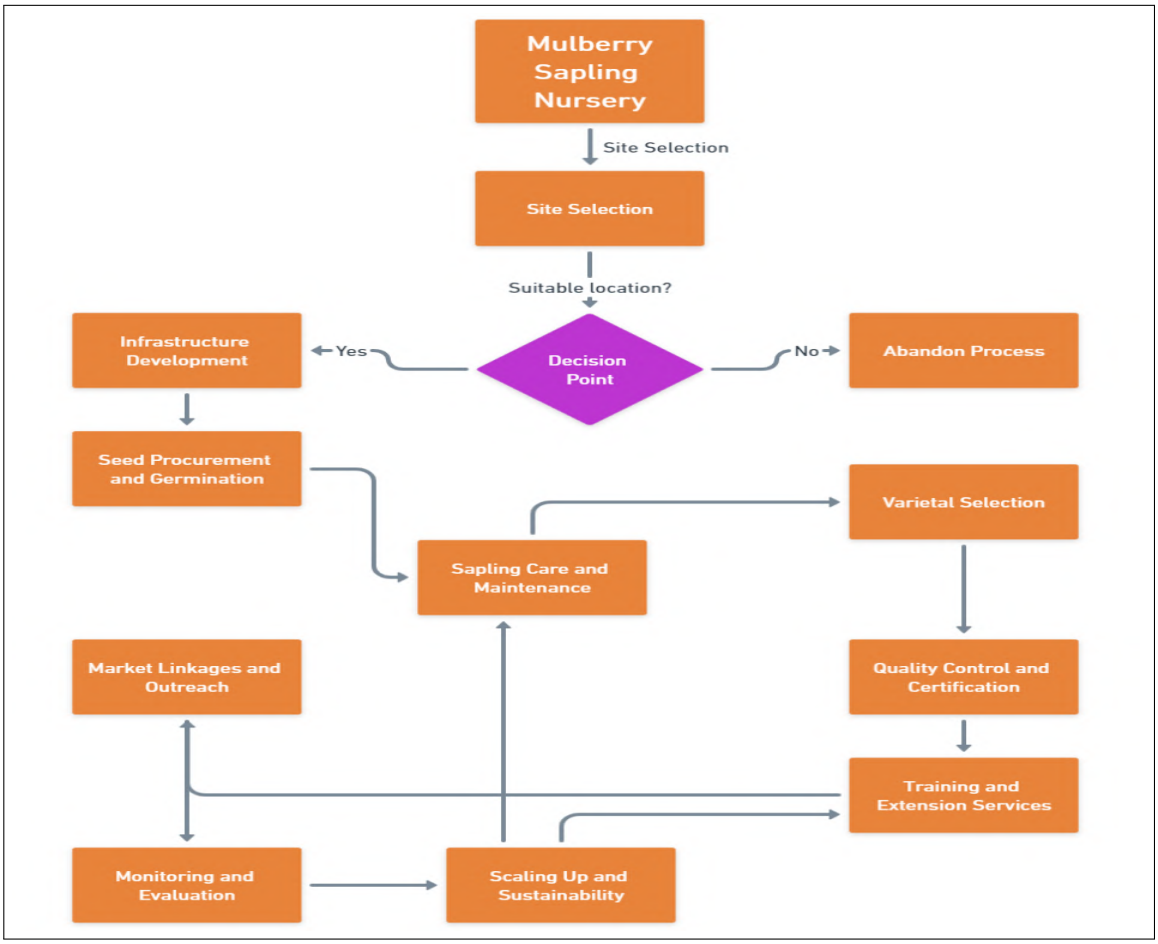
Source : Team's own Conception

By developing an e-commerce platform or mobile app to connect local farmers in Jalgaon district, stakeholders can create new market opportunities, improve efficiency in agricultural marketing, and contribute to the economic empowerment of farming communities in the region.

5.11 Establish Nursery of Mulberry Sapling for New Plantation

Establishing a nursery for mulberry saplings is a crucial step in supporting new plantation initiatives, particularly for sericulture (silk production) or as feed for livestock. Here's a comprehensive plan for setting up a mulberry sapling nursery in Jalgaon district:

Figure 5.10: Prototype for Nursery of Mulberry Sapling



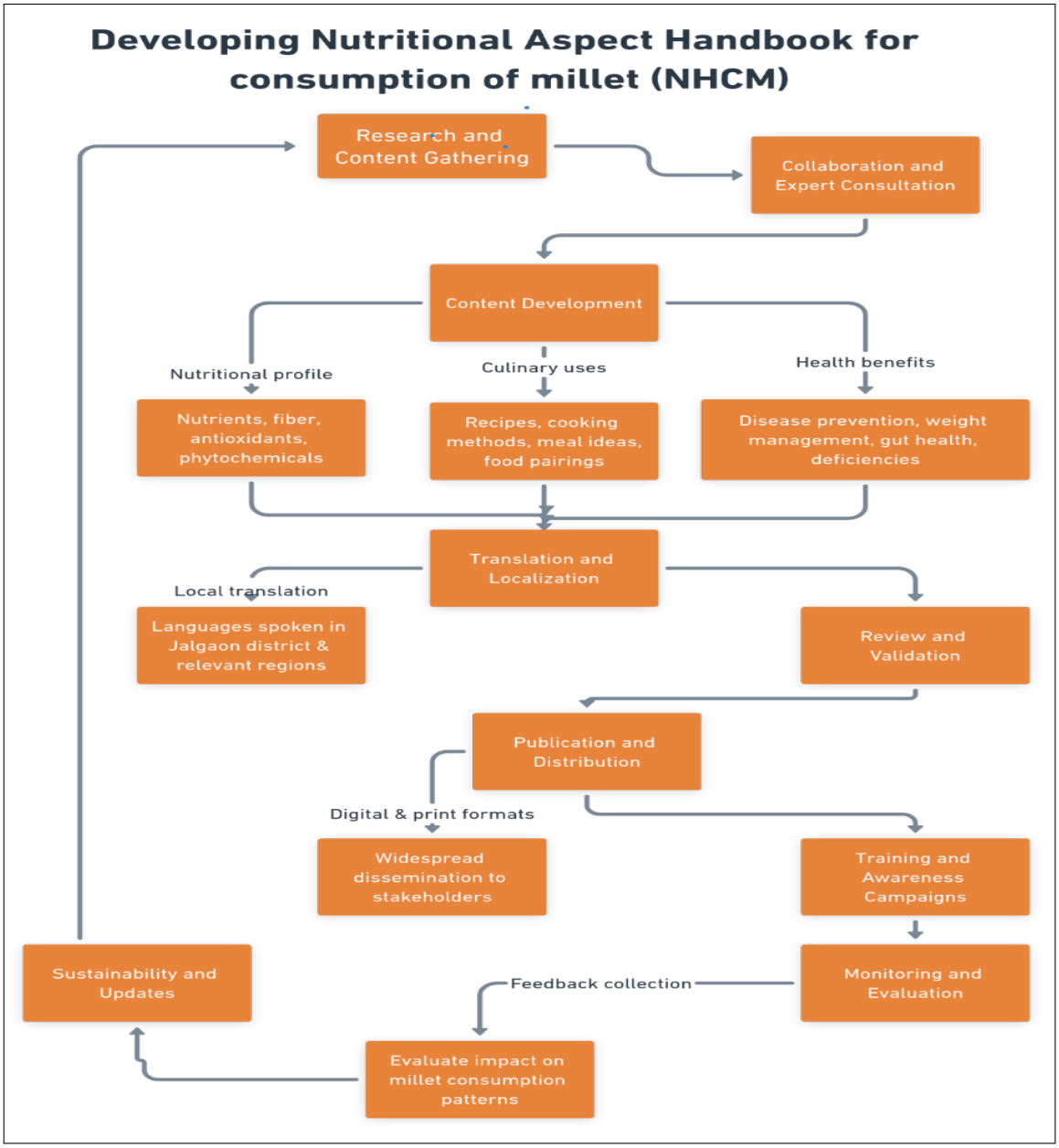
Source : Team's own Conception

By establishing a mulberry sapling nursery in Jalgaon district, stakeholders can support the expansion of mulberry cultivation, promote sericulture as a viable livelihood option, and contribute to the socioeconomic development of the region.

5.12 Developing Nutritional Handbook for consumption of millet (NHCM)

Developing a Nutritional Handbook for Consumption of Millets (NHCM) is an essential step in promoting the consumption of millets and raising awareness about their nutritional benefits. Here's a comprehensive plan for creating the NHCM:

Figure 5.11: Prototype for NCHM



Source : Team's own Conception

By developing a Nutritional Handbook for Consumption of Millets (NHCM) tailored to the context of Jalgaon district, stakeholders can empower communities with knowledge and resources to embrace millets as a nutritious and sustainable food option, thereby promoting food security, health, and well-being in the region.

Chapter 6

Conclusion

The focal aim of Strategic Development Plan for Agriculture Development in Jalgaon district is to foster sustainable and inclusive growth aligning with the sustainable development goal. It studied the status of different agriculture inputs that support boosting up agriculture activities in the district. The report also offers the initiative requires to excel sectoral growth of the district. Team found that, the total available geographical area is 11,76,502 Hectare while total area under Cultivation is 8,71,213 Hectare of land, thus around 77.38% utilized for cultivation of various crops in the district.

The major crops produced in the district mainly are Cotton, Wheat, Jowar, Bajra, Maize Gram, Tur, Moong, Udid, Math, Groundnut, Soybean, other Food grains and variety of fruits and vegetables. These crops show significant fluctuation in area under cultivation as total area on which food grains and fruits and vegetables cultivated was 7,57,088 hectare. In 2018 it rose to 8,59,686 Hectare in 2022 but subsequently again fall in to 7,77,142 Hectare in 2023. Team concludes that, these fluctuations arise out of insufficient awareness about precision farming techniques, mono crop culture, lack of timely training programmes on climate resilience based cultivation practices and meager financial supports. Further there is need of cold and dry storage warehousing for preservation of fruits and vegetables and need support for cultivation of high-value crops for fruits, vegetables and banana along with diversification towards high value crops production.

In terms of Talukas with the largest production of particular crops, Yawal emerges as a noteworthy contributor in maize production and produced 4,975 kilograms per hectare. In gram production Raver score high with 1,415 kilograms per hectare, Jalgaon Taluka reaches 446 kilograms per hectare in sesame production (Refer Table 6 for detail of top producer talukas). Irrespective of top producer in particular crops the production is instable, thus team infer that, farmers are lacking in crops pattern management, custom-made strategies, scarcity of quality of inputs such as seeds, fertilizers, and pesticides.

The land use statistics specifies a thorough overview of land utilization of the district, significant agricultural activity carried out in block that include Chopda, Raver, Jalgaon, and Chalisgaon, with net cultivated areas of 78,057, 63,404, 70,501, and 88,193 hectares, respectively. The district has 91,820 hectares of land reserved for forest area and land designated for plantation notably occupied in the blocks like Raver, Amalner, and Chopda. In addition, district display a diverse soil profile, with a substantial expanse of black soil, totalling 7,36,385 hectares, red soil is 28,888 hectares and Sandy

loam soils, covering 61,771 hectares. Considering this factual data team concluded that, there is requirement of awareness campaigning for organic farming, modernization and expansion of soil testing laboratories at the district level.

The irrigation amenities contribute approximately 30% (2,68,147 hectares out of the total gross cultivated area of 8,71,213 hectares) of the total cultivated area under irrigation which shown underutilization of irrigation facilities in the district. Thus, the team proposes that, increasing artificial ponds, rejuvenating natural ponds in agriculture, organization of irrigation efficiency training program, increasing the area under drip irrigation and fertigation facility and also boosting the participation of local *Gram sabha* in watershed management.

Based on the status of agricultural inputs and direction from district authorities for achieving the targets set forth under SDG's, the Consulting Team set forth small-medium-long term goals such as enhancing agricultural productivity; promoting rational utilization of agriculture inputs mainly seeds, fertilisers, machinery and labour; building sustainable agricultural ecosystems for prosperity and innovation and entrepreneurship and sustainable agri-business development.

Team arrives on the conclusion for achieving these targets that all the stakeholders must have to strive hard for Effective Water Management; Value Addition in Existing Practices; Transforming Agriculture from Traditional way of operation to Mechanized and Modernized way of operation; Evolving Sustainable and Continuous Support Mechanism. Further there is immediate attention need to be lay down for the growth of allied sectors of agriculture specifically in fisheries production, sericulture, poultry management, goat farming, honey production and oil extraction production. In addition to this Team Concluded that, urgent focus must be towards to set up agriculture value added industries for banana, cotton and for fruits and vegetable. The secondary sectors pertaining to agriculture like organic food processing, organic manures, bio-pesticides need support like capital, land from the district authorities.

Finally Team Proposes several facilitative **Prototype Ideation** for enhancing the performance of agriculture sector of Jalgaon District which include One Crop One Taluka, Jalgaon District Export documentation Cell (JDEDC); Jalgaon District Inter and Intra network facilitation centre for transporters (IINF); Developing Jalgaon virtual Geo map (JVGM); Jalgaon Allied Industry promotion zone (JAIPZ); Agro Gram Vikas Committee at Village level (AGVC); Jalgaon Agri Partnership Program -JAPP; E-Commerce Platforms or Mobile Apps to Connect Local Farmers; Establish Nursery of Mulberry Sampling for New Plantation; Developing Nutritional Handbook for consumption of millet (NHCM). Consequently, report present the exclusive and strategic document for agriculture development of Jalgaon District.

Signing of **MOU** in the auspicious presence of

Mr. Ayush Parasd

(District Collector Jalgaon)

with

Prof. V. L. Maheshwari

Vice- Chancellor

(KBC North Maharashtra University)

&

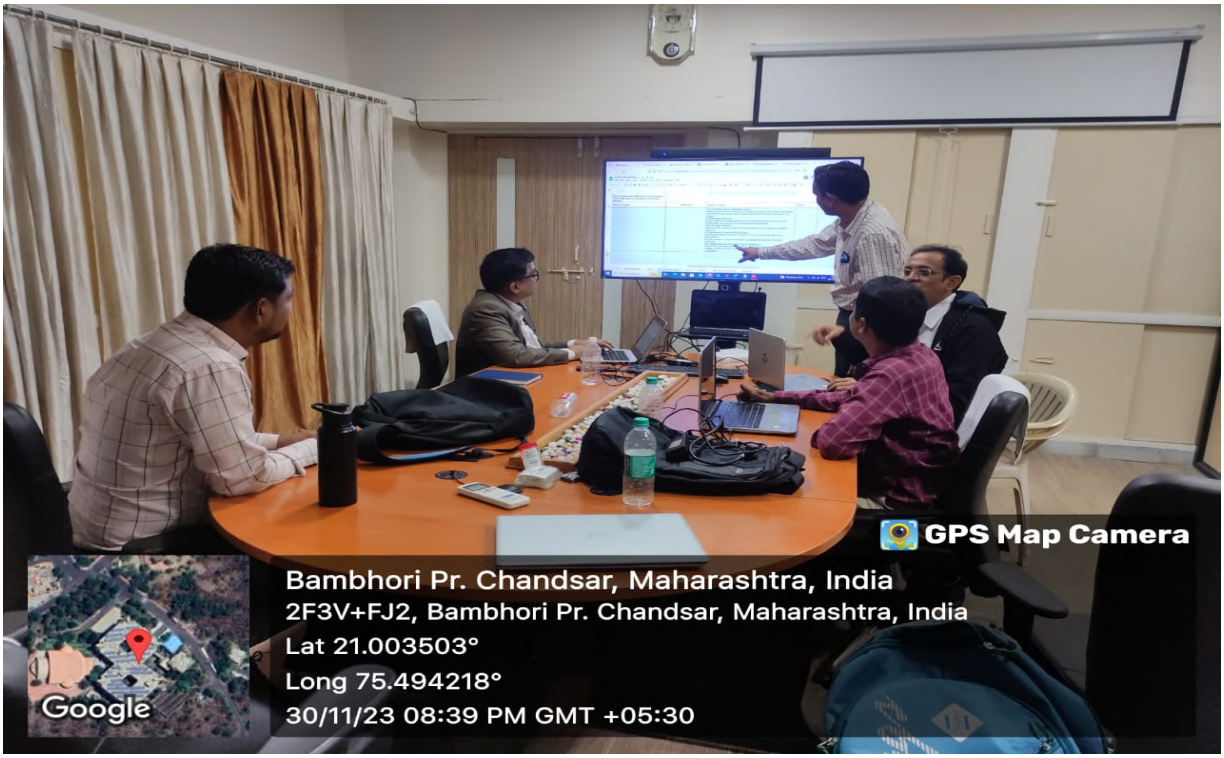
Mr. Vijay Shinde (District Planning Officer, Jalgaon District), Dr. Vinod Patil (Registrar, KBCNMU, Jalgaon), Dr. Rajesh Jawlekar (Director, Innovation Incubation & Linkages)

Guidance & Consultation with Hon'ble District Collector

Shri Ayush Prasad (IAS)

Team Consultation with District Planning Officer and Concerned Departments

Consultation with Lead Statistician

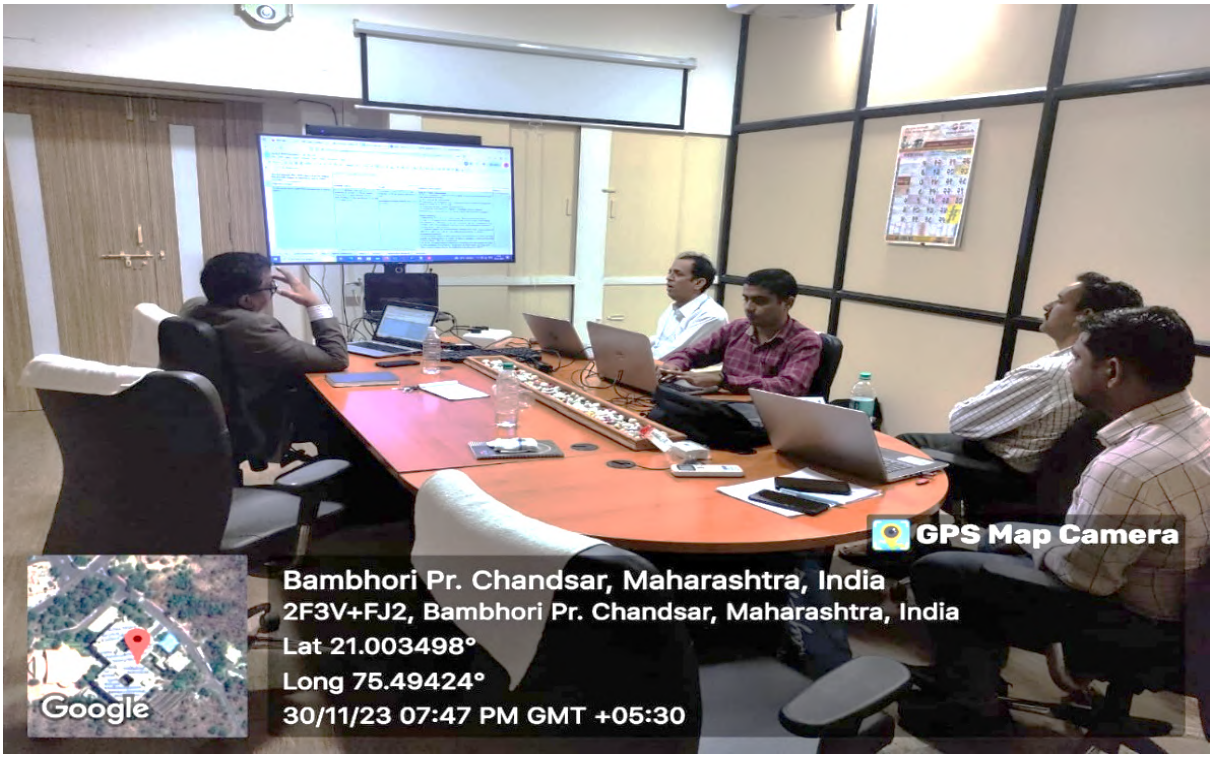


Team Consultation with officals of NABARD, DIC, DSO, Fisheries and KVK Departments

Team Member visit to Agriculture Expo

Consultation on Mapping SDGs with proposed initiatives

Team Participation in DPC Meeting, Jalgaon



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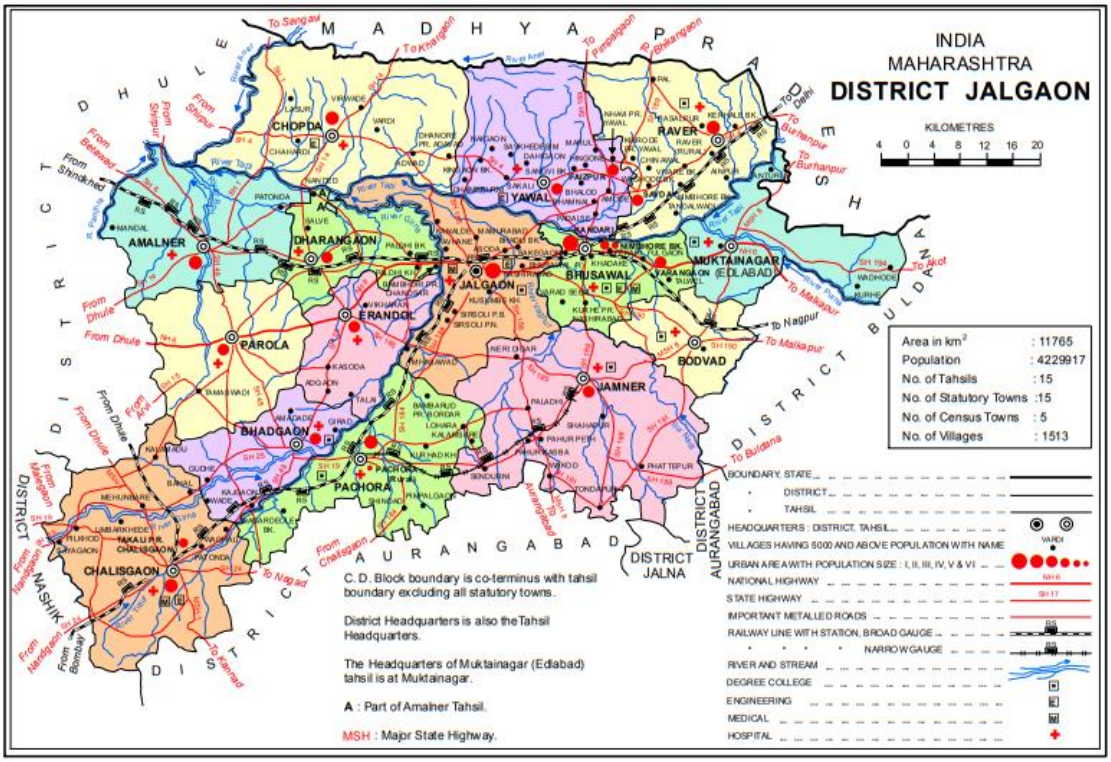
District Strategic Plan: Jalgaon

2023-24 -- 2027-28

A Study for Making Maharashtra the First USD 1 Trillion Economy in India



Jointly Prepared by:

Symbiosis School of Economics (SSE), Pune, and Collector Office, Jalgaon District

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A study was undertaken for steering Maharashtra towards becoming the first US $ one trillion economy in India for the 36 districts of the state. The District Growth Strategic Plan (DGSP) for a five-year period (2023-24 to 2027-28) for Jalgaon was conducted by the Symbiosis School of Economics (SSE), Pune, in collaboration with the Collectorate Office of Jalgaon. The study was led by Dr. Gargi Patil, Assistant Professor, SSE under the guidance of Dr. Jyoti Chandiramani, Director SSE, and Dr. Sudipa Mujumdar, Deputy Director, SSE and was supported by the research team at SSE – Mr. Amey Khare and Miss. Sanika Ranade.

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Stage I – Where is the District now?

Chapter 1 – Baseline Profile of the District

Table 1 Administrative Profile of District

Sr. No.	Details	Source of Data	Data as on – (Date)
No. of Subdivisions	4	Jalgoan District Census Handbook, 2011.	2011-12
No. of Blocks/ Tehsils	15	Jalgoan District Census Handbook, 2011.	2011-12
No. of Cities/ Towns	15	Jalgoan District Census Handbook, 2011.	2011-12
No. of Municipalities	17	Economic Survey of Maharashtra 2022	2021-22
No. of Nagar Panchayats	3	Economic Survey of Maharashtra 2022	2021-22
No. of Villages	1487	Economic Survey of Maharashtra 2022	2021-22
No. of Gram Panchayats	1153	Economic Survey of Maharashtra 2022	2021-22

Source: Compiled by authors from various sources and provided by Jalgaon District Planning Department, 2023

Table 2 Demographic Profile of District

To be provided by Planning Dept					
S.N.	**Indicator**	**District details**	**State details**	**Source of Data**	**Data as on – (Date)**
1	No. of Inhabited Villages	1,487	40,959	Census 2011	2011-12
2	No. of Households	899,306	2.44 crores	Census 2011	2011-12
3	Population	4,631 lakhs	125,005 crores	Directorate of Economics & Statistics, Maharashtra	2021-22
4	Growth Rate of Population in Last Decade	0.77%	0.91%	Directorate of Economics & Statistics, Maharashtra	2021-22
5	Urban Population (as % of total population)	31.74%	45.22%	Census 2011	2011-12
6	Sex Ratio (No. of Females per 1000 males)	925	929	Census 2011	2011-12
7	Population Density (Per Sq. Kms)	360	365	Census 2011	2011-12
8	Literacy Rate	78.2%	82.34%	Census 2011	2011-12
9	No. of workforce in Primary Sector	65%	47%	Census 2011	2011-12
10	No. of workforce in Secondary Sector	35%	24.36%	Census 2011	2011-12
11	No. of workforce in Tertiary Sector		28.64%	Census 2011	2011-12
12	Working People Population (as % of Total	44.06%	44.1%	Census 2011	2011-12

	Population)				
13	HDI	0.723	0.752	Maharashtra Human Development Report, 2012	2011-12

Source: Compiled by authors from various sources and provided by Jalgaon District Planning Department, 2023

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Table 3 Economic Profile of District

S.N.	Indicator	Details	Source of Data	Data as on – (Date)
1	Gross District Domestic Product (GDDP)	49,307 crores	Directorate of Economics & Statistics, Maharashtra	2021-22
2	Growth rate of GDDP (%)	3.67 %	Directorate of Economics & Statistics, Maharashtra	2021-22
3	Per capita income (in INR)	1,47,554	Directorate of Economics & Statistics, Maharashtra	2021-22
4	Sector wise distribution of GDDP (Districts may add rows for addition of Sectors)			
4.1	Primary	8,823 crores	Directorate of Economics & Statistics, Maharashtra	2021-22
4.2	Secondary	11,149 crores	Directorate of Economics & Statistics, Maharashtra	2021-22
4.3	Tertiary	24,132 crores	Directorate of Economics & Statistics, Maharashtra	2021-22

5	Credit Available	10,957 crores	NABARD Report	2022-23
6	District's share in State's GDP	1.4%	Directorate of Economics & Statistics, Maharashtra	2021-22
7	Sectoral historical growth rate (past 5 years) - Primary Sector	1.26	Directorate of Economics & Statistics, Maharashtra	2021-22
8	Sectoral historical growth rate (past 5 years) - Secondary Sector	-1.26	Directorate of Economics & Statistics, Maharashtra	2021-22
9	Sectoral historical growth rate (past 5 years) - Tertiary Sector	2.17	Directorate of Economics & Statistics, Maharashtra	2021-22

Source: Compiled by authors from various sources and provided by Jalgaon District Planning Department, 2023

Table 4 ESG Profile of District

		To be provided by Planning Dept			
S.N.	**Indicator**	**District details**	**State details**	**Source of Data**	**Data as on – (Date)**
Environment					
1	Drinking Water Availability throughout year (% of household)	99.87%	84.22%	Jal Jeevan Mission	2023-24
2	Air Quality	79 AQI (satisfactory)	167 AQI (poor)	Maharashtra Air Quality Index (AQI)	2024
3	Proportion of Land under Forest Cover	15.10%	16.90%	Directorate of Economics & Statistics, Maharashtra	2020-21
Social					
1	No. of BPL residents	1,132,757	3,700,715	Directorate of Economics & Statistics, Maharashtra	2020-21
2	% of Population Residing in Urban Area	31.74%	45.22%	Directorate of	2020-21

				Economics & Statistics, Maharashtra	
3	% of Population Residing in Rural Area	68.26%	54.78%	Directorate of Economics & Statistics, Maharashtra	2020-21
4	Women Labor Force Participation Rate	20%	37.7%	Census 2011	2011-12
5	Sex Ratio	925	929	Census 2011	2011-12

Source: Compiled by authors from various sources, 2023

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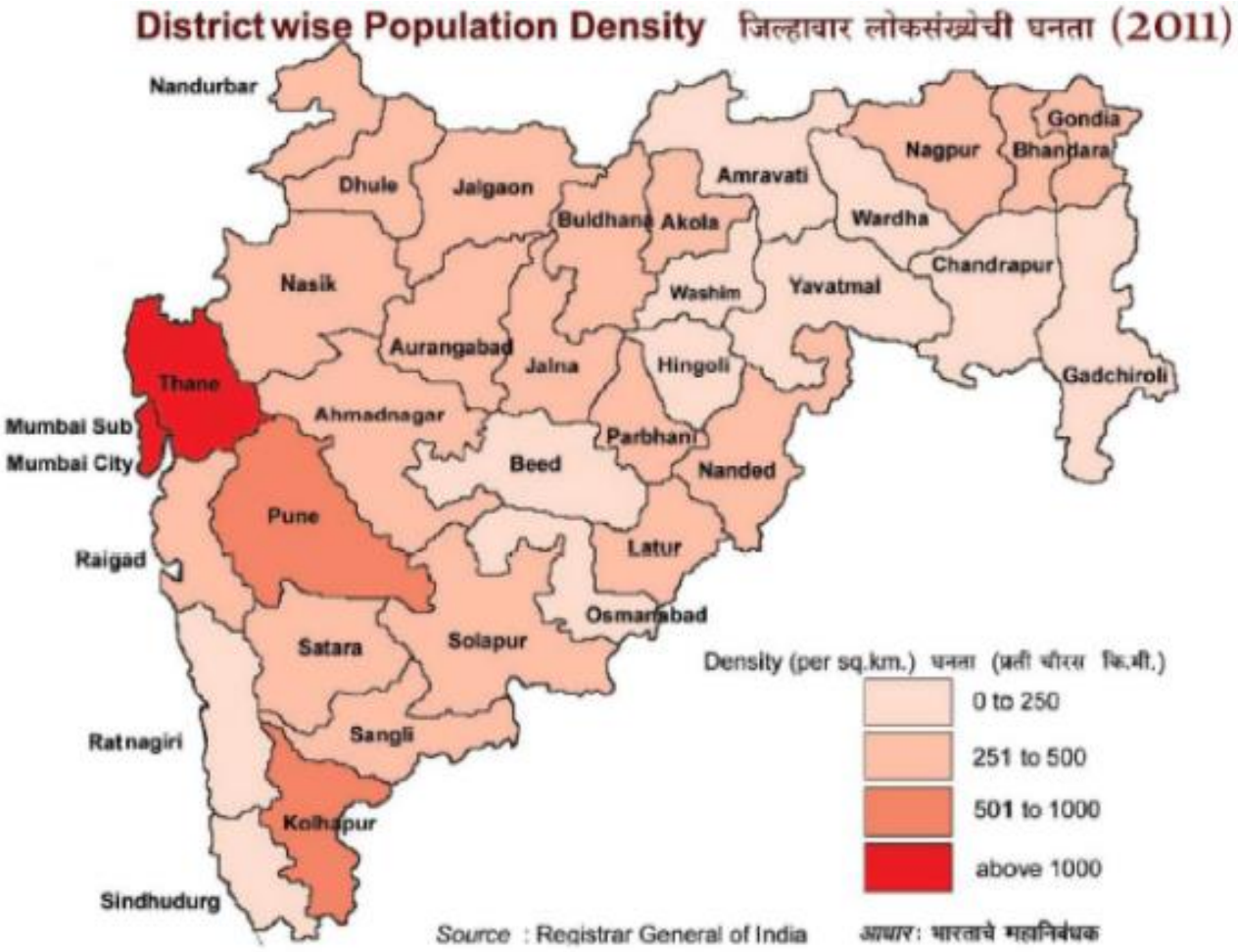
Figure 1 District-Wise Population Density



Source: Registrar General of India, 2011

Stage II – Where does the District want to go?

Chapter 2 – District's Vision of 2028

Vision

"Empowering Jalgaon as a Sustainable and Inclusive Centre of Innovation and Development, where diverse strengths converge to achieve the Sustainable Development Goals (SDGs) through economic prosperity, technological advancements and harmonious growth. District administration strives to ensure a promising future for all while setting a benchmark for progress in the region, contributing significantly to the global effort to achieve a more equitable, sustainable and prosperous world".

Mission

1. Promote crop diversification to elevate the agricultural sector to a new height of productivity and sustainability. To make the district a leading producer of Banana and Cotton.
2. Foster a conducive environment for business, attract investments and support diverse industries. Promote innovation, skill development and access to modern industries.
3. Invest in strategic development projects to enhance connectivity and infrastructure. Bolster trade, tourism and accessibility, ensuring seamless movement of goods and people.
4. Promoting sustainable practices, conservative efforts and green initiatives to maintain ecological balance, ensuring clean water bodies, sustainable agriculture and greener district for the present and future.
5. Foster research, innovation, and collaboration for knowledge-based growth in the District.
6. Build a transparent, efficient governance framework centred on citizen needs. Streamline the processes, promote e-governance and responsibly manage resources for District sustainable growth.

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Theory of Change (TOC) Framework

Table 5 Sectoral Theory of Change Framework – Primary Sector

Sectors	Issues / Constraints	Interventions Required	Expected Immediate Outcomes	Long-Term Outcomes (Five Years)
Primary Sector	Monocropping	Encourage and promote multi-cropping and inter-cropping by undertaking training (soybean and toor, along with cotton and banana).	Improved soil health and reduced risk of monoculture-related issues.	Preservation of groundwater resources for long-term sustainability.
	Lack of cold storage facilities	Warehousing and cold storage facilities to be created.	Improved conservation and storage of perishable products.	Exports and food processing will be possible.
	Excessive dependence on chemical fertilizers	Bio fuel to be introduced and training about use of fertilizers.	Improve land quality and implementation of sustainable practices.	Contribution to environmental sustainability.
	Lack of banana food processing	Banana processing units (chips, cake, biscuits, pulp) to be set up and post-harvest strategies to be developed.	Creation of job opportunities in banana processing industries.	Improved post-harvest practices for banana and related products.
	Inadequate rail transport	Longer stops for the railway at Jalgoan (since going to Bhusawal is an expense).	Reduction in transaction costs and intermediaries.	Extended shelf life and improved market access for these products.
	Fishing is not very well developed. Only smaller fishes are growth due to lack of space and lack of storage of water.	Ground-water storage and building of large scale tanks.	Diversified sources of income for farmers through improved finishing and the cultivation of multiple crops.	Promotion of fishing and aquaculture for additional income.

Source: Based on data gathered from stakeholder's interaction, 2023

Table 6 Sectoral Theory of Change Framework – Secondary Sector

Sectors	Issues / Constraints	Interventions Required	Expected Immediate Outcomes	Long-Term Outcomes (Five Years)
Secondary Sector	Non-functional MIDC's	Provide infrastructure facilities. Quicker allocation of land (EODB).	Faster allocation of land for industries can promote industrial growth.	Long-term growth of the manufacturing sector.
	Dual taxation (APMC + MIDC)	Single Window taxation (EODB).	Reduction in tax burden.	Increased profits due to reduction in taxes.
	Costly electricity	Affordable electricity to be provided.	Lower electricity costs for industries, will improve cost-effectiveness and cost of production.	Reduced cost of production and increased productivity.
	Transport Infrastructure	Better road and rail connectivity to be provided.	Improved mobility will enhance trade.	Improved access to markets and facilitate the movement of goods and people.
	Issues related with APMC (governance)	APMCs to be monitored.	Effective management of pulse prices in APMCs through the implementation of farm laws.	Enhanced markets.
	Unskilled labour	Skills and training to be provided.	Skilled labour.	Better incomes for skilled labour and more employability.
	Toor is not grown but is imported in the district.	Promotion of the dal mills association and processing of locally produced pulses.	Increased employment opportunities.	Increased long-term incomes.
	Lack of construction	EODB + simpler land allocation to developers.	Development of overall area and increase in employment opportunities.	Diversification of employment opportunities and increased long-term incomes.

Source: Based on data gathered from stakeholder's interaction, 2023
**EODB = Ease of Doing Business*

Table 7 Sectoral Theory of Change Framework – Tertiary Sector

Sectors	Issues / Constraints	Interventions Required	Expected Immediate Outcomes	Long-Term Outcomes (Five Years)
Tertiary Sector	Gold is traded and exchanged informally (out of GST net).	There is a need to formalize gold trading and manufacturing. Gold Clusters to be formulated.	Formalization of Gold Clusters and Issuance of gold retail licenses.	Promotion of Jalgaon as Gold Hub and generation of formal employment opportunities.
	Lack of promotion of religious tourism (despite the presence of multiple temples).	Promotion of religious tourism.	Renovation and maintenance of old temples.	Increased incomes from tourism sector.
	Less development of the real estate sector.	Boost to be given to the construction and real estate sector.	Construction of better roads, malls and cinema halls may help to promote the real estate sector.	Establishment of popular food chains to boost the real estate sector.
	Out-migration and lack of good formal education institutions.	Formal training of local workers is necessary, in order to avoid migration.	More jobs should be created in order to reduce out-migration.	Promotion of higher education institutions and skill development to prevent out-migration and brain drain.

Source: Based on data gathered from stakeholder's interaction, 2023

Chapter 3 – Identification of priority subsectors

Table 8 Identification of Sub-Sectors Based on GDVA and Current Prices (7-years)

Sr. No.	Headings	Subsector % Share in GDVA (one year)	Subsector CAGR (%) (7-years)
	Primary Sector		
1	Crops	13.77	-1.98
2	Livestock	2.31	0.92
3	Forestry & Logging	1.05	2.92
4	Fishing & Aquaculture	0.01	-28.41
5	Mining & Quarrying	0.58	15.90
	Secondary Sector		
6	Manufacturing	18.01	-1.15
7	Electricity, Gas and Water Supply, Other Utility Services	2.09	2.80
8	Construction	5.17	0.74
	Tertiary Sector		
9	Trade, Repair, Hotels & Restaurants	8.05	2.09
10	Railway	0.41	-2.21
11	Transport by means other than Railways	3.29	-0.44
12	Storage	0.17	20.35

13	Communication & Services related to Broadcasting	1.46	2.50
14	Financial Service	10.90	2.79
15	Real estate, Ownership of dwellings & Professional Services	20.19	3.44
16	Public administration & Defense	3.47	5.61
17	Other Services	6.75	2.67
	Average	**6.50**	**1.62**

Source: Based on data from DES Report on District Domestic Product of Maharashtra, 2023

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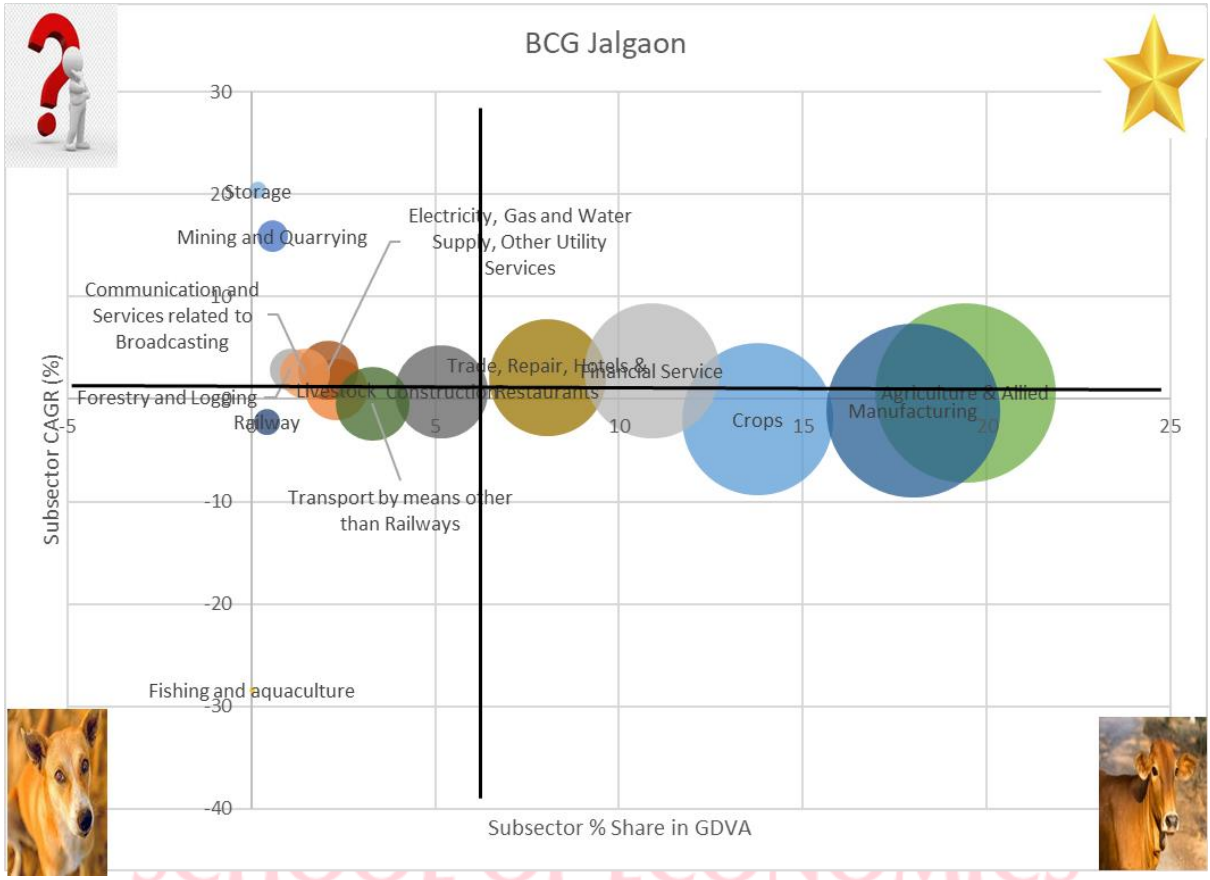
BCG Matrix

Figure 2 Seven-Year BCG Matrix for Jalgaon based GDVA and Current Prices



Source: Calculated by authors based on data from DES Report on District Domestic Product of Maharashtra, 2023 (Based on Table-6).

Table 9 Updated Calculations for BCG Matrix and Identification of Sub-Sectors

Sr. No.	Headings	Average Share (2014-15 to 2021-22)	Sub-Sector CAGR (%) between 2014-15 to 2021-22
	Primary Sector		
1	Crops	15.51	-1.43
2	Livestock	3.54	0.56
3	Forestry & Logging	1.00	3.71
4	Fishing & Aquaculture	0.09	-4.97
5	Mining & Quarrying	0.66	37.26
	Secondary Sector		
6	Manufacturing	17.08	0.86
7	Electricity, Gas, Water Supply & Other Utility Services	17.08	1.38
8	Construction	2.25	3.49
	Tertiary Sector		
9	Trade, Repair, Hotels & Restaurants	5.54	1.63
10	Railways	9.05	3.51
11	Transport by means other than Railways	0.54	0.90
12	Storage	2.95	2.36
13	Communication & Services related to Broadcasting	0.12	17.21
14	Financial Services	1.40	4.15
15	R. Estate, O. Dwellings & Professional Services	9.53	4.01
16	Public Administration & Defence	20.32	5.56
17	Other Services	3.36	6.58
	Average	**6.47**	**5.10**

Source: Based on data from DES Report on District Domestic Product of Maharashtra, 2023

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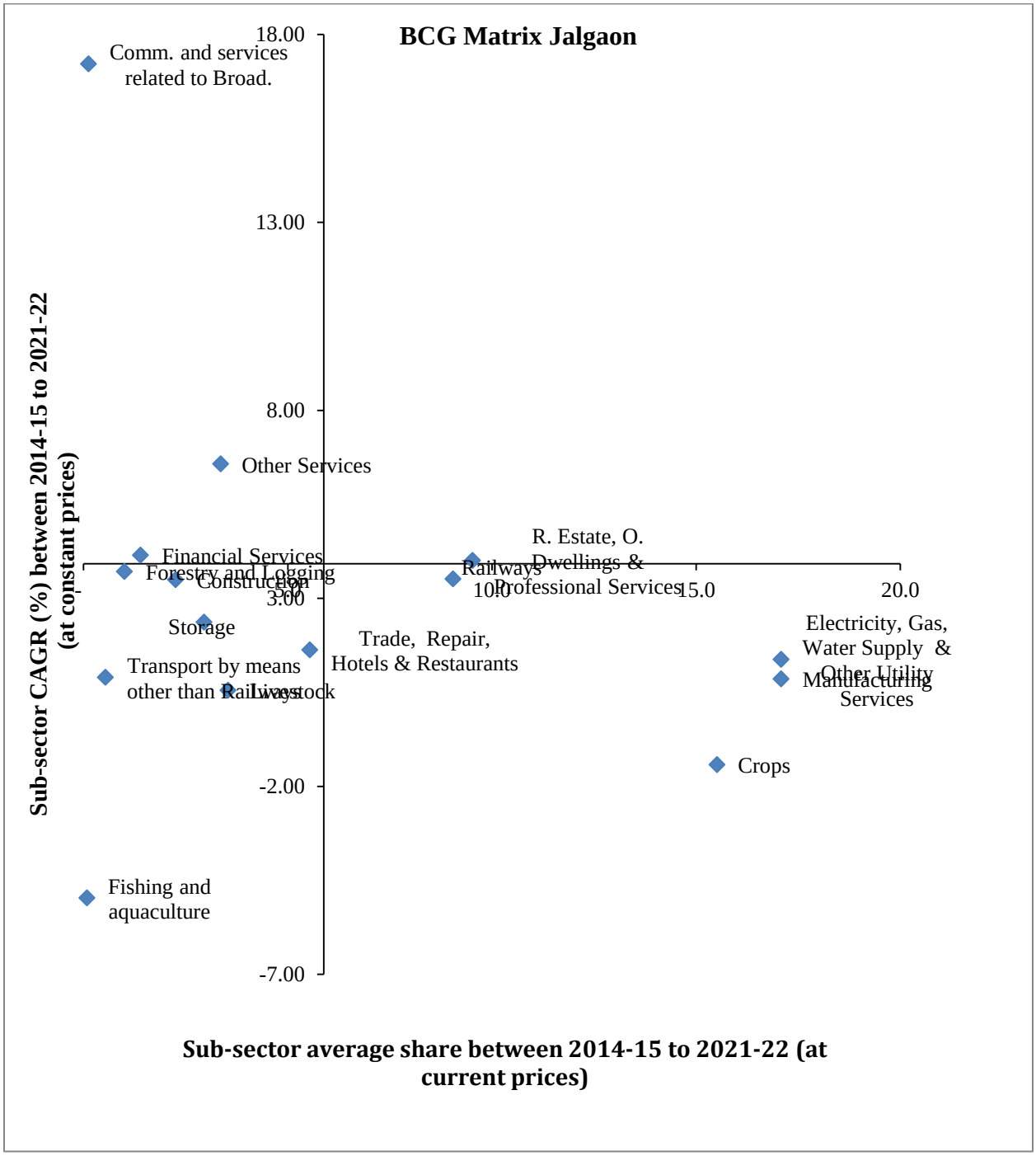
Figure 3 Updated BCG Matrix for Jalgaon based GDVA and CAGR at Current Prices



Source: Calculated by authors based on data from DES Report on District Domestic Product of Maharashtra, 2023 (Based on Table-7).

Table 10 Identification of Growth and Aspirational Sub-Sectors Based on BCG Matrix

Sr. No.	Sectors	Growth	Aspiration
1	Primary Sector	Crops	Fishing & Aquaculture
		Livestock (Animal Husbandry)	Forest & Logging
2	Secondary Sector	Manufacturing	Electricity, Gas, Water Supply
		Construction	
3	Tertiary Sector	Real Estate	Railway
		Financial Services	Transport by means other than Railways
		Storage & Other Services	Communication & Services
			Public Administration & Defense
			Trade, Repair, Hotels & Restaurants

Source: Calculated by authors

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From the BCG Matrix and above table, the following inferences can be drawn;

- The focused (star) sub-areas under Primary Sector should be – crops (banana, cotton, maize and toor) and animal husbandry.
- The focused (star) sub-areas under Secondary Sector should be – food processing units, Plastic Processing (Mats + PVC pipes), irrigation, cotton ginning industry, toor dal mills, and chemical fertilizer manufacturing, wood processing units and harnessing units for solar and wind energy.
- The focused (star) sub-areas under Tertiary Sector should be – banking sector, religious tourism, gold manufacturing and Gems and Jewelers.

Stage III – How will the District reach there?

Chapter 4 – Detailed analysis of priority subsectors

Table 11 Overall District SWOT

Strength	**Weakness**
1. Fertile agriculture land + black cotton soil 2. Availability of irrigation facility 3. High banana produce (1st in State), high Cotton and Maize cultivation 4. Cotton spinning, ginning and de-seeding industries 5. Existence of plastic and related product industries 6. Existence of toor dal industries 7. Decent road connectivity 8. Growing gems and gold jewellery industries 9. Presence of temples – as tourist attractions	1. High Reliance on agriculture for employment 2. Low contribution of the primary sector to GDDP (17%) 3. Cold storage facilities are not available (especially for Banana) 4. Mono-cropping is a major issue 5. Toor is not cultivated (despite the existence of dal mills) 6. Lack of entrepreneurial spirit and inadequate professionalism in mind set 7. Lack of technically skilled workforce 8. Rail network and other infrastructure is weak
Opportunities	**Threats**
1. Agri-tourism could be promoted 2. If groundwater level is increased and large pounds are created - fishing can be explored 3. Banana food processing industries (like chips, jam, pulp) and Banana stems processing industry 4. Textile industries from cotton	1. Lack of cold storage facilities and hence no Banana Processing Industries 2. Shifting out of industries due to lack of railway stoppage and inadequate transportation facilities 3. Migration of workforce to metro cities in search of employment and education

5. Boost to be provided to toor dal mills 6. Transportation sector- set up a direct road network from Jalgaon to Surat and Jalgaon to JNPT in Mumbai 7. Formalization of the Gems and Gold Industry is necessary - promote Jalgaon as a 'Gold Hub' (like Surat as a 'Diamond Hub') 8. Religious tourism opportunities to be explored	

Source: Based on data gathered from stakeholder's interaction, 2023
*EST = Education, Skilling & Training

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Table 12 Primary Sector SWOT

Strength	**Weakness**
1. High agricultural produce – Cotton, Banana & Maize 2. Existence of cotton spinning, ginning and de-seeding industries (80% cotton goes to ginning mills) 3. Availability of irrigation facilities 4. Availability of agricultural land 5. Fertile black cotton soil 6. Availability of water and land 7. Employs more than 70% of the total population	1. A declining share of agriculture to GDDP 2. Lack of cold storage facilities 3. Extensive reliance on agriculture for employment 4. Lack of agro-based industries for banana and related products 5. Only 1-2% of Bananas are used in the food processing industry 6. Lack of innovation and capacity building 7. Disguised employment in the agricultural sector 8. The use of fertilizers and pesticides is very high – amongst the highest in Maharashtra 9. Lack of awareness about FSSAI guidelines on packaging & certifications
Opportunities	**Threats**
1. Multi-crop pattern to be explored (with soybean and toor), since water & land are available 2. Banana food processing industries (such as pulp, jams, chips) 3. Banana stem processing industry 4. Millet food processing 5. Cultivating toor and promoting toor dal	1. Lack of crop diversification – mono-cropping is a major issue (extensive dependence on cotton) 2. APMCs are not very effective, are not managed properly and are not continuous in nature 3. Fluctuations in prices of raw materials is a major concern – no price stability

mills 6. Setting up of food testing labs 7. Research in agriculture is required	

Source: Based on data gathered from stakeholder's interaction, 2023

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Table 13 Sub-Sector SWOT Analysis - Agriculture (Crops)

Strength	**Weakness**
1. The district benefits from a well-established irrigation system 2. The presence of an experienced farming community enhances agricultural productivity	1. Despite the irrigation network, the district faces challenges related to water scarcity (especially in Monsoons), impacting crop yields 2. Reliance on monsoons for water availability makes agriculture vulnerable to climate variations 3. The level of farm mechanization in certain areas is limited, affecting overall efficiency
Opportunities	**Threats**
1. Encouraging farmers to adopt modern agricultural technologies can improve productivity and efficiency 2. Exploring and promoting the cultivation of high-value crops or specialty products can open new avenues for farmers 3. The rising demand for organic produce presents an opportunity for farmers to transition towards organic farming practices	1. Mono-cropping and unsustainable agricultural practices may lead to soil erosion and land degradation over time 2. Fluctuations in crop prices can pose a threat to the economic viability of farming activities

Source: Based on data gathered from stakeholder's interaction, 2023

Table 14 Sub-Sector SWOT Analysis - Livestock

Strength	**Weakness**
1. Jalgaon has a robust agricultural sector, providing ample feed resources for livestock 2. Various government schemes and initiatives supporting animal husbandry can be leveraged for development	1. Insufficient infrastructure such as veterinary clinics and animal care facilities may hinder optimal growth 2. Limited adoption of modern technologies in animal husbandry might be a hurdle for efficiency 3. Limited market access and connectivity could impact the distribution of animal products
Opportunities	**Threats**
1. There is an opportunity for value addition in the form of processing units for dairy and meat products 2. Encouraging farmers to diversify into high-value livestock products like organic dairy or specialty breeds 3. Implementation of training programs for farmers to enhance their skills and knowledge	1. Changing climatic conditions might affect the availability and quality of fodder. 2. Fluctuations in market prices for livestock products can impact the economic viability of animal husbandry

Source: Based on data gathered from stakeholder's interaction, 2023

Table 15 Sub-Sector SWOT Analysis - Forestry & Logging

Strength	**Weakness**
1. Jalgaon District is known for providing a range of teak wood, and scrub forest. 2. No major challenges are faced by this department. 3. The focus on sustainable forestry practices in the region may ensure long-term environmental and economic benefits.	1. No major forest products and hence hardly any economic contribution. 2. Weed and non-fodder plants are more in number, so usable fodder production is less. 3. No regular sighting of animals – so no tourism. 4. No major forest products and hence hardly any economic contribution. 5. The sector faces challenges due to the limited adoption of modern technology in logging and forestry operations.
Opportunities	**Threats**
1. Tendu leaves extraction takes place, which largely is exported to Madhya Pradesh for Bidi Manufacturing. 2. Introducing agroforestry practices could diversify income sources for local communities and enhance overall productivity. 3. Investing in Research and Development (R&D) for sustainable logging practices and innovative wood products could open new avenues for growth. 4. Leveraging the region's natural beauty for eco-tourism could bring additional revenue.	1. Changes in climate patterns could affect forest health, leading to increased vulnerability to pests and diseases.

Source: Based on data gathered from stakeholder's interaction, 2023

Table 16 Secondary Sector SWOT

Strength	Weakness
1. Existence of dal mills 2. Existence of Plastic, Pipes and Mats Industries (Jain Irrigation) 3. Export of plastic mats (Shraddha Mats) 4. The location of Jalgaon MIDC is easily accessible by road from nearby cities 5. Availability of raw materials (except toor) 6. Availability of manpower 7. Availability of ample land	1. Out of the 3 MIDC areas (Jalgaon, Bhusawal & Chalisgaon), only Jalgaon MIDC is functional 2. Reduction in number of industries in MIDC area from 994 to 862 3. Complex, complicated and slow approval system at govt offices 4. No redressal mechanism at govt. level 5. No 24*7 electricity and load shedding is a common phenomenon even in MIDC 6. High electricity cost – since subsidies are not provided 7. Unskilled labor force 8. Low wages as compared to cities 9. Double taxation is a major challenge (APMC fees + corporation tax) 10. Infrastructural constraints - especially rail transport
Opportunities	**Threats**
1. Food processing industry especially for Banana Products 2. Cotton and textile industries can be explored 3. Cotton and Banana Fibre to be explored (banana silk industries) (Ideally 70% cotton and 30% banana shoot fiber is utilized to make silk)	1. Out-migration of labor force to cities (brain drain) 2. Low Ease of Doing Business (EODB) hampering growth of manufacturing sector 3. High number of daily wage workers, who shift factories frequently and hence absenteeism

4. Real estate sector and construction to be promoted 5. Export-linked growth strategies could be developed for processed banana products	

Source: Based on data gathered from stakeholder's interaction, 2023

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Table 17 Sub-Sector SWOT Analysis - Manufacturing

Strength	**Weakness**
1. Availability of raw material 2. Good road connectivity – for transport and logistics of product 3. Prevalent Food Processing Industry- Jain Farm Fresh, Dal Mills, Wipro Vanaspati Ghee	1. Only 5-6% of Bananas used in Food Processing Industry 2. Lack of proper machinery and equipment 3. Rejection of sun dried banana powder in export due to high ash content 4. Lack of awareness about FSSAI guidelines on packaging & certifications
Opportunities	**Threats**
1. Food Testing Lab could be set up 2. Credit supply through government schemes & banking support 3. Skilled labour in food processing industry 4. Growing demand of processed foods	1. Fluctuations in prices of raw material 2. Adverse weather conditions affect the availability and quality of raw material

Source: Provided by Jalgaon District Planning Department, 2023

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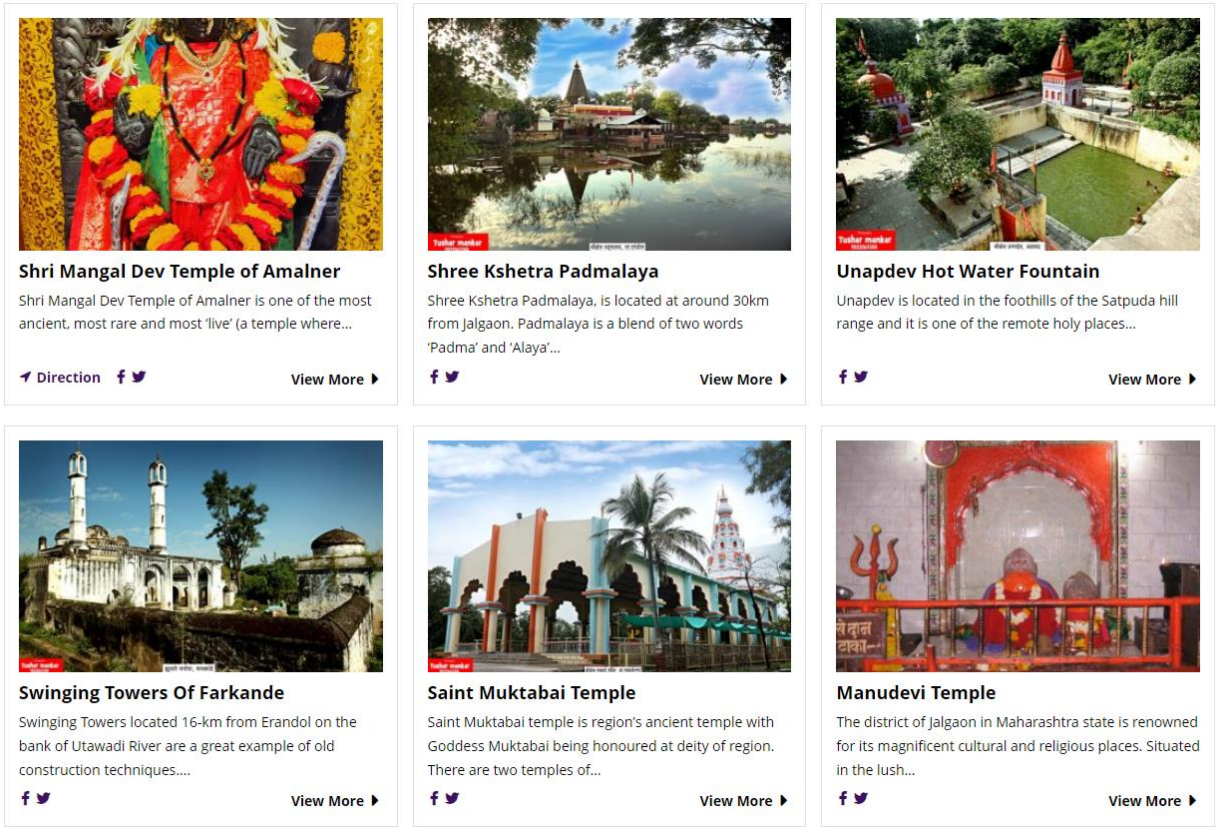
Table 18 Tertiary Sector SWOT

Strength	Weakness
1. High contribution to GDDP – more than 50% 2. The district is famous for the purity of gold 3. Gems and jewellery is an established business in the sector 4. Government health centres and hospitals are available 5. Both public and private banks are available for credit 6. Housing is affordable	1. Language barrier for service sector and 2. Unskilled labour force hence low employment 3. Lack of educational and skill training institutes for employment in the tertiary sector 4. 80% of labour in gold sector are migrants from West Bengal 5. Lack of marketing of religious tourist places 6. Lack of hotels and accommodation facilities for tourists
Opportunities	**Threats**
1. Formal skill training institutions and vocational training to be set up 2. Customized training is required to suit local needs should be provided 3. Required skilling intervention in Gem and jewellery sector 4. Lack of good higher educational facilities (extensive dependence on North Maharashtra University) 5. Promote District as a 'Gold Hub' - connect with Surat via road 6. Formalizing trading and automation of Gold Markets is necessary 7. Real Estate (especially cinema halls, malls, etc) have a lot of potential and	1. Lack of awareness about various services 2. Informal credit lending is common 3. High competition from nearby cities 4. Extensive out-migration, so skills are not available locally

can promote growth 8. Religious tourism should be promoted; • Mangal Dev Temple, Amalner • Patna Devi Temple, Chalisgaon • Ajanta Caves, Ajanta • Satpuda Mountains • Manudevi Temple	

Source: Based on data gathered from stakeholder's interaction, 2023

Figure 4 Famous Tourist Places in Jalgaon District



Source: Jalgaon District Website, 2023

Table 19 Sub-Sector SWOT Analysis - Trade, Repair, Hotels & Restaurants

Strength	**Weakness**
1. Jalgaon's prominence in agriculture can boost trade activities, especially in the trade of agricultural produce like bananas and cotton. 2. Its location on transportation routes can attract trade and tourism, fostering a conducive environment for hotels and restaurants. 3. Cultural sites or events could draw tourists, offering opportunities for hoteliers and restaurateurs to cater to visitors.	1. Insufficient infrastructure, especially in rural areas, limits the growth potential for hotels, restaurants, and repair services. 2. Lack of specialized skills or training in hospitality or repair services adversely impacts the service quality.
Opportunities	**Threats**
1. Leveraging cultural events & religious sites, can attract tourists, boosting demand for hotels and restaurants. 2. Offering specialized repair services can attract a broader customer base.	1. Nearby urban centers especially Aurangabad may attract tourists or customers, posing competition for Jalgaon's hospitality and service industry. 2. Economic downturns or shifts in consumer spending patterns can impact the hospitality and repair sectors.

Source: Based on data gathered from multiple secondary sources, 2023

Table 20 Sub-Sector SWOT Analysis - Education and Skill Development

Strength	**Weakness**
1. Presence of several established educational institutes – schools, college & university 2. Good PTR (30:1 for primary, 36:1 for secondary)	1. High dropout ratio 2. Low literacy rate (District-78.2)
Opportunities	**Threats**
1. Sports & physical education 2. Introduction of modern teaching technologies 3. Modern pedagogy 4. More skill training institutes	1. Coaching industry leading to out migration 2. Online & distance learning programmes, so adequate skill sets are not provided

Source: Provided by Jalgaon District Planning Department, 2023

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Table 21 Sub-Sector SWOT Analysis - Gems and Jewellery

Strength	**Weakness**
1. Jalgaon know as 'Gold Capital' – famous for the purity of gold 2. Established businesses in the sector 3. Total 108 gold credit agencies	1. Lack of local skilled labour 2. About 90% workforce - migrants from WB 3. Lack of formal skill training in the sector 4. Lack of use of modern technologies
Opportunities	**Threats**
1. Growing demand from nearby areas 2. Formal skilling, upskilling can be provided	1. Increasing competition from city based jewellers 2. Fluctuations in global economy and consumer spending

Source: Provided by Jalgaon District Planning Department, 2023

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Projections and Calculations

Overall District Projections

Table 22 Overall Predictions to Achieve USD 1 Trillion Target for Maharashtra

Headings	Jalgaon District		Maharashtra	
2021-22 (current GDDP in Rs. crores)	49,307		2,027,971	
2027-28 (target GDDP Rs. in crores)	200,788	171,404	8,200,000	7,000,000
Required CAGR for the share in one trillion dollar	26.37%	23.08%	26.22%	22.93%
Years to reach the projection at current CAGR	59.45	52.75	59.15	52.45
Current 5-year CAGR (2017-18 - 2021-22)	1.10%		1.43%	
Dollar Rate	at 82 rupees exchange rate	at 70 rupees exchange rate	at 82 rupees exchange rate	at 70 rupees exchange rate
Average (between current and rs.70)	**13.73**	**12.09**	**13.83**	**12.18**

Source: DES Report on District Domestic Product of Maharashtra, 2023 (at Constant Prices)

Jalgaon District is up against a steep hill to climb the economic production in order to meet Maharashtra's target of reaching upto a trillion dollar GDP. The table shows that in order to fulfil the GDDP 2027–2028 targets, a strong Compound Annual Growth Rate (CAGR) of 26.37% or 23.08%, depending on the currency rate utilized, is required. This necessitates a major acceleration of economic development initiatives, given that the district's 5-year CAGR is now at a meager 1.10%. It has been observed that at Rs.80 exchange rate, the district will take 59.65 years to complete the target for 1 Trillion Dollar Economy. Similarly, at Rs.70 exchange rate, the

district will take 52.95 years to complete the target.

Jalgaon District will probably need to focus and carry out a wide range of programs, investments and legislative changes that promote economic growth, encourage innovation and open doors for both companies and individuals in order to close this gap. Realizing the district's economic potential and bringing it into line with the larger objectives of the Maharashtra and Indian governments would depend heavily on these actions.

Table 23 Five-Year CAGR Comparison Between Jalgaon and Maharashtra (2017-2022)

Sr. No.	Headings	Jalgaon (figures in percent)	Maharashtra (figures in percent)
1	Population	0.61	0.73
2	Per Capita DDP	0.49	0.70
3	GDDP / GSDP	1.10	1.43
4	Primary Sector	2.80	4.51
5	Secondary Sector	-1.26	-1.09
6	Tertiary Sector	2.17	2.35

Source: Calculated by authors (at Constant Prices)

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From the above table, it can be seen that - while Jalgaon is growing in various economic aspects, there are differences in growth rates compared to the state of Maharashtra. The per capita DDP in Jalgaon is lower than the overall growth rate in Maharashtra, indicating potential disparities in economic development. Both Jalgaon and Maharashtra experience growth in the primary sector, but Maharashtra's growth is significantly higher, suggesting a more robust agricultural or resource-based economy at the state level. Both Jalgaon and Maharashtra show a decline in the secondary sector, with Jalgaon experiencing a slightly steeper decline. This may warrant further investigation into the industrial activities in the district. The tertiary sector in Jalgaon is growing, albeit at a slightly slower rate compared to Maharashtra.

Table 24 A Comparison of Growth Rates of GDDP and District Expenditure (Figures in Rs. Crores)

Years	GDDP / Output	YOYGR	Actual Expenditure	YOYGR
2016-17	45,466		305	
2017-18	46,688	3	286	-6
2018-19	47,510	2	285	0
2019-20	48,123	1	285	0
2020-21	46,684	-3	347	22
2021-22	49,307	6	400	15
Average Growth Rate	**47,662**	**1.8**	**320**	**6.2**
CAGR	**1.64**		**5.57**	

Source: Calculated by authors based on expenditure data that was provided by the District Planning Department, 2023.

From the above table-20, it can be seen that the GDDP and Expenditure (from budget) of Jalgaon District both exhibit positive trends, with fluctuations in growth rates. Notable spikes in growth rates for Expenditure occurred in 2020-21 and 2021-22, largely attributed to the Covid-19 pandemic. The CAGR for GDDP standing at 1.64% and for Expenditure standing at 5.51% provides a stable measure of growth, further indicating that, the Annual Expenditure has grown a much faster rate when compared to the GDDP or Output. These numbers suggest a dynamic economic scenario with some fluctuations but overall positive trends in both GDDP and District Expenditure.

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Table 25 A Comparison between Budgeted and Actual Expenditure (Figures in Rs. Crores)

Years	Budgeted Expenditure	Actual Expenditure	Difference / Variance
2016-17	185	305	-120
2017-18	287	286	1
2018-19	301	285	16
2019-20	308	285	23
2020-21	375	347	28
2021-22	400	400	0
Average Growth Rate	**309**	**320**	
CAGR	**16.65**	**5.57**	

Source: Calculated by authors based on expenditure data that was provided by the District Planning Department, 2023.

The above table-21, showcase the difference between planned and actual expenditure which is called a Variance. Usually, the idea is that actual expenditure has to be as close to the planned expenditures as possible and therefore the variance has to be as less as possible. For the above table, it can be seen that there has been wide and fluctuating difference between planned and actual expenditures, indicating a simple fact, that overtime, the expenditures for Jalgoan district have not been estimated in a defined and systematic manner.

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Table 26 A Ten-Year Comparison of GDDP between Jalgaon and Maharashtra

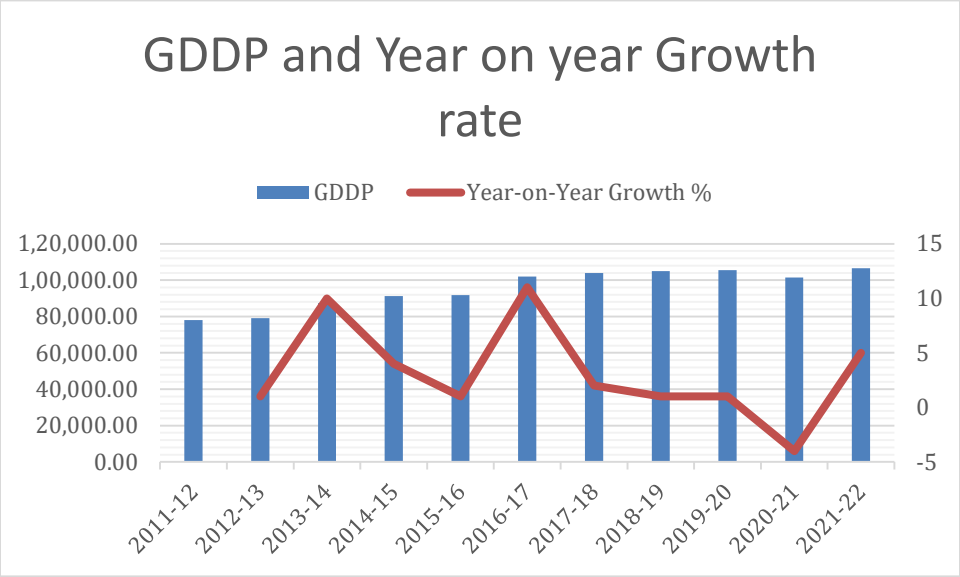
Years	GDDP – Jalgaon (in Rs. crores)	GDDP – Maha (in Rs. crores)	GDDP Jalgaon as ratio of Maha (in percent)	Per Capita DDP – Jalgaon (in Rs. crores)	Per Capita DDP – Maha (in Rs. crores)	Jalgaon Per Capita GDDP as ratio of Maha (in percent)
2011-12	33,180	1,280,369	**2.59**	77,998.00	113,192	**0.69**
2012-13	33,972	1,357,942	**2.50**	79,093.00	118,716	**0.67**
2013-14	15,978	1,451,615	**1.10**	87,340.00	125,511	**0.70**
2014-15	39,919	1,543,165	**2.59**	91,195.00	131,977	**0.69**
2015-16	40,574	1,654,284	**2.45**	91,835.00	139,960	**0.66**
2016-17	45,466	1,807,046	**2.52**	102,030.00	151,353	**0.67**
2017-18	46,688	1,888,706	**2.47**	103,936.00	156,694	**0.66**
2018-19	47,510	1,957,381	**2.43**	104,931.00	160,867	**0.65**
2019-20	48,123	2,004,663	**2.40**	105,457.00	163,221	**0.65**
2020-21	46,684	1,858,370	**2.51**	101,514.00	149,916	**0.68**
2021-22	49,307	2,027,971	**2.43**	106,482	162,231	**0.66**
10-Year Average	**40,673**	**1,711,956**	**2.36%**	**95,619.18**	**143,058**	**0.67%**
5-Year Average	**47,662**	**1,947,418**	**2.45%**	**104,464.00**	**158,586**	**0.66%**

Source: Calculated by authors (at Constant Prices)

- The GDDP of Jalgaon shows an upward trend over the ten years, reaching 49,307 in 2021-22. The overall GSDP of Maharashtra also increased, reaching 2,027,971 in 2021-22.
- Jalgaon as a ratio of Maharashtra: This indicates the proportion of Jalgaon's GDDP to the total GSDP of Maharashtra. It fluctuated but maintained around 2.36% on a ten-year average and stood at 2.45% on a five-year average.
- Per Capita DDP: This indicates the average income per person in both Jalgaon and Maharashtra. Jalgaon Per Capita DDP as a ratio of Maharashtra shows the per capita income in Jalgaon relative to Maharashtra, which averaged at 0.67% over ten years and

stood at 0.66% over five years.

Figure 5 Jalgaon GDDP and YOYGR Comparison



Source: Calculated by authors

From the above figure-3, it can be seen that while the Year-Over-Year Growth Rare for Jalgaon has fluctuated over the ten-year time-frame (2011-12 to 2021-22), the Gross District Domestic Product (GDDP) has shown a constant increase over the selected period (except in the year 2022-21 which was the Covid Pandemic Year).

Table 27 Sectoral Share in Jalgaon's GDDP (5 Years) (in%)

Years	Primary as% of total	Secondary as% of total	Tertiary as% of total	GDDP (in Rs. crores)
2017-18	16.46	25.44	46.42	46,688
2018-19	15.17	25.10	47.85	47,510
2019-20	15.59	23.11	49.81	48,123
2020-21	19.92	23.03	46.99	46,684
2021-22	17.89	22.61	48.94	49,307
Average	17	24	48	47662
CAGR	2.80	-1.26	2.17	1.10

Source: Calculated by authors

Together with the related Jalgaon's GDDP numbers, the table breaks down the sectoral proportion of Jalgaon's GDDP for the years 2017–18 to 2021–22. Here is a summary and justification of the table:

- Of the 46,688 crore rupees that made up the GDDP in 2017–18, the primary sector provided 16.46%, the secondary sector contributed 25.44%, and the tertiary sector contributed 46.42%. These percentages have fluctuated only slightly over the years that followed.
- The share of the primary sector fell to 15.17% in 2018–19, the percentage of the secondary sector slightly decreased to 25.10%, and the share of the tertiary sector increased to 47.85%.
- The primary sector's share increased a little to 15.59% in 2019–20, the secondary sector's share decreased to 23.11%, and the tertiary sector's share increased further to 49.81%.
- The share of the primary sector increased significantly to 19.92% in 2020–21, while the percentage of the secondary sector stayed relatively stable at 23.03% and the share of the tertiary sector declined to 46.99%.
- The share of the primary sector fell to 17.89% in the most recent year, 2021–2022, the percentage of the secondary sector marginally reduced to 22.61%, and the share of the tertiary sector climbed to 48.94%. A total of 49,307 crore rupees was the GDDP.

During these years, the average contribution for the primary sector stood at 17%, the secondary sector at 24%, and the tertiary sector at 48%. Over the course of this time, the the CAGR for primary sector was 2.80%, the secondary sector was -1.26% and the tertiary sector was 2.17%.

These sectors' overall growth rates are reflected in the CAGR numbers. These patterns imply that Jalgaon's economy has primarily benefited from the tertiary sector, which encompasses trade and services. The primary and secondary sector' shares have been fluctuating in nature and therefore will not be a dependable strategy for the growth of the district. To further support the region's economic development and sectoral balance, these findings can be incorporated into economic policies and initiatives.

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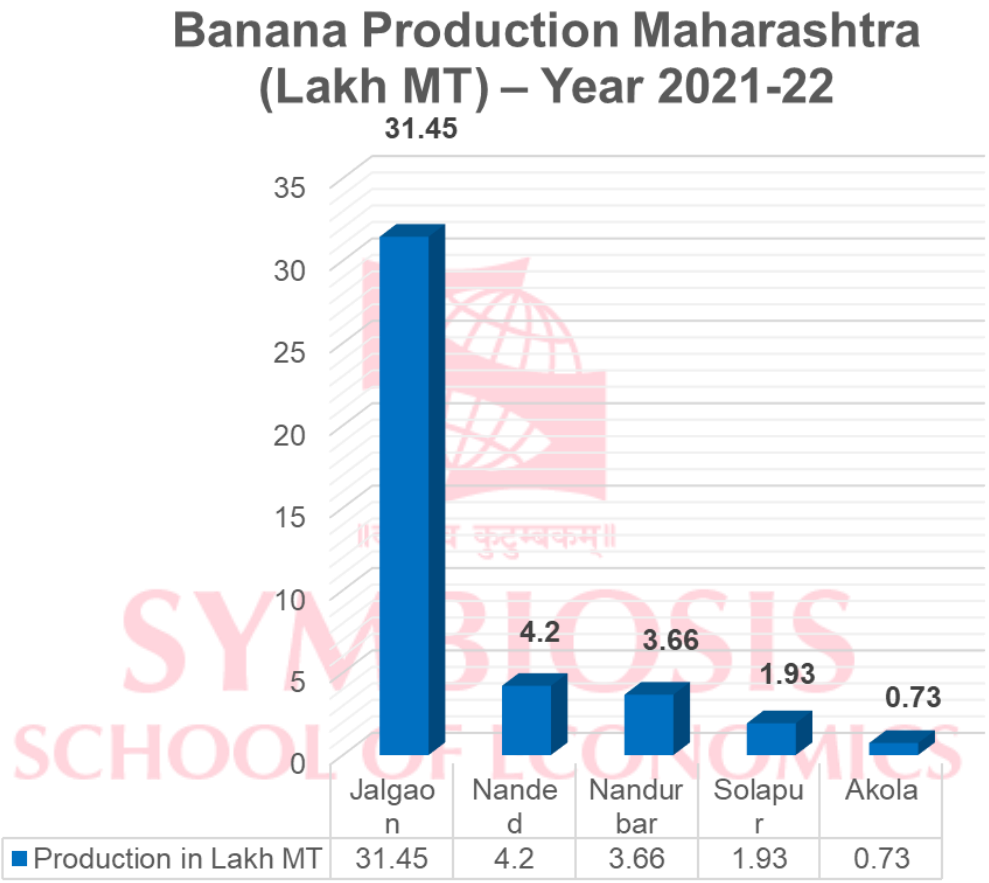
One District One Product (ODOP)

Figure 6 Banana for Jalgaon - One District One Product

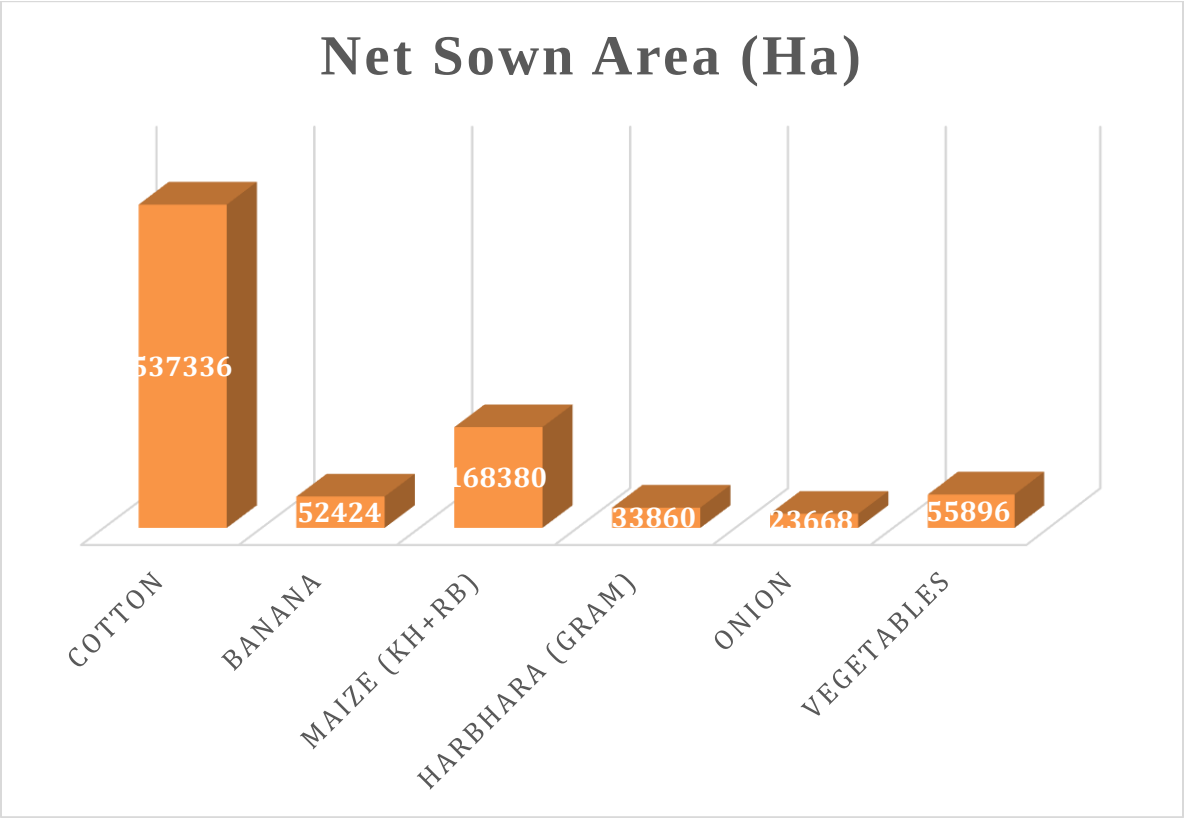


Source: Provided by Jalgaon District Planning Department, 2023

As a part of the State led champion of One District One Product (ODOP), the district of Jalgaon has selected Banana – since it is the leading producer of Banana in the state of Maharashtra – as can be seen from the figure-6 above. A large part of the Banana produce is sent to the northern states of Punjab and Haryana after covering the domestic consumption.

Primary Sector Projections

Figure 7 Major Crops in the District with Net Sown Area



Source: Provided by Jalgaon District Planning Department, 2023

From the above figure;

- About 62% of total area is under Cotton, 19% under Maize and 6% under Banana.
- 90% of the Banana produce is exported in northern states like Punjab and Haryana.
- Under cotton processing - multiple ginning units are present in the district.
- Dal Mills are present in large numbers especially in Jalgaon MIDC.

Table 28 Productivity of Select Crops for Jalgaon District

Sr. No.	Crops	Area ('000'ha)	Production MT ('000)	Productivity KG/ha	Avg. productivity kg/ha – (Cotton-Bales)
1	Cotton	577	233140	404	434
2	Jowar	83	114539	1380	1472
3	Maize	207	573615	2771	2514
4	Bajara	12	11396	950	786
5	Wheat	63	136247	2163	2293
6	Gram/ Harbhara	75	96018	1280	1270

Source: Provided by Jalgaon District Planning Department, 2023

From the above table;

- The largest part of area under cultivation is under Cotton (577'000 hectors), thus indicating mono-cropping being prevalent in the district. The crop however has low average prodcutivity standing at 434 kgs per hector.
- The highest average productivity is seen for Maize (at2514 kgs per hector), which is also the second highest grown crop in the district.

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Table 29 Primary Sector Share in Jalgaon's GDDP (in Rs. Crores)

Years	Crops	Livestock	Forestry and Logging	Fishing and aquaculture	Mining and Quarrying	Agriculture and Allied	Primary (total)	Jalgaon GDDP	Maharashtra
2017-18	6090	1171	381	39	60	7681	7686	46688	1888706
2018-19	5165	1330	419	42	83	6956	7209	47510	1957381
2019-20	5112	1316	425	425	92	6880	7501	48123	2004663
2020-21	6658	1959	463	41	105	9121	9298	46684	1858370
2021-22	6074	1020	466	7	9.3	8566	8823	49307	2027971
Average	5819	1359	430	110	70	7840	8103	47662	1947418
5 years CAGR	-0.05	-2.72	4.11	-29.07	-31.05	2.2	1.26	1.1	1.43

Source: DES Report on District Domestic Product of Maharashtra, 2023

The table includes the GDDP for Jalgaon District and a comparison with the GSDP for the state of Maharashtra. The table also shows the Compound Annual Growth Rate (CAGR) for each subsector over the last five years. The five-year CAGR for Jalgaon's primary sector is 1.1%, which suggests a moderate but low overall growth rate for the industry over this time. Crops, Livestock, Forestry and Logging, Fishing and Aquaculture, Mining and Quarrying, Agriculture and Associated Activities were the subsectors that made up the primary sector. The subsectors showcased the following patterns:

- Agriculture and allied activities (including crops): The agricultural subsector's contribution has fluctuated over time, reaching a peak of 9121 crore rupees in 2020–21 and a low of 6880 crore rupees in 2019-20. It makes an average contribution of 7840 crore rupees (highest in primary sector) and had a 5-year CAGR at 2.2%.

From the stakeholder's interaction, it was concluded that, hardly 1-2% of cultivation goes for food processing industries. Since the banana production in Jalgaon is largest in the state of Maharashtra, it will be a good strategy to promote food processing industries for bananas such as chips, pulp and jams. In terms of cotton (which is the highest cultivated crop in the district), it will be a good growth strategy to promote ginning and de-seeding industries in the short run along with setting up some textile industries in the long run.

- Livestock: Over time, the livestock subsector's contribution has increased indicating a growth potential; it peaked in 2020-21 at 1956 crore rupees from the original Rs.965 crores. On an average, it contributed 1,359 crore rupees and had a 5-year CAGR at -2.27%.
- Forestry & Logging: With an average contribution of 430 crore rupees, this subsector has remained comparatively constant. It had a 5-year CAGR standing at 4.11%.
- Fishing and aquaculture: This subsector's contribution is comparatively small in comparison to the others, and it has fluctuated over time, with a notable decline in 2020–21.

From the stakeholder's interaction, it was concluded that, if the groundwater is saved and reservoirs are created, the fishing and aquaculture sector could be promoted.

- Mining and Quarrying: This subsector CAGR stand at -31%, indicating a negative growth over the selected five-year timeframe. The decline is seen from Rs. 60 in 2017-18 to Rs. 9.3 in 2021-22.

The total contribution of the primary sector to the GDDP is represented by the Primary Sector (Total), which is the total of all the subsectors. An average contribution of 8,103 crore rupees has been displayed in the average GDDP for Jalgaon of Rs. 47662 crores. The data and patterns presented provide a valuable understanding of the economic functioning of the primary sector in Jalgaon District. This may be utilized to develop plans and policies that aim to improve agriculture and related activities and foster sustainable economic growth in the area.

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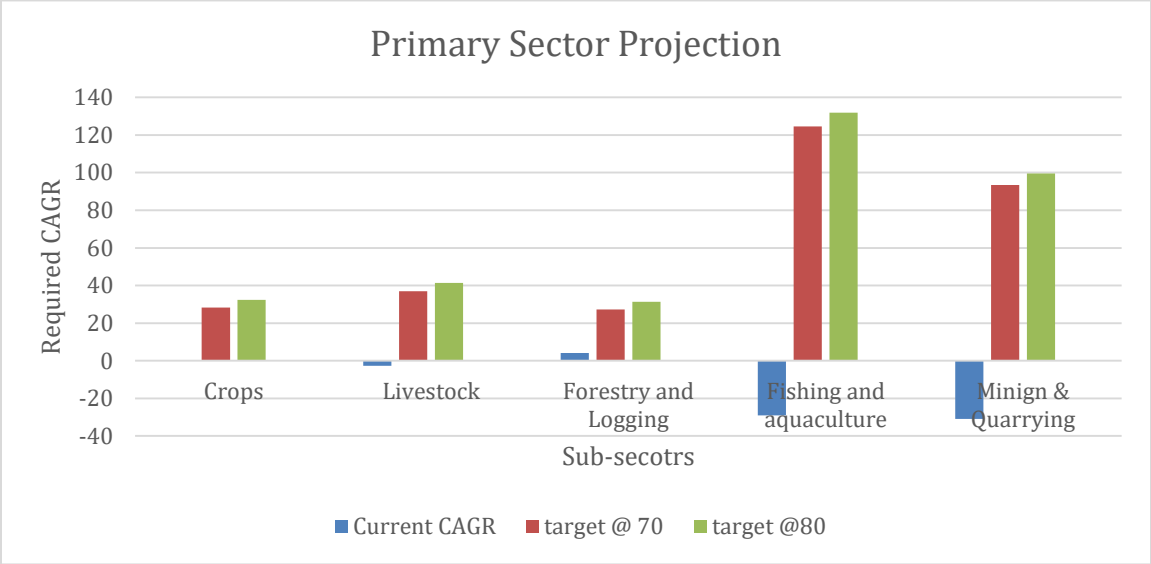
Table 30 Projections of the primary sector on the exchange rate at 70rs and 82rs

Headings	Crops	Livestock	Forestry and Logging	Fishing and aquaculture	Mining and Quarrying	Agriculture and Allied
% Share in Jalgaon	12	3	1	0	0.15	16
% Share in Maharashtra	0.3	0.07	0.02	0.01	0.03	0.4
Current Average	5819.8	1359.2	430.8	110.8	70	7840.8
at Rs.82	24,629.60	5,752.18	1,823.16	468.91	297	33,182.55
at Rs.70	21,025.32	4,910.41	1,556.36	400.29	253	28,326.63
Required CAGR at Rs.82	32.31	41.33	31.37	131.85	99.65	31.11
Required CAGR at Rs.70	28.19	36.93	27.28	124.62	93.43	27.02
Current CAGR	-0.05	-2.72	4.11	-29.07	-31.05	2.2
Average (between current and rs.70)	14.07	17.10	15.69	47.77	31.19	14.61

Source: Calculated by authors

Figure 8 Graphical Representation of Projections for Primary Sector



Source: Calculated by authors

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- ➔ The current average value for agriculture and allied activities is approximately Rs. 7,840.8 crores and the current CAGR is 2.2%. At an exchange rate of 82 Rs, the predicted share is Rs. 33,182.55 crores, requiring a CAGR of 31.11%. At an exchange rate of 70 Rs, the predicted share is Rs. 28,326.63 crores, requiring a CAGR of 27.02%.
- ➔ The current average value for livestock is approximately Rs. 1,359.2 crores and the current CAGR is -2.72%. At an exchange rate of 82 Rs, the predicted value is Rs. 5,752.18 crores, requiring a CAGR of 41.33%. At an exchange rate of 70 Rs, the predicted value is Rs. 4,910.41 crores, requiring a CAGR of 36.93%.
- ➔ The current average value for forestry and logging is approximately Rs. 430.8 crores and the current CAGR is 4.11%. At an exchange rate of 82 Rs, the predicted value is Rs. 1,823.16 crores, requiring a CAGR of 31.37%. At an exchange rate of 70 Rs, the predicted value is Rs. 1,556.36 crores, requiring a CAGR of 27.28%.
- ➔ The current average value for fishing and aquaculture is approximately Rs. 110.8 crores and the current CAGR is -29.07%. At an exchange rate of 82 Rs, the predicted value is

Rs. 468.91 crores, requiring a CAGR of 131.85%. At an exchange rate of 70 Rs, the predicted value is Rs. 400.29 crores, requiring a CAGR of 124.62%.

- The current average value for mining and quarrying is approximately Rs. 70 crores and the current CAGR is -31%. At an exchange rate of 82 Rs, the predicted value is Rs. 297 crores, requiring a CAGR of 99%. At an exchange rate of 70 Rs, the predicted value is Rs. 253 crores, requiring a CAGR of 93%.

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Secondary Sector Projections

Table 31 Secondary Sector Share in Jalgaon's GDDP (in Rs. Crores)

Years	Manufacturing	Electricity, Gas and Water Supply, Other Utility Services	Construction	Secondary (including Industry)	Jalgaon GDDP	Maharashtra
2017-18	8,776	868	2,235	11,878	46688	1888706
2018-19	8,755	870	2,303	11,927	47510	1957381
2019-20	7,997	841	2,283	11,122	48123	2004663
2020-21	7,664	824	2,262	10,750	46684	1858370
2021-22	7,945	922	2,281	11,149	49307	2027971
Average	8,227	865	2,273	11,365	47,662	1,947,418
5 year CAGR	-1.97	1.21	0.41	-1.26	1.1	1.43

Source: DES Report on District Domestic Product of Maharashtra, 2023

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Over the past 5-years (2017-18 -2021-22), Jalgaon's secondary sector (including Manufacturing, Electricity, Gas and Water Supply, and Construction) has displayed fluctuating tendencies, with an average value of about Rs. 11,365 crores and has also indicated a negative CAGR of -1.26%, further indicating a minor fall in industrial activity. This fact is also restated in the stakeholder interaction, when the number of industries has fallen from 994 to 862 and out of 3 MIDCs, only the Jalgaon MIDC is functional.

- The Manufacturing sector in Jalgaon, has shown a fluctuating trend over the past six years, with an average value of approximately Rs. 8,227 crores. However, there has been a negative 5-year CAGR of -1.97%, indicating a slight decline in manufacturing activities during this period.
- The Electricity, Gas and Water Supply, and Other Utility Services sector has shown a

relatively stable growth, with an average value of approximately Rs. 865 crores. The 5-year CAGR for this sector is 1.21%, signifying a modest positive growth trend.

- The Construction sector in Jalgaon has experienced minor fluctuations but has remained relatively steady, with an average value of approximately Rs. 2,273 crores. The 5-year CAGR for the Construction sector is 0.41%, indicating a slow but positive growth.

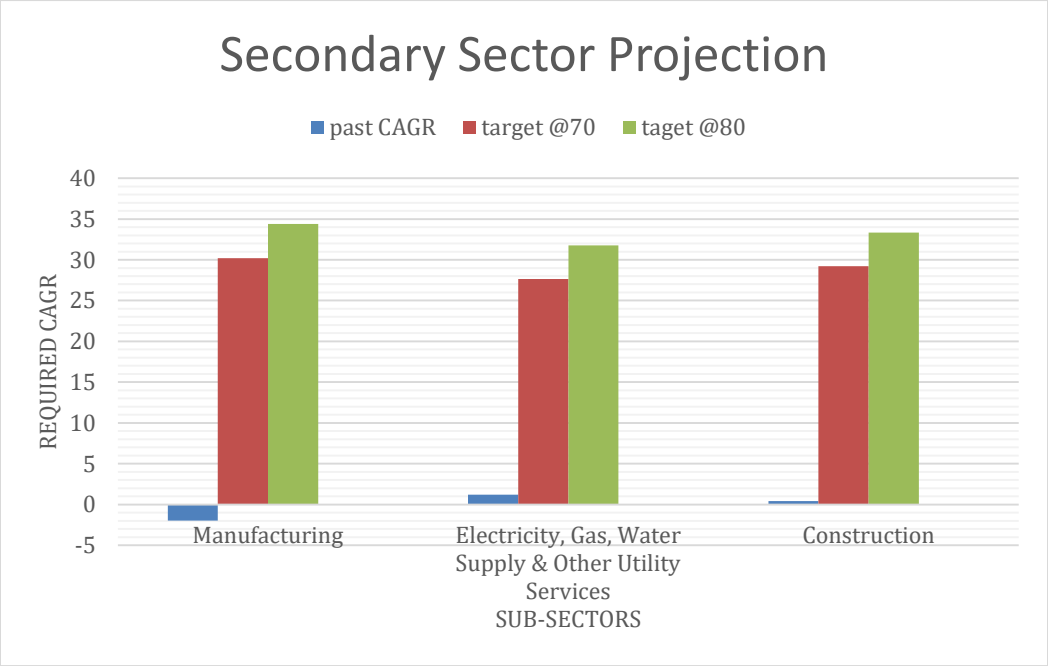
These numerical interpretations provide insights into the trends and growth rates of various sectors within Jalgaon, Maharashtra's secondary economy. These figures can be cited in an academic context to support research and analysis.

Table 32 Projections of the secondary sector on the exchange rate at 70rs and 82rs

Headings	Manufacturing	Electricity, Gas and Water Supply, Other Utility Services	Construction
% Share in Jalgaon	17.26	1.81	4.77
% Share in Maha	0.42	0.04	0.12
Current Average	8,227	865	2,273
at Rs.82	34818	3660	9618
at Rs.70	29723	3125	8210
CAGR at Rs.82	34.38	31.75	33.35
CAGR at Rs.70	30.2	27.65	29.2
Current CAGR	-1.97	1.21	0.41
Average (between current and rs.70)	14.11	14.43	14.80

Source: Calculated by authors

Figure 9 Graphical Representation of Projections for Secondary Sector



Source: Calculated by authors

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- The current average value for manufacturing is approximately Rs. 8,227 crores and the current CAGR is -1.97%. At an exchange rate of 82 Rs, the predicted share is Rs. 34,818 crores, requiring a CAGR of 34.38%. At an exchange rate of 70 Rs, the predicted share is Rs. 29,723 crores, requiring a CAGR of 30.2%.
- The current average value for electricity, gas, and water supply, along with other utility services, is approximately Rs. 865 crores and the current CAGR is 1.21%. At an exchange rate of 82 Rs, the predicted share is Rs 3,660 crores, requiring a CAGR of 31.75%. At an exchange rate of 70 Rs, the predicted share is Rs. 3,125 crores, requiring a CAGR of 27.65%.
- The current average value for the construction sector is approximately Rs. 2,273 crores and the current CAGR is 0.41%. At an exchange rate of 82 Rs, the predicted share is Rs. 9,618 crores, requiring a CAGR of 33.35%. At an exchange rate of 70 Rs, the predicted share is Rs. 8,210 crores, requiring a CAGR of 29.2%.

Tertiary Sector Projections

Table 33 Tertiary Sector Share in Jalgaon's GDDP (in Rs. Crores)

Years	Trade & Hotels	Railway	Other Transport	Storage	Communication	Financial Service	Real estate	Public administration & Defense	Other Services	Tertiary Sector (services)	Jalgaon GDDP	Maharashtra
2017-18	3,407	238	1,624	26	528	4,204	7,697	1,181	2,766	21,672	46688	1888706
2018-19	3,827	233	1,728	70	534	4,264	7,986	1,235	2,856	22,733	47510	1957381
2019-20	3,900	189	1,896	70	586	4,356	8,404	1,427	3,144	23,972	48123	2004663
2020-21	2,852	157	1,345	65	573	4,567	8,329	1,401	2,646	21,935	46684	1858370
2021-22	3,553	181	1,451	76	646	4,808	8,907	1,532	2,979	24,132	49307	2027971
Average	3,508	200	1,609	61	573	4,440	8,265	1,355	2,878	22,889	47,662	1,947,418
5 year CAGR	0.84	-5.33	-2.23	23.93	4.12	2.72	2.96	5.34	1.49	2.17	1.1	1.43

Source: DES Report on District Domestic Product of Maharashtra, 2023

The total value of the Tertiary Sector services, including various sub-sectors, has an average of approximately Rs. 22,889 crores. The 5-year CAGR for the Tertiary Sector is 2.17%, indicating positive overall growth in Jalgaon's GDDP.

- The Trade, Repair, Hotels and restaurants sector has shown an increasing trend over the

years, with an average value of approximately Rs. 3,508 crores. The 5-year CAGR for this sector is 0.84%, indicating a modest positive growth in commercial and hospitality activities.

From the stakeholder interaction, it was concluded that there is a wide scope for real estate development in the commercial sector such as hotels, restaurants and food chains.

- The Railway sector has experienced a declining trend with an average value of approximately Rs. 200 crores. There has been a significant negative 5-year CAGR of -5.33%, reflecting a substantial decrease in railway-related activities.

This is further restated (from stakeholder interaction) with the fact that the Bhuswal rail junction has been closed down, which is reflected in the decrease in railway activities and increase in transportation costs for local people.

- The Transport sector excluding Railways has shown a declining trend, with an average value of approximately Rs. 1,609 crores. The 5-year CAGR for this sector is -2.23%, indicating a notable decrease in transportation services excluding railways.
- The Storage sector has witnessed a substantial increase in 5-year CAGR at 23.93%, with an average value of approximately Rs. 61 crores. This suggests a significant growth in storage-related services.

However, from the stakeholder's interaction, it was observed that there is a significant need for more storage facilities especially the cold storage facilities for Banana and related products.

- The Communication and services related to the Broadcasting sector has shown a positive 5-year CAGR of 4.12%, with an average value of approximately Rs. 573 crores.
- The Financial Services sector, which includes banks and other financial institutions has experienced a positive 5-year CAGR of 2.72%, with an average value of approximately Rs. 4,440 crores.
- The Real estate and Professional Services sector has shown a positive 5-year CAGR of 2.96%, with an average value of approximately Rs. 8,265 crores.
- The Public Administration and Defense sector has experienced a significant positive 5-year CAGR of 5.34%, with an average value of approximately Rs. 1,355 crores.
- The Other Services sector has shown a moderate 5-year CAGR of 1.49%, with an average value of approximately Rs. 2,878 crores.

These numerical interpretations provide insights into the trends and growth rates of different sub-

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sectors within the Tertiary Sector of Jalgaon's economy. These figures can be utilized in an academic context to support research and thereby implement policies.

Table 34 Projections of the tertiary sector on the exchange rate at 70rs and 82rs

Headings	Trade & Hotels	Railway	Other Transport	Storage	Communication	Financial Service	Real estate	Public administration & Defense	Other Services
% Share in Jalgaon	7.36	0.42	3.38	0.13	1.2	9.32	17.34	2.84	6.04
% Share in Maha	0.18	0.01	0.08	0	0.03	0.23	0.42	0.07	0.15
Current Average	3,508	200	1,609	61	573	4,440	8,265	1,355	2,878
at Rs.82	14845.14	844.71	6808.5	259.85	2426.65	18789.39	34976.09	5735.26	12180.65
at Rs.70	12672.71	721.1	5812.15	221.82	2071.53	16039.76	29857.7	4895.96	10398.14
CAGR at Rs.82	33.11	36.08	36.23	27.87	30.3	31.34	31.46	30.21	32.53
CAGR	28.96	31.84	31.99	23.89	26.24	27.25	27.37	26.16	28.4

at Rs.70									
Current CAGR	0.84	-5.33	-2.23	23.93	4.12	2.72	2.96	5.34	1.49
Average (between current and rs.70)	14.90	13.26	14.88	23.91	15.18	14.98	15.17	15.75	14.95

Source: Calculated by authors

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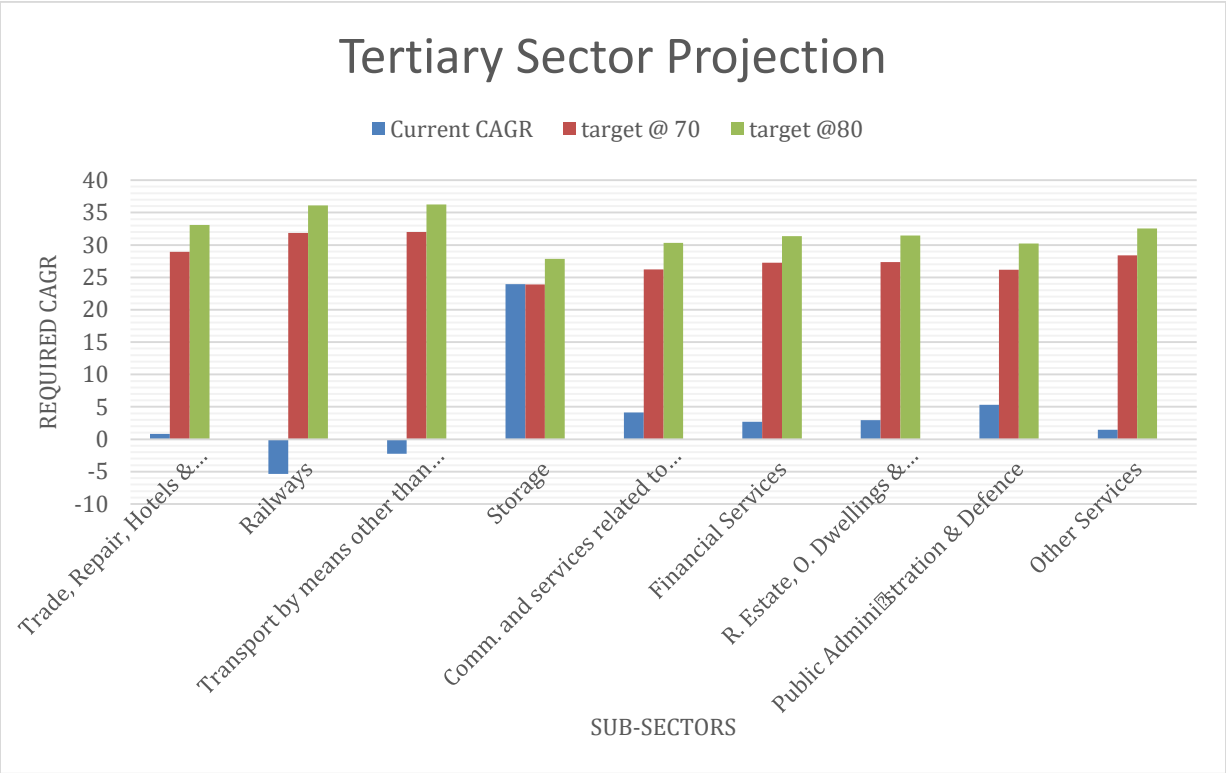
Figure 10 Graphical Representation of Projections for Tertiary Sector



Source: Calculated by authors

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- ➔ The current average value for the trade, repair, hotels & restaurants sector is approximately Rs. 3,508 crores and current CAGR for this sector is 0.84%, indicating a modest growth. At an exchange rate of 82 Rs, the predicted value is Rs. 14,845.14 crores, requiring a CAGR of 33.11%. At an exchange rate of 70 Rs, the predicted value is Rs. 12,672.71 crores, requiring a CAGR of 28.96%.
- ➔ The current average value for the railway sector is approximately 200 crores and the current CAGR for the railway sector is -5.33%. At an exchange rate of 82 Rs, the predicted value is Rs. 844.71 crores, requiring a CAGR of 36.08%. At an exchange rate of 70 Rs, the predicted value is Rs. 721.1 crores, requiring a CAGR of 31.84%.
- ➔ The current average value for transport by means other than railways is approximately Rs. 1,609 crores and the current CAGR for this sector is -2.23%, indicating a decline. At an exchange rate of 82 Rs, the predicted value is Rs. 6,808.5 crores, requiring a CAGR of 36.23%. At an exchange rate of 70 Rs, the predicted value is Rs. 5,812.15 crores, requiring a CAGR of 31.99%.

- The current average value for storage is approximately Rs. 61 crores and the current CAGR for this sector is 23.93%, indicating substantial growth. At an exchange rate of 82 Rs, the predicted value is Rs. 259.85 crores, requiring a CAGR of 27.87%. At an exchange rate of 70 Rs, the predicted value is Rs. 221.82 crores, requiring a CAGR of 23.89%.
- The current average value for communication and services related to broadcasting is approximately Rs. 573 crores and the current CAGR for this sector is 4.12%, indicating growth. At an exchange rate of 82 Rs, the predicted value is Rs. 2,426.65 crores, requiring a CAGR of 30.3%. At an exchange rate of 70 Rs, the predicted value is Rs. 2,071.53 crores, requiring a CAGR of 26.24%.
- The current average value for financial services is approximately Rs. 4,440 crores and the current CAGR for this sector is 2.72%, indicating moderate growth. At an exchange rate of 82 Rs, the predicted value is Rs. 18,789.39 crores, requiring a CAGR of 31.34%. At an exchange rate of 70 Rs, the predicted value is Rs. 16,039.76 crores, requiring a CAGR of 27.25%.
- The current average value for real estate, ownership of dwellings, and professional services is approximately Rs. 8,265 crores and the current CAGR for this sector is 2.96%, indicating moderate growth. At an exchange rate of 82 Rs, the predicted value is Rs. 34,976.09 crores, requiring a CAGR of 31.46%. At an exchange rate of 70 Rs, the predicted value is Rs. 29,857.7 crores, requiring a CAGR of 27.37%.
- The current average value for public administration and Defense is approximately Rs. 1,355 crores and the current CAGR for this sector is 5.34%, indicating growth. At an exchange rate of 82 Rs, the predicted value is Rs. 5,735.26 crores, requiring a CAGR of 30.21%. At an exchange rate of 70 Rs, the predicted value is Rs. 4,895.96 crores, requiring a CAGR of 26.16%.
- The current average value for other services is approximately Rs. 2,878 crores and the current CAGR for this sector is 1.49%, indicating modest growth. At an exchange rate of 82 Rs, the predicted value is Rs. 12,180.65 crores, requiring a CAGR of 32.53%. At an exchange rate of 70 Rs, the predicted value is Rs. 10,398.14 crores, requiring a CAGR of 28.4%.

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Chapter 5 – Action Plan

Table 35 Five-Year Action Plan - Primary Sector Strategies

S. N.	Sub Sector	Challenges / Objectives	Interventions Required	Ease of Implementation (on a 1-2-3 Rating Scale)	Physical Targets for 5 Years	Policies / Schemes	Linkage with SDGs
Short-Term (One Year) (2023-24)							
1	Crops	Hardly 1-2% of cultivation goes for food processing industries.	Banana processing units (chips, cake, biscuits, pulp) to be set up and post-harvest strategies to be developed.	1	Food Processing Units	Maharashtra Agribusiness Network (MAGNET), Hon. Balasaheb Thackeray Agribusiness and Rural Transformation (SMART) Project	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
2	Crops	Since mono-cropping is a major issue with respect to Cotton. 62% of land is	Encourage and promote multi-cropping and inter-cropping (soybean and toor,	1	NA*	Pradhan Mantri Fasal Bima Yojana (PMFBY), Krishi Vikas Yojana	3 GOOD HEALTH AND WELL-BEING 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

		under cotton cultivation. Adequate fodder is not generated.	along with cotton and banana) by creating awareness. Even if 5% of land each year is used for crop diversification, it will help to deal with the issue of mono-cropping. Crop diversification for climate resilience and sustainable farm profitability. Change the mindset of people by educating				

			them about the advantages of multi-cropping. The local governmen t should encourage farmers to avail benefits under various schemes and thereby improve farm practices.				
3	Crops	Use of fertilizers is very high.	Bio fuel sector and green fuel to be explored in this regard, since cattle is available in the district. Skill Training	3	NA*	Rashtriya Krishi Vikas Yojana - Remunerati ve Approaches for Agriculture and Allied sector Rejuvenatio n (RKVYRAFT AAR)	

			and Demonstration on Organic Farming should be conducted.				
4	Agriculture & Allied	APMC are not continuous – so there is no open market for cotton.	Streamlining of APMCs especially for cotton and dal manufacturing.	2	APMCs	Electronic National Agriculture Market (eNAM)	
5	Transportation	Adequate transportation facilities are not available.	Longer stops for the railway at Jalgoan (since going to Bhusawal is an expense).	1	Longer Railway Stops	Agriculture Export Policy of Maharashtra, PM Gati Shakti	
6	Livestock	Milk production is poor and productivity has declined	Fodder cultivation is required for cattle, the introduction of more	2	Cattle Houses	Rashtriya Gokul Mission (RGM), National Programme for Dairy Development	

		overtime.	Gir Cows (which are milk producing cows) and increase the role played by co-operative dairies in the district.			(NPDD), Dairy processing & Infrastructure Development Fund (DIDF)	
7	Forestry & Logging	No major forest products and hence hardly any economic contributi on. No regular sighting of animals – so no tourism.	Fodder area can be identified, extracted and then auctioned for some meaningful economic contributio n to the district GDDP. Teak forest maybe utilized for wood processing and in	1	NA*	NA*	

			furniture industries.				
Medium-Term (Three Years) (2023-26)							
8	Agriculture & Allied	Lesser demand for banana products.	Identify new markers and establish food processing industries.	3	New Markets / Shops	Electronic National Agriculture Market (eNAM)	
9	Agriculture & Allied	Marketing and branding are expensive and knowledge of markets is unavailable.	Marketing options – NAFED and from the government. Awareness programmes, training sessions need to be conducted.	3	New Markets / Shops	Electronic National Agriculture Market (eNAM)	
10	Agriculture & Allied	Banana is not exported, therefore lesser incomes are	Banana and related products to be exported to Kerela. Tie up with mills in	1	Export Oriented Units (EOUs) and Special Econom	Maharashtra Agribusiness Network (MAGNET), Agriculture Export Policy of Maharashtra	

		generated.	Yewla for banana silk and Seri-Culture.		ic Zones (SEZs)		
11	Storage	Not cold storage facilities are available.	Building of cold storage of bananas and related products. Warehousing facilities needs to be created. Private sector investments and CSR funding could be involved in this regard.	3	Cold Storage Units	Integrated Cold Chain and Value Addition scheme under Pradhan Mantri Kisan Sampada Yojana (PMKSY)	
Long-Term (Five Years) (2023-28)							
12	Fishing & Aquaculture	Fishing is not very well developed. Only smaller fishes are growing	Community recharge structure could be made to save ground water and	3	Fishing Ponds and Water Storage Facilities. Fishing	Animal Husbandry Infrastructure Development Fund (AHIDF), Pradhan Mantri Mastya Sampada	

		due to lack of space and lack of storage of water. To increase Fish Production By 500 MT Per Year.	thereby promote fishing (1000 tons of target can be achieved). If groundwater is saved, then aqua culture can be promoted for the added income of local people. Soil and water conservation through watershed programmes should be implemented, recharge of groundwater is		clusters could be formulated.	Yojana (PMMSY), Fisheries And Aquaculture Infrastructure Development Fund (FIDF)	

			essential.				
13	Mining & Quarrying	No significant contribution to the District Economy.	No significant contribution to the District Economy.	3	NA*	NA*	12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Source: Based on data gathered from stakeholder's interaction, 2023
*NA=Not Available

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Table 36 Five-Year Action Plan - Secondary Sector Strategies

S. N.	Sub Sector	Challenges / Objectives	Interventions Required	Ease of Implementation (on a 1-2-3 Rating Scale)	Physical Targets for 5 Years	Policies / Schemes	Linkage with SDGs
Short-Term (One Year) (2023-24)							
1	Manufacturing	The number of industries has fallen from 994 to 862. There are 3 MIDCs – Jalgaon, Bhusawal and Chalisgaon. However only Jalgaon MIDC is functional. Bhusawal and Chalisgaon MIDC are empty. Land	Streaming of land allocation processes is very important and needs to be fastened, in order to promote industrial growth. Facilitate access to credit and small finance for MSME's. Industrial corridors should be encourage	2	MSMEs	Interest Subsidy Incentive, Credit Guarantee Scheme for Micro & Small Enterprises (CG TMSE), Micro & Small Enterprises Cluster Development Programme (MSE-CDP) Scheme, Credit Guarantee Scheme for Subordinate Debt	

		allocation in MIDC is very slow.	d to promote local industries.			(CGSSD) for Stressed MSMEs.	
2	Manufacturing	Dual taxation – GST + market cess in APMC makes pulses expensive. Dual taxation – MIDC tax and Mahanagar Palika tax. No refund of GST for capital investments.	Government intervention is required at the local level. Local-level taxes can be altered.	1	MSMEs	NA*	
3	Electricity	Electricity is expensive because subsidies are not given (whereas in Vidharbha	Affordable electricity prices throughout the state. Subsidized electricity could be	2	Allocation of Subsidies	Power tariff Subsidy (Maharashtra State Policy)	

		and Marathwada electricity subsidies are provided). Load-shedding is common even in MIDC areas.	provided for industries in the MIDC area. Local market and MIDC timings could be extended for longer production timings. A local Thermal Power Plant should be set up.				
Medium-Term (Three Years) (2023-26)							
4	Manufacturing	Out of the total demand by dal mills, only 30% toor is produced in the district and hence imports for	Cultivation of toor is necessary not only to reduce the import of dal, but also to promote the Dal	3	Dal Mills	Project (CROPSAP)	

		raw material is high.	Mills Association.				
5	Manufacturing	There are a lot of issues with APMC – extensive documentation, FSSI certification is complex and complicated and GST as increased tax, test reports to be uploaded on govt. websites every 6 months which is a tedious process, import licenses to be renewed each year.	It is important to implement farm laws to manage the prices of pulses in APMCs. Simplification of governmental and licensing processes would help encourage industries in the MIDC area. Upgradation in technology and digital marketing of products can further	1	APMCs and Industry Facilitation Centre (IFC)	Procurement and Marketing Support (PMS) Scheme, International Cooperation (IC) Scheme	

			aid in reaching wider markets. Setting up an Industry Facilitation Centre (IFC) would help.				
6	Education	Local labour is unskilled. Lack of awareness about new courses. A lot of internal influence and hence delay in allocating new courses to the district.	CIPET training is not available in the district (it is in Aurangabad) - this could be provided. Customized training to be provided by ITIs. The DGT training should be provided	2	CIPET and ITIs	Assistance to Training Institutions (ATI) Scheme, Skill development, employment and entrepreneurship training center for tribal candidates	

			for machine operators, electricians and fitters. Employment fairs should be organised immediately after each such training program to bring employer and employee together.				
Long-Term (Three Years) (2023-28)							
7	Construction	The construction especially commercial (Malls or Cinema Halls) sector is not well developed.	There is a need for marketing Jalgaon as an investment hub especially for developme	3	NA*	Real Estate (Regulation and Development) Act, 2016	

			nt from the private sector.				

Source: Based on data gathered from stakeholder's interaction, 2023
*NA=Not Available

Table 37 Five-Year Action Plan - Tertiary Sector Strategies

S. N.	Sub Sector	Challenges / Objectives	Interventions Required	Ease of Implementation (on a 1-2-3 Rating Scale)	Physical Targets for 5 Years	Policies / Schemes	Linkage with SDGs
Short-Term (One Year) (2023-24)							
1	Transport	Transportation is an issue. Bhusawal train junction is closed causing inconvenience in transportation and increase in cost.	Better road and railway connectivity.	1	Longer Railway Stops	PM Gati Shakti	
2	Other Services	Gold recycling and processing is an unorganized industry (informal).	There is a need to formalize gold manufacturing. The supply chain for gold to be set up. It is	3	Gold Processing Units	PM Economic Package for MSME Sector	

			important to set up gold Clusters. Gold retail license is a must at the local level.				
3	Trade	All of the gold is imported, which comes to the district for recycling.	Surat to Jalgaon road link to be set up for promoting Jalgaon as Gold Hub. Prominent Jewelers' include – Ratanlan C Bafna and Rajmal Lakhichand.	3	Longer Railway Stops and Improved Road Connectivity and Network	PM Gati Shakti	
4	Education	There are almost 7000 artisans in the district. Laboures are largely from West Bengal.	The identification of labour demand in the Jewellery sector and providing necessary formal training to	3	CIPET and ITIs	Assistance to Training Institutions (ATI) Scheme	

			the local workers is necessary in order to avoid migration.				
5	Tourism	Religious Tourism and Agro Tourism needs to be promoted as a growth strategy. The potential can be explored at the adjacent mentioned places.	Jalgaon district has a lot of old temples, which if rebuilt and maintained properly will bring in a lot of local revenue. Agro Tourism could be promoted in the Satpuda Range. Private investments in local transportation facilities & accommodation facilities will go a long	2	Longer Railway Stops and Improved Road Connectivity and Network	PM Gati Shakti	

			way in promoting tourism. • Mangal Dev Temple, Amalner • Patna Devi Temple, Chalisgaon • Ajanta Caves, Ajanta • Satpuda Mountains Range • Manudevi Temple				
Medium-Term (Three Years) (2023-26)							
6	Real Estate	Real estate and construction growth is slow.	Real estate sector (malls and cinema halls) to be developed to create	2	NA*	Real Estate (Regulation and Development) Act, 2016	

			demand and prevent out-migration. Food chains like Kamat, Haldirams, Dominos, McDonalds to be encouraged.				
7	Education	Lack of skilled labour and lack of higher education institutions (extensive dependence on North Maharashtra University).	Investments, especially in higher education must be encouraged, not only to provide local skill sets but also to prevent out migration of young people.	1	CIPET and ITIs	Assistance to Training Institutions (ATI) Scheme	
8	Financial Services	Presence of banking sector is seen in the district both private and public.	Provision of credit for new construction and private companies is imperative.	2	Banks and Other Financial Institutions	NA*	

		However, there is a need to boost access to credit for all sectors.					
Long-Term (Three Years) (2023-28)							
9	Storage	Overall storage facilities needs to be improved.	Building of overall storage facilities is necessary for both farm produce and manufacturing. Private sector investments and CSR funding could be involved in this regard.	3	Storage Facilities	NA*	

Source: Based on data gathered from stakeholder's interaction, 2023
*NA=Not Available

Table 38 Industry -Wise Generation of Employment

Sr. No.	Name of the cluster	Generated Employment
1	Plastic mat cluster	9,000
2	Gold ornament cluster	5,000
3	Engineering cluster	1,200

Source: District wise skill gap study for the State of Maharashtra

Sector-Wise Credit Allocations

Primary Sector

Table 39 Targeted and Achieved Credit for Primary Sector Over 5-Years (Figures in Rs. Lakhs)

Sr. No.	Agriculture			Farm Credit			Agriculture Infrastructure			Ancillary Activities		
	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach
2017	384717	252450	66	375874	124977	33	8843	756	9	0	126717	0
2018	370438	227589	61	289999	188090	65	80439	7675	10	0	31823	0
2019	423645	234009	55	320000	181209	57	103645	5096	5	0	47704	0
2020	432000	235087	54	330000	196366	60	102000	4369	4	0	34351	0
2021	461873	306480	66	445932	258009	58	14308	2321	16	1633	46149	2826

Source: SLBC Maharashtra, 2021

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Table 40 Estimated Credit Targets for Primary Sector (2023-24) (Figures in Rs. Crores)

Farm Credit				Out of Farm Credit, total allied activities		Agri. Infrastructure		Ancillary Activities		Total Agriculture (PS)	
Crop Loan		Term Loan									
A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt
298536	3014.97	96688	2643.06	48567	1216.14	10756	270.03	45280	1133.04	451260	7061.1

Source: Provided by Jalgaon District Planning Department, 2023

Secondary Sector

Table 41 Targeted and Achieved Credit for Secondary Sector Over 5-Years (Figures in Rs. Lakhs)

Sr. No.	MSME			Micro Enterprises (Manu + Service)			Small Enterprises (Manu + Service)			Medium Enterprises (Manu + Service)			Khadi & Village Industries			Others under MSMEs		
	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach
2017	101773	184892	182	0	44216	0	0	89641	0	0	39587	0	0	518	0	101773	10930	11
2018	123534	173456	140	49413	66564	135	24707	85765	347	24707	14232	58	0	622	0	24707	6273	25
2019	94206	250567	266	0	99351	0	0	92572	0	0	39420	0	0	686	0	94206	18538	20
2020	128000	216195	169	0	94945	0	0	105069	0	0	11059	0	0	374	0	128000	4749	4
2021	206195	137615	67	15922	69278	435	44782	53159	119	29852	14497	49	28370	336	1	87268	345	0

Source: SLBC Maharashtra, 2021

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Table 42 Estimated Credit Targets for Secondary Sector (2023-24) (Figures in Rs. Crores)

Micro Enterprises		Small Enterprises		Medium Enterprises		Khadi and Village Industries		Others under MSMEs		Total MSMEs (PS)	
A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt	A/c	Amt
27882	262.74	7819	737.02	6525	493.44	0	0	118840	1120.79	161066	2613.99

Source: Provided by Jalgaon District Planning Department, 2023

Tertiary Sector

Table 43 Targeted and Achieved Credit for Tertiary Sector Over 5-Years (Figures in Rs. Lakhs)

Sr. No.	Export Credit			Education			Housing			Social Infrastructure			Renewable Energy			Others		
	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach	Tgt	Achmnt	% Ach
2017	0	108	0	14567	1822	13	25751	13376	52	0	680	0	0	1584	0	33891	2295	7
2018	0	184	0	16728	1886	11	29581	17842	60	0	120	0	0	143	0	38929	6235	16
2019	0	17235	0	16397	2395	15	28990	26052	90	0	127	0	0	2005	0	38154	18778	49
2020	0	962	0	12754	2351	18	22621	42542	188	0	525	0	0	330	0	29625	8082	27
2021	5936	1117	19	11845	1591	13	21008	29354	140	7909	1646	21	7170	196	3	6497	6333	97

Source: SLBC Maharashtra, 2021

Table 44 Estimated Credit Targets for Tertiary Sector (2023-24) (Figures in Rs. Crores)

Export Credit		Education (PS)		Housing (PS)		Social Infrastructure		Renewable Energy	
A/c	**Amt**	**A/c**	**Amt**	**A/c**	**Amt**	**A/c**	**Amt**	**A/c**	**Amt**
1524	23.04	7194	110.97	2668	604.48	5704	87.96	1523	23.12

Source: Provided by Jalgaon District Planning Department, 2023

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Recommendations

Why Jalgaon?

The District of Jalgaon is located in the north-west region popularly known as Khandesh region in the state of Maharashtra. It is surrounded by the Satpuda mountain ranges in the north, Ajanta mountain ranges in the south. It is bounded by Madhya Pradesh state to the north, and by the districts of Buldhana to the east, Jalna to the southeast, Aurangabad to the south, Nashik to the southwest, and Dhule to the west. The district is rich in volcanic soil which is well suited for cotton production. It has an area of 11,765 sq. kms. with a population of 42 lakhs in 2011.

The district has decent road and rail connectivity to major cities in the state and to cities in other states, which is crucial for trade and industrial development. It can make the district accessible to markets and suppliers, encouraging economic growth and investment. Considering all these advantages that makes the district conducive to industrial growth, and the industrial growth of Mumbai, Thane, Pune, and Nashik, reaching towards saturation, Jalgaon has a high growth potential.

Existing resources must be harnessed and employed optimally for the maximum multiplier effect. Growth Plan for Ahmednagar district involves a combination of infrastructure development (physical/ social and institutional), economic initiatives, and urban development and planning. Some sector-wise recommendations that would contribute to the growth of Jalgaon are discussed in the sections below.

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1) Primary Sector

The growth rate of primary sector in Jalgaon district in the last 5 years is much lower than the required growth rate to achieve the projected GDDP targets for 2027-28. Within the Primary Sector, Crops have outperformed the other sub-sectors. Some recommendations to strengthen the post-harvest processing infrastructure are as follows;

1.1 Agriculture

- As a part of ODOP program – there is a need to set up banana processing units. Setting up post-harvest units, will not only help in increasing overall incomes of local people but also contribute to the district's GDDP.

- There is a need to enhance agricultural processing infrastructure. Improving agricultural processing infrastructure can lead to increased efficiency, reduced waste, higher-quality products, and enhanced market access.
- Focus needs to be on increasing warehouses and cold storage facilities for agricultural produce (especially banana). Promotion of Negotiable Warehouse Receipt (NWR) in the existing warehouses is also recommended.
- Need for a proper market integration to create a more interconnected and efficient system for crops such as cotton, banana, soybean and toor.
- Ease of doing business for FPCs- to bring buyers and sellers on one platform.
- Value addition via food processing industry for agricultural products - this will also enhance the productively and employ additional workforce from the agricultural sector.

1.2 Livestock- Dairy and Animal Husbandry

- Interventions are required mainly to upgrade infrastructure wherein disease diagnosis labs can be established in the district.
- Cold storage facilities to be increased for milk and related products.
- Cattle insurance to be provided.
- Adequate fodder to be provided for cattle.

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2) Secondary Sector

Secondary sector in the district has showcased a negative growth rate, which needs to be pushed to an average of 14% in the next five years (until 2027-28). The district has a lot of untapped potential in terms of its strategic location, road and rail connectivity, and existence of three MIDCs. The district needs a big push in its manufacturing and industrial sector to achieve the targeted growth. Some recommendations are as follows;

2.1 MIDC

- The district has three MIDC areas with decent connectivity which needs to be tapped.
- Adequate 24*7 electricity needs to be provided at a subsidized rate for the industries to be settled within the MIDCs.
- Land allocation needs to be quick and the process has to be made more transparent.

- It is recommended to organize Investor Conferences and events to showcase the potential of MIDC areas and attract investors.
- Focus on creation of specialized clusters for industries to encourage collaboration, innovation, and shared resources.
- Establish incubators and accelerators to support startups and foster a culture of innovation.

2.2 Rural Transformation via Non-Farm Growth

- It is essential to create market linkages via creating platforms to connect rural producers with urban markets, facilitating the sale of non-farm products.
- Onboarding of Sellers/ MSMEs/ Women SHGs/ FPOs/ Artisans, etc. into the Open Network for Digital Commerce (ONDC) network such that a larger proportion of people can participate digitally, improving the rural digital economy at the district level.
- Encourage the establishment of food processing units especially for banana processing for value addition to agricultural produce, and thereby reducing post-harvest losses.
- Promote agro-tourism by showcasing agricultural practices, farm stays, and agro-based experiences to attract tourists.

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3) Tertiary Sector

Services sector has grown at a CAGR of 1% which needs to grow at 14% to achieve the projected GDDP targets by 2027-28. Within the services sector, the district has a potential to grow in sub-sectors like hotels, restaurants, transport, real estate, etc. due to untapped tourism and its strategic location. Few recommendations that would boost the growth of services sector are as follows;

3.1 Transport and IT

- Investment in efficient and accessible public transit systems especially roads and railways can go a long way in improving distribution and transportation of products from Jalgaon.
- Setting up an IT Park can act as a catalyst for multifaceted development, transforming Jalgaon into a dynamic, tech-savvy hub. The growth of an IT park often spurs the

development of supporting services like restaurants, housing, transportation, and healthcare, improving the overall quality of life in the city.

3.2 Tourism

- Since a lot of temples exist in the district, promotion of religious tourism is suggested to boost the overall economy of Jalgaon.
- Development of tourism-related infrastructure like resorts, tourist information centers, parking facilities, toilets, clean drinking water facilities and recreational facilities is also important.
- Due to availability of land, the district also has scope for adventure tourism wherein trekking, camping, rock climbing can be focused on.

3.3 Education and Skill Development

- Collaborate with educational institutions to offer industry-specific training programs and skill development courses.
- Encourage industries to provide internships to students, bridging the gap between academia and practical skills.
- Provide resources, funding, and mentorship for local entrepreneurs to start businesses.
- Policy interventions are recommended for simplification of regulatory structures wherein simplified and digitized procedures can speed up approvals and reduce paperwork.

Recommendations pertaining to secondary and tertiary sector would not only lead to increase in incomes of the stakeholders but also generate additional employment opportunities in the district, increase the sources of livelihoods and reduce the dependency on agricultural sector for employment.

Sectors which are unique to Jalgaon are ‘food processing’, ‘gems and jewellery’, and ‘tourism, travel and hospitality’. If adequate investments materialise in these sectors (both from Government and private), then these sectors will generate employment much more than what has been forecasted as of now.

Collaboration between government bodies, local communities, private sectors, and NGOs is vital for the successful implementation of these recommendations, aiming for holistic and sustainable development in Jalgaon District.

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Chapter 6 – Implementation/ monitoring support reqd.

List of Annexures

Table 45 Stakeholder Identification - Primary Sector

Sr. No.	Stakeholder Designation	Government / Private	Name of the Institute / Body	SPOC Name	SPOC Contact (e-mail Mobile no.)
1	DSAO	Government	Collectorate Jalgaon	NA*	
2	Project Director	Government	ATMA	NA*	
3	Assistant Commissioner	Government	FDA	NA*	
4	ADO	Government	Zilla Parishad	NA*	
5	Animal Husbandary Officer	Government	Zilla Parishad	Hemant Waghode	9960240315
4	Principal Scientist	Government	Oil and Seed Research Centre Jalgaon	Dr. Sanjiv Patil	9422775727
5	District Development Manager	Government	NABARD	Mr Shrikant Zambare	8160363418
6	Head KVK, Mamurabad	Government	Krushi Vigyan Kendra, Mamurabad	Dr Hemant Baheti	7588580512

7	Head KVK, Pal	Government	Krushi Vigyan Kendra, Pal	Mahesh Mahajan	9970661546/ 8669791959
8	Scientist	Government	Banana Research Centre Jalgaon	Dr. Pujari Sir	9420943146
9	SMS (FST)	Government	Krushi Vigyan Kendra, Mamurabad	Mr. Tushar Gore	
10	Agro-Economist	Private	Jain Irrigation	Dr, B.D.Jade	9422774981
11	Sr. Scientist & Head Banana Tissue Culture	Private	Jain Irrigation	Dr. K.B.Patil	9422774941
12	Head	Government	NAFED	Mr. Ganesh Budhukale	8087412630
13	Proprietor	Private	Mahjan Banana Export	Mr. Prashant Mahajan	9763904777
14	Proprietor	Private	Max Fresh FPC	Vishal Agrawal	9423188307
15	Individual	Private	Farmer	Mayur Wagh	9767364746/ 8830633197
16	Chairman	Private	FPO	Bhalchandra Chaudhari	9764741723/ 9797155116
17	Individual	Private	Farmer	Avdhut Mahajan	9767713332
18	Individual	Private	Farmer/	Premanand	9763893777

			Exporter	Mahjan	
19	Chairman	Private	Ginning Mill Association	Pradip Jain	9823046495
20	Officer	Government	Animal Husbandry Department	Mandavale Sir	9834933768

Source: Provided by Jalgaon District Planning Department, 2023
*NA = Not Available

Table 46 Stakeholder Identification - Secondary Sector

Sr. No.	Stakeholder Designation	Government / Private	Name of the Institute / Body	SPOC Name	SPOC Contact (e-mail Mobile no.)
1	GeM	Government	District Industries Centre	Chetan B Patil	9112050107
2	Manager	Government	District Industries Centre	Mr. Dongare Sir	9423168140/ 8329894180
3	Member	Private	Jain Irrigation	Mr. Sunil Lodha	9422774970
4	Member	Private	Supreme Industries	Mr. Dhananjay Jehurkar	9765402539
5	Proprietor	Private	Jalgaon Dal Mill Association	Mr. Manoj Nagla	9421001359
6	Proprietor	Private	Be natural Organnics	Mr. Pratibha Zawar	8888877444

7	Proprietor	Private	Bhaskar Foods	Mr. Bhaskar Mali	9422283582
8	Proprietor	Private	Plastic Pipe Mfg Association	Mr. Ravindra Laddha	9823094276
9	Proprietor	Private	Oil Mil Owners Association	Mr. Mahale	9422292115
10	Proprietor	Private	Shraddha Polymats	Mr. Mahendra Raisoni	9823054546
11	Proprietor	Private	Textile Association	Mr. Ashish Gujrathi	98224003099
12	Proprietor	Private	Soyo Solar Energy	Mr. Kishor Dhake	9422277066
13	Proprietor	Private	Small Scale Ind Asso.	Mr. Sham Agrawal	9225120678
14	Proprietor	Private	Jalgaon Dal Mill Association	Mr Govind Maniyar	9422772100
15	Proprietor	Private	Jalgaon Dal Mill Association	Mr Dinesh Rathi	9823046503
16	Proprietor	Private	Dal Mill Association	Mr Avinash Kakkad	9423188990
17	Proprietor	Private	Jalgaon Dal Mill Association	Mr Satish Biyani	9823289418
18	Senior Engineer	Private	Wipro Amalner	Mr Harish Mahore	9765355522

Source: Provided by Jalgaon District Planning Department, 2023

Table 47 Stakeholder Identification - Tertiary Sector

Sr. No.	Stakeholder Designation	Government / Private	Name of the Institute / Body	SPOC Name	SPOC Contact
1	Education Officer-Primary	Government	Zilla Parishad	Vikas Patil	7588008740
2	Education Officer Secondary				
3	Dean	Government	Government Ayurvedic College	NA*	NA*
4	Dean	Government	Government Homeopathy College	NA*	NA*
5	Dean	Government	Government Medical College	NA*	NA*
6	Proprietor	Private	Gold	Ajay Lawani	9423187097
7	Proprietor	Private	Gold	Gautam Luniya	9421522890
8	Proprietor	Private	Gold	Vijay Verma	9420787206
9	Proprietor	Private	Tourism	Amey Neve	7020544160/ 8275759500
10	Proprietor	Private	Tourism	Aman Sharma	9975101438

Source: Provided by Jalgaon District Planning Department, 2023.
*NA = Not Available.

Figure 11 Financial Inclusion Index (2011, 2015 & 2023) (from Studies at SSE)

District	Year 2011	District	Year 2015	District	Year 2020
Bhandara	0.1176	Bhandara	0.0785	Bhandara	0.0427
Dhule	0.1813	Hingoli	0.3575	Nandurbar	0.3443
Hingoli	0.2622	Parbhani	0.4212	Hingoli	0.3712
Jalna	0.3565	Nandurbar	0.4229	Jalna	0.3781
Buldana	0.4510	Jalna	0.4430	Parbhani	0.3868
Latur	0.4542	Washim	0.4920	Latur	0.4011
Washim	0.4823	Nanded	0.5137	Washim	0.4902
Nanded	0.4856	Latur	0.5244	Nanded	0.5015
Yavatmal	0.5003	Dhule	0.5383	Gadchiroli	0.5072
Jalgaon	0.5122	Yavatmal	0.5446	Yavatmal	0.5485
Gondia	0.5185	Gadchiroli	0.5779	Dhule	0.5587
Gadchiroli	0.5268	Buldana	0.6124	Buldana	0.5933
Osmanabad	0.5323	Jalgaon	0.6178	Gondia	0.6454
Nandurbar	0.5456	Osmanabad	0.6550	Jalgaon	0.6480
Nasik	0.6206	Thane	0.6792	Thane	0.6512
Solapur	0.6402	Solapur	0.6901	Solapur	0.6919
Aurangabad	0.6694	Gondia	0.7054	Aurangabad	0.6996
Akola	0.6758	Aurangabad	0.7460	Akola	0.7116
Thane	0.6867	Akola	0.7566	Ahmednagar	0.7773
Ahmednagar	0.6900	Nasik	0.8007	Osmanabad	0.8010
Amravati	0.7122	Ahmednagar	0.8109	Chandrapur	0.8046
Chandrapur	0.7763	Chandrapur	0.8347	Nasik	0.8137
Sangli	0.8089	Amravati	0.8679	Sangli	0.8290
Satara	0.8091	Sangli	0.9157	Amravati	0.8430
Wardha	0.8597	Satara	1.0385	Kolhapur	0.9748
Kolhapur	0.9039	Kolhapur	1.0468	Satara	0.9920
Parbhani	0.9073	Wardha	1.0720	Wardha	1.0949
Beed	1.0854	Beed	1.4021	Nagpur	1.3292
Raigad	1.3006	Nagpur	1.4332	Raigad	1.4751
Nagpur	1.3327	Raigad	1.5277	Beed	1.7516
Pune	1.6355	Pune	1.8269	Pune	1.7541

Report Card of Jalgaon					
Performing well on parameters	Value	Rank	Performing poor on parameters	Value	Rank
Dimension 1 (SDG- Growth Index)					
Per Capita Growth rate	0.455	3	Percentage_of_Secondary_sec_of_total_GDP	0.068	16
Percentage_of_Primary_sec_of_total_GDP	0.113	2	Percentage_of_household_with_banking_facility	0.055	29
Proportion of fair price shops to total fair price shops	0.572	7	percapita_PMJDY_Bank_A/c_opened	0.189	16
Per_capita_con_of_Electricity	0.327	11	Percapita_PMJDY_Deposits	0.111	19
Cropping Intensity	0.234	8	No. of SHGs	0.105	26
			Micro enterprises	0.021	26
			Small enterprises	0.041	12
Dimension-2 (SDG-PHII)					
1-AAY	-0.076	11	National_Poverty_Line	0.288	17
Total cereal productivity in Kgs/hector	0.300	12	Health_Insurance	0.092	24
Total pulses productivity in Kgs/hector	0.290	14	Mother_and_Child_Protection_Card	0.494	27
Total food grain productivity in Kgs/hector	0.244	9	Financial_Assistance_to_mother_and_child	0.080	14
Total oilseeds productivity in Kgs/hector	0.160	11	1-Homeless_household	0.326	22
Gini Inequality_inverse	-0.261	9	1-Stunted_Children/100	0.300	17
Dimension - 3 (SDG-HWSI)					
Households_with_ an_improved_drinking-water_source	0.068	3	Households_using_improved_sanitation_facility	0.163	19
Households_sing_iodized_salt	0.301	11	Households_using_clean_fuel_for_cooking	-0.018	23
Children_under_5_years_who_are_not_severely_wasted_(weight-for-height)	0.182	11	Households_with_any_usual_member_covered_by_a_health_scheme_or_health_insurance	0.074	24
Children_under_5_years_who_are_not_underweight_(weight-for-age)	0.486	14	Women_age_20-24_years_married_before_age_18_years	0.153	21
Women_whose_BMI_is_normal_(BMI < 18.5 kg/m2)	0.427	2	Women_age_15-19_years_who_were_not_already_mothers_or_pregnant_at_the_time_of_the_survey	0.143	29
Men_whose_BMI_is_normal_(BMI < 18.5 kg/m2)	0.262	5	Institutional births	0.762	27
Doctor/10000	0.306	12	Institutional births in public facility	0.222	29
			Children under age 3 years breastfed within one hour of birth	-0.285	25
			Children_under_5_years_who_are_not_stunted_(height-for-age)	0.153	17
			Children_under_5_years_who_are_not_wasted (weight-for-height)	0.268	27
			Women_who_are_not_overweight_or_obese_(BMI ≥ 25.0 kg/m2)	0.008	29
			Men_who_are_not_overweight_or_obese_(BMI ≥ 25.0 kg/m2)	0.108	19
			Maternal_mortality_ratio	0.123	16
			Nurses/10000	0.042	26
Dimension-4 (SDG-EI)					
Net_Enrollment_Ratio_(Primary)	0.445	8	Percentage_of_Professionally_Qualified_Teachers_(Government_contractual_Total)	-0.096	16
Net_Enrollment_Ratio_(Upper_Primary)	-0.203	11	Inverse_of_Pupil_Teacher_Ratio	0.031	31
Percentage_of_Professionally_Qualified_Teachers_(Government_Regular_Total)	0.420	5	Percent_of_Government_Rural_Schools	0.043	25
Percentage_of_Professionally_Qualified_Teachers_(Private_Total_All)	0.268	3	Percentage_of_Schools_with_MDM	0.269	25
Percentage_of_schools_with_PTR_(<30_at_Pr_Level)	-0.007	2	Percentage_of_Schools_with_Computer	0.047	21
Inverse_of_Student_Classroom_Ratio	-0.003	2	Avg_Teacher_per_School	-0.006	30
Percentage_of_Schools_with_Approachable_by_Weather_Road	0.813	2	Percent_of_Benefiiaries_Upper_Primary(Textbook)	0.360	26
Percentage_of_Schools_with_Playground	0.781	3	Percent_of_Benefiiaries_Primary(Uniform)	0.014	21
Percentage_of_Schools_with_Boundary_wall	0.883	5	Percent_of_Benefiiaries_Upper_Primary(Uniform)	0.027	25
Percentage_of_Schools_with_Girl's_toilet	0.881	8			
Percentage_of_Schools_with_Drinking_Water	0.796	7			
Percentage_of_Schools_with_Electricity	0.437	18			
Percent_of_Benefiiaries_Primary(Textbook)	0.050	12			
SDG-CI					
SDG-CI	3.561	11			

Figure 13 Photos from Stakeholder Meetings

GPS Map Camera
Jalgaon,MH,India
Mahabal Road, Prabhat Colony, Jalgaon,
425001, MH, India
Lat 21.001000, Long 75.563181
10/03/2023 01:19 PM GMT+05:30
Note : Captured by GPS Map Camera

Figure 14 Photos from Meeting with Banana Farmers

Figure 15 Photos from Field Visit to Plastic Mats Industry

END OF REPORT

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