



UTTARAKHAND ECONOMIC SURVEY

2023-24

Volume – II

DIRECTORATE OF ECONOMICS AND STATISTICS

Government of Uttarakhand

37A, IT Park, Dehradun, Uttarakhand

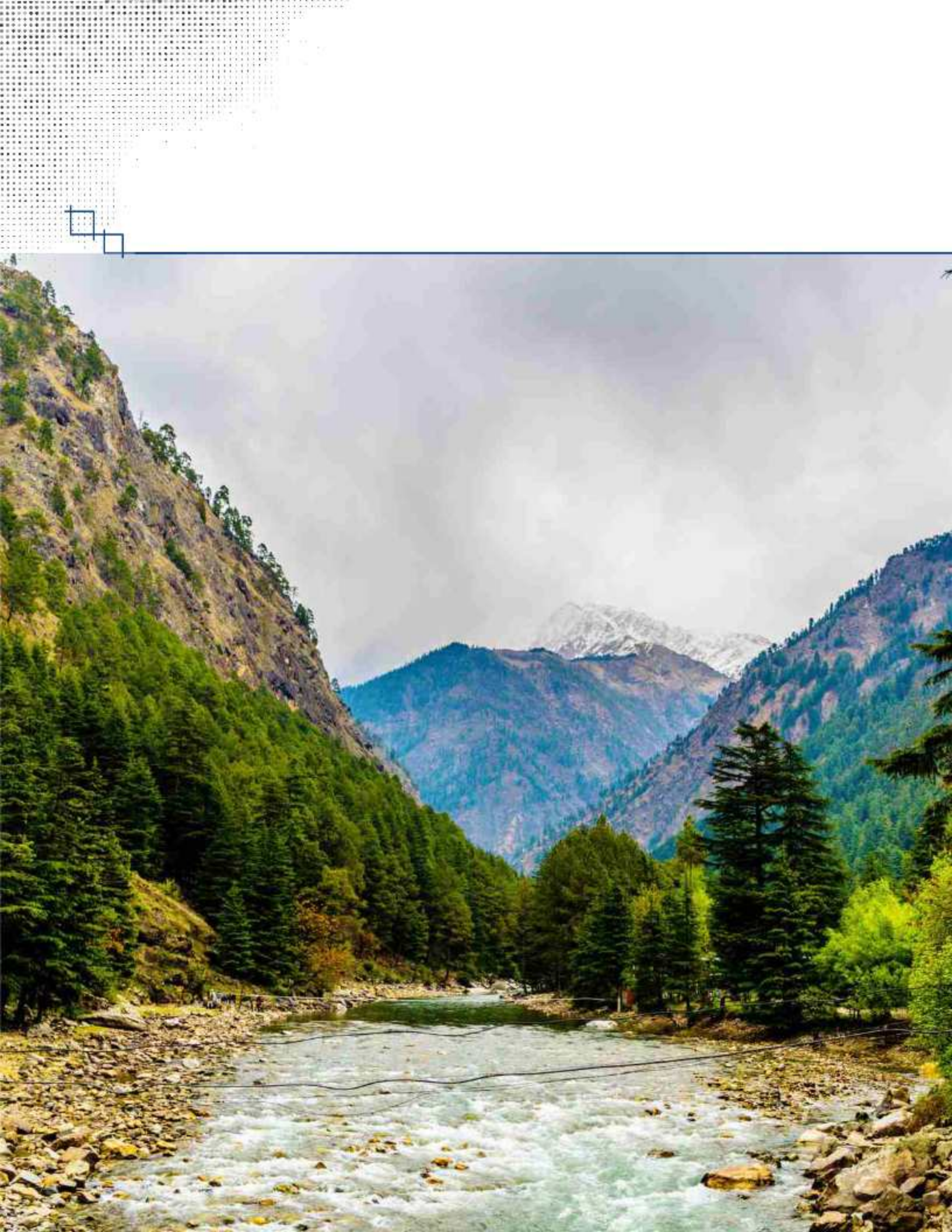




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Preface

Volume II of the Uttarakhand Economic Survey 2023-24 is seventh in the series brought out by the Directorate of Economics and Statistics (DES), Govt. of Uttarakhand this year. It reflects on the developments in the State economy over the year and reviews the progress of major development programmes and projects and at the same time provides an analytical perspective on State's economy and growth scenario. The challenges associated with the roadmap for doubling the State economy, initiatives planned and under implementation under Sashakt Uttarakhand @2025, policy disconnects and gaps, were given special attention in this edition.

This Economic Survey report serves as a valuable resource for policymakers, researchers, investors, and other stakeholders interested in understanding Uttarakhand's economic trajectory. We hope that the findings, analysis, and recommendations provided in this report will foster informed discussions, inspire innovative solutions, and shape the vision for a vibrant and resilient Uttarakhand economy.

We sincerely hope that this report contributes to a deeper understanding of the economic dynamics of Uttarakhand and facilitates the realization of the vision to double the State's economy and the status of implementation of multiple initiatives under Sashakt Uttarakhand @2025. It is hoped that this report will result in redoubling of efforts and shifting of gears to put the State economy on a higher growth trajectory. It is expected that various departments' programme strategies and implementation processes would be further strengthened for higher impact. I appreciate the efforts of Shri. Sushil Kumar, Director, Directorate of Economics and Statistics and Dr Manoj Kumar Pant Additional Chief Executive Officer, Centre for Public Policy and Good Governance and the entire team of EHI International in the preparation of this report.

Principal Secretary



Sushil Kumar
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Foreword

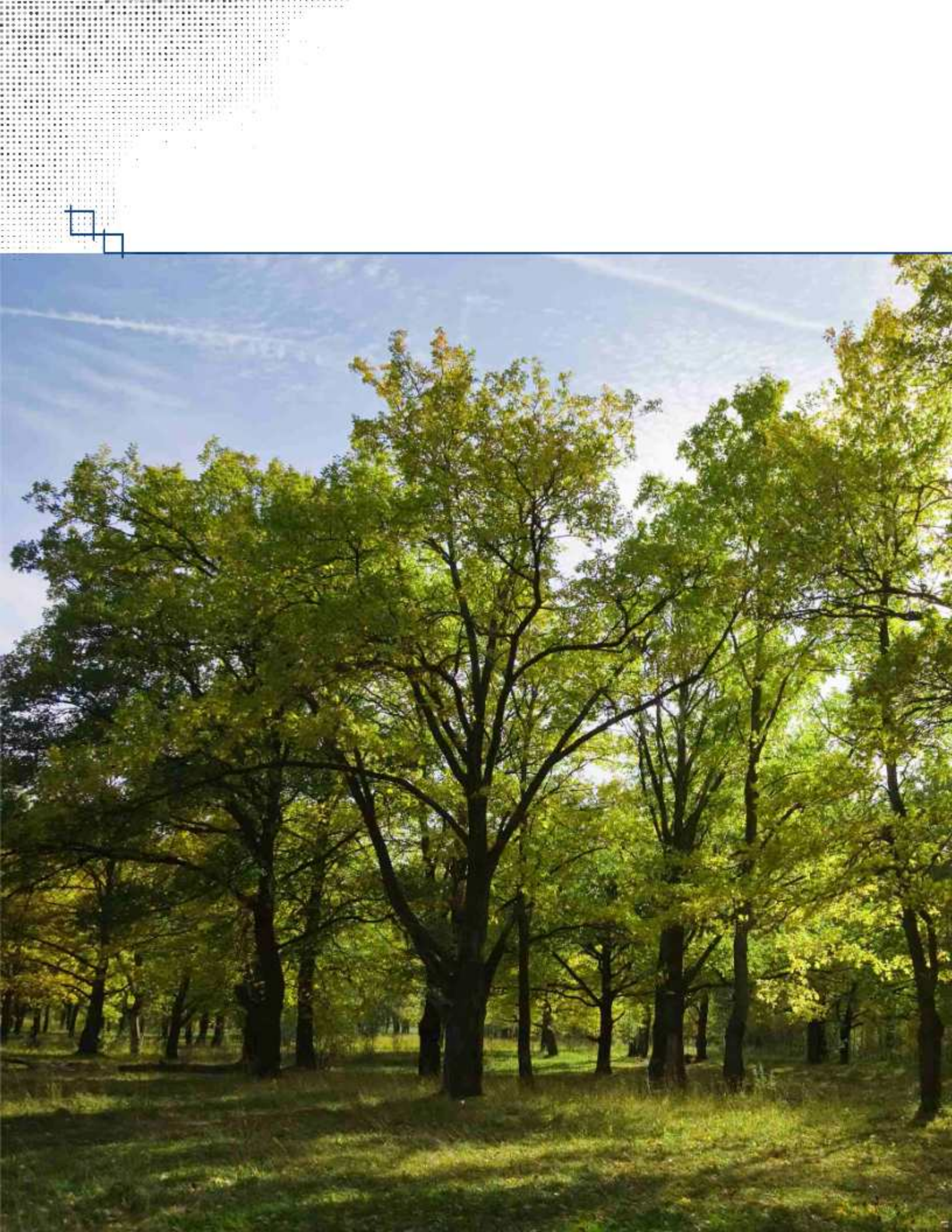
The Uttarakhand Economic Survey 2023-24 (Volume-II), is the Seventh in the series is a comprehensive report that analyzes the State's economy with focus on Doubling the Uttarakhand Economy. This report offers valuable insights and recommendations to propel Uttarakhand towards a path of sustainable economic growth.

This report covers various sectors that drive Uttarakhand's economy. It explores the Agriculture and Allied Activities sector, the Manufacturing Sector, and the Services Sector, highlighting their contributions, challenges, and opportunities. Additionally, it presents a roadmap for achieving the desired economic growth in next five years as envisaged in Uttarakhand Vision 2030 and Sashakt Uttarakhand@2025.

Uttarakhand, with its abundant natural resources and vibrant culture, has immense potential for economic development. This report serves as a reference for policymakers, researchers, and stakeholders, providing a thorough assessment of the current economic landscape and outlining strategies to achieve the ambitious goal of doubling the State's economy within a short timeframe. Let us join hands in realizing the vision of a prosperous and thriving Uttarakhand.

I express my sincere gratitude to the DES, and I am also thankful to the CPPGG, Department of Planning team for their technical support, particularly in the review of the draft report. I welcome suggestions from the readers and researchers for further improvement of the report in future.


(Sushil Kumar)
Director



Acknowledgment



EHI International team expresses its gratitude to Shri R Meenakshi Sundaram, IAS (Secretary, Planning), Directorate of Economics and Statistics (DES), Planning Department, Government of Uttarakhand, Shri. Sushil Kumar (Director, DES) and Dr Manoj Kumar Pant, (Additional Chief Executive Officer, Centre for Public Policy and Good Governance) for allocating this important assignment to EHI International and for their invaluable guidance.

We express our deep appreciation for the immense support received from Shri Sushil Kumar and Dr Manoj Kumar Pant throughout the execution of the assignment and timely feedback on sections of the report, which was instrumental in its finalisation.

We extend our sincere thanks to the Directorate of Economics and Statistics for their unwavering support and guidance throughout the entire process. Their insights and inputs have been instrumental in shaping the direction and content of this report.

We are indebted to all the officials of the DES who have regularly helped by providing data and other material pertaining to specific areas of this report, especially Dr. Dinesh Chandra Badoni, Joint Director who was always forthcoming to guide the expert team and coordinate their interactions with government departments. We are equally indebted to Deputy Directors Shri Amit Punetha, Shri Manish Rana and others along with CPPGG Specialists for their guidance, support and valuable comments from time to time, which helped us immensely to finalise this report.

Furthermore, we would like to express our appreciation to the various stakeholders, including government agencies and individuals, who generously shared their knowledge and insights, enabling us to gain a deeper understanding of Uttarakhand's economy and multiple initiatives underway in the State. Lastly, we would like to thank the readers and users of this report. Your engagement and interest in understanding Uttarakhand's economic landscape are of paramount importance, and we hope that this edition serves as a valuable resource for your endeavours.

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Disclaimer

The views expressed and any errors herein are entirely those of the authors. The views expressed do not necessarily reflect those of and cannot be attributed to the study advisors, contacted individuals, institutions and organizations involved. The information contained herein has been obtained from various sources including the respective Uttarakhand Government Departments, discussions with stakeholders, a review of publications, and are to the best of our knowledge accurate. Despite all precautions taken to accurately reflect the information that was collected for this report, any errors pointed out subsequently by any party cannot lead to any liability on the part of the authors. The contents of this report may be used with necessary acknowledgment.

ABBREVIATIONS

AI	: Artificial Intelligence	DIPP	: Department for Promotion of Industry and Internal Trade
AIBP	: Accelerated Irrigation Benefit Prog.	DPIIT	: Department for Promotion of Industry & Internal Trade
AICTE	: All India Council for Technical Edu.	EoDB	: Ease of Doing Business
AISHE	: All India Survey on Higher Education	E-NAM	: e-National Agricultural Market
AL	: Agricultural Labourer	EPI	: Export Preparedness Index
AMRUT	: Atal Mission for Rejuvenation and Urban Transformation	FPOs	: Farmer Producer Organizations
ANM	: Auxiliary Nurse Midwifery	FTA	: Foreign Tourist Arrivals
APEDA	: Agricultural & Processed Food Products Export Development Authority	FY	: Financial Year
ASHA	: Accredited Social Health Activist	GBI	: Generation Based Incentives
ASPIRE	: A Scheme for Promotion of Innovation, Rural Industry & Entrepreneurship	GCA	: Gross Cropped Area
AWC	: Anganwadi Centre	GDP	: Gross Domestic Product
AWW	: Anganwadi Worker	GER	: Gross Enrolment Ratio
AYUSH	: Ayurveda, Yoga, Unani, Siddha & Homocopathy	GFCF	: Gross Fixed Capital Formation
CA	: Control Atmosphere	NDP	: Net Domestic Product
CAC	: Corporate Affairs Commission	NFHS	: National Family Health Survey
CAGR	: Compound Annual Growth Rate	NFSM	: National Food Security Mission
CBDP	: Community-Based Disaster Preparedness	GI	: Geographical Indication
CGST	: Central Goods and Service Tax	GIS	: Geographic Information Systems
CGTMSE	: Credit Guarantee Trust Fund for Micro and Small Enterprises	GMVN	: Garhwal Mandal Vikas Nigam
CHC	: Community Health Centre	GSDP	: Gross State Domestic Product
CHCs	: Custom Hiring Centres	GST	: Goods and Service Tax
CMRY	: Chief Minister's Rozgar Yojana	GSVA	: Gross State Value Added
CoEs	: Centres of Excellence	GVA	: Gross Value Added
DBT	: Department of Bio-Technology	III	: Innovation India Index
DDU-GKY	: Deen Dayal Upadhyaya Gramin Kaushalya Yojana	IBDS	: Integrated Beekeeping Development Scheme
DICs	: District Industries Centre	ICDS	: Integrated Child Development Services
		ICIMOD	: International Centre for Integrated Mountain Development
		ICT	: Information and Comm. Technology

IFAD	: International Fund for Agri. Development	NAFED	: National Agricultural Cooperative Marketing Federation of India
IGST	: Integrated Goods and Service Tax	NCDC	: National Cooperative Development Corporation
IHCAP	: Indian Himalayas Climate Adaptation Programme	RE	: Revised Estimates
IIEs	: Integrated Industrial Estates	RES	: Renewable Energy Sources
ILSP	: Integrated Livelihood Support Project	RKVV	: Rashtriya Krishi Vikas Yojana
IOFS	: Integrated Organic farming System	NHM	: National Health Mission
IRENA	: International Renewable Energy Agency	NIC	: National Information Centre
ITA	: International Tourist Arrivals	NLM	: National Livestock Mission
ITIs	: Industrial Training Institutes	NMAET	: National Mission on Agriculture Extension & Technology
JNNURM	: Jawaharlal Nehru National Urban Renewal Mission	NMSA	: National Mission for Sustainable Agriculture
KMVN	: Kumaon Mandal Vikas Nigam	NDP	: National Dairy Plan
LoA	: Letter of Approval;	NEET	: Not in Education Employment or Training
MAP	: Medicinal and aromatic plants	NcGP	: National e-Governance Plan
MCM	: Million Cubic Meters	NFDB	: National Fisheries Development Board
MNRE	: Ministry of New & Renewable Energy	NBSS	: National Bureau of Soil Survey
MNREGA	: Mahatma Gandhi National Rural Employment Guarantee Act	NPOF	: National Project on Organic Farming
MoU	: Memorandum of Understanding	NRLM	: National Rural Livelihood Mission
MOOC	: Massive Open Online Course	NSDP	: Net State Domestic Product
MSME/MSE	: Micro Small Medium Enterprises	NSSO	: National Sample Survey Office
MSP	: Minimum Support Price	ODOP	: One District, Two Products
MSY	: Mukhyamantri Solar Yojana	OTR	: Own Tax Revenue
MSECDP	: Micro & Small Enterprises Cluster Development Programme	PCNSDP	: Per-Capita Net State Domestic Product
MUDRA	: Micro Units Development and Refinance Agency Bank	PE	: Provisional Estimates
MVDA	: Mountain valley Development Association	PKVV	: Paramparagat Krishi Vikash Yojana
NAARM	: National Academy of Agricultural Research Management	PMEGP	: Prime Minister Employment Guarantee Programmes
NABARD	: National Bank for Agriculture and Rural Development	PMFBY	: Pradhan Mantri Fasal Bima Yojana
		PMGDASA	: Pradhan Mantri Gramin Digital Saksharta Abhiyaan



PMJDY	: Pradhan Mantri Jan-Dhan Yojana	TFR	: Total Fertility Rate
PM-KCC	: Pradhan Mantri Kisan Credit Card	TTR	: Total Tax Revenue
PMKSY	: Pradhan Mantri Krishi Sinchayee Yojana	TUF	: Technology Upgradation Fund Scheme
PPPs	: Public-Private Partnerships	UCOST	: Uttarakhand State Council for Science & Technology
PWD	: Public Works Department	UEPPCB	: Uttarakhand Environment Protection & Pollution Control Board
RCS	: Regional Connectivity Scheme	UHHDC	: Uttarakhand Handloom and Handicraft Development Council
RSBY	: Rashtriya Swasthya Bima Yojana	UKSERC	: Uttarakhand Science Education & Research Centre
SAME	: Sub Mission on Agricultural Extension	UNDP	: United Nations Development Programme
SDG	: Sustainable Development Goal	UOCB	: Uttarakhand Organic Commodity Board
SGDP	: State Gross Domestic Product	UREDA	: Uttarakhand Renewable Energy Development Agency
SGST	: State Goods and Service Tax	URWSSP	: Uttarakhand Rural Water Supply & Sanitation Project
SHG	: Self Help Group	UTPADAC	: Uttarakhand Program for Advanced Development of Apple Cultivation
SMAM	: Sub-Mission on Agricultural Mechanization	VAT	: Value Added Tax
SME	: Small and Medium Enterprises	WBCIS	: Weather-Based Crop Insurance Scheme
STIP	: State Technology Improvement Plan		
SUPHAL	: Scheme for Upgradation of Post-Harvest Apple Logistics		
SEZs	: Special Economic Zones		
SWCS	: Single Window Clearance System		
SWOT	: Strengths, Weaknesses, Opportunities And Threats		



UTTARAKHAND ECONOMIC SURVEY 2023-24



EXECUTIVE SUMMARY

The second volume of Uttarakhand Economic Survey 2023-24 has in its focus Doubling of the State Economy and progress made in the endeavour during the year. The first two chapters of the report examine the status of Uttarakhand economy and contribution of various sectors and sub-sectors to the State GSDP and GSVA. It then analyses the growth trends of the State Economy during the year.

Various chapters of the report outline the progress made by Uttarakhand government to boost the economy, taking into consideration the measures proposed in Sashakt Uttarakhand @2025 Implementation and Monitoring Plan 2023. References are made to the quarterly progress reports of the Sashakt Uttarakhand @2025 project.

Progress is evident in several focus sectors and initiatives as envisaged in Sashakt Uttarakhand @ 2025 document. Pace of implementation of planned measures requires to be considerably enhanced and the concerned departments require to work on war footing to catch up, if the planned timelines are to be met, especially in Skill Development and AYUSH areas.

Progress on Policy Framework:

- Uttarakhand Service Sector Policy 2023 → GO with revisions issued in March 2024.
- Uttarakhand Air Connectivity Scheme → Approved in February 2024.
- Development of NTFP, Herbal & Aroma Tourism through Federation → State Level Federation constituted and orientation workshop with key stakeholders held.
- Uttarakhand Helipads Promotion Policy Approved in November 2023 → Locations for development of helipads / heliports notified by UCADA.
- Uttarakhand Pumped Storage Policy Approved in September 2023 → Several proposals have been received to develop self-identified off-stream pumped storage projects.
- UTPADAC Policy (Uttarakhand Program for Advanced Development of Apple Cultivation) → Approved in September 2023. The cost benchmarks were under review by the Department.
- AYUSH Policy → Approved in September 2023 and notified
- Uttarakhand Drone Usage and Promotion Policy → Approved in June 2023. The High-Powered Committee and State Drone Coordination Cell has been formulated for policy implementation.
- Uttarakhand Tourism Policy → Tourism Policy April 2023 has been approved and published, Guidelines have been drafted and single window clearance portal has been modified.

Preparation of several key policies was in progress including :

- Uttarakhand Housing Policy
- Scheme for Upgradation of Post-Harvest Apple Logistics (SUPHAL).
- Programme for Advanced Development of Hi-tech Apple Nurseries (PRADHAN),
- Mahak Revolution (Aroma Cultivation Policy),
- Kiwi Cultivation Policy,
- Millets Cultivation Policy,
- Uttarakhand Poultry Policy,
- MRO Policy.

Signing of MoUs with Investors:

Government of Uttarakhand has signed multiple MoUs or received Expressions of Interest (Eols) from investors across sectors:

- ₹ 15,000 Cr with JSW Neo Energy for development of Pumped Storage Projects of up to 3,000 MW capacity. 800 MW site allocation request sent (₹ 4,000 Cr).
- ₹ 4,000 Cr with ITC for development of a paper and pulp mill.

Tourism

- | | |
|----------------------------------|--|
| 1. ₹ 1,000 Cr with Club Mahindra | 2. ₹ 800-1,000 Cr with Karamchand Thapar Group |
| 3. ₹ 300 Cr with Oberoi Group | 4. ₹ 300 Cr with ITC Hotels |
| 5. ₹ 300 Cr with Mayfair Group | 6. ₹ 250 Cr with DS Group |
| 7. ₹ 250 Cr with Paul Resorts | 8. ₹ 250 Cr with Suryagarh Resorts |
| 9. ₹ 200 Cr with Khyber Resorts | 10. ₹ 200 Cr with CGH Resorts |

Healthcare

- | | |
|-------------------------------------|------------------------------------|
| 1. ₹ 800 Cr with Yatharth Hospitals | 2. ₹ 500 Cr with Cygnus Hospitals |
| 3. ₹ 300 Cr with Apollo Hospitals | 4. ₹ 200 Cr with Global Hospitals |
| 5. ₹ 200 Cr with Yashoda Hospitals | 6. ₹ 100 Cr with Sankar Nethralaya |
- ₹ 1,400 Cr with Adani Cement
 - ₹ 800-1,000 Cr with SRM University
 - ₹ 120 Cr ITC Solar Plant
 - ₹ 10 Cr Mahyco Apple Nursery

Activation of Uttarakhand Investment and Infrastructure Development Board (UIIDB): Managing Director of the Board appointed in January 2024. Key projects initiated/taken up by UIIDB are:

- Haridwar-Rishikesh Heritage Planning – Tender process completed and selection of winning bidders was closed in March 2024 for master planning, DPR preparation and construction monitoring activities of development projects in these 2 cities. Work was expected to commence thereafter.
- Master Planning of Dakpatthar – Tender process to select a Master Planner and Architect for planning of developments in this land parcel was started.
- Master Planning of Yamuna Colony, Dehradun – Tender process for master planning of Yamuna Colony was expected to be started soon.
- Empanelment of Master Planners and Architects – A proposal was mooted to empanel Master Planners and Architects for different projects.
- It is proposed to take up multiple other projects in coming months such as Sharda River Corridor Development, Racecourse Colony Redevelopment etc.

Planned Activities in the Future:

To give impetus to the implementation process the State government requires to focus on:

- Strengthening the Institutional Setup to steer the implementation of plans by multiple departments.
- Service Sector Policy -Approval of guidelines/rules for Service Sector Policy
- Interdepartmental transfer of land for allotment and auctions for select land parcels.
- Approval and roll out of remaining policies under the Apple Mission, and new policies under the Kiwi, Aromatic Crops and Millets Missions
 - ▲ Aggregation units policy to promote set up of Sorting & Grading Units, CA Stores and Goods Ropeways (SUPHAL)
 - ▲ Hi-tech Apple Nurseries policy to promote supply of high quality planting materials (PRADHAN)
 - ▲ Millets Mission Policy to promote cultivation and processing of millets
 - ▲ Mahak Revolution Policy to promote cultivation and processing of aromatic plants
- Award of key projects initiated by UIIDB
- Grounding of investment under MoUs signed : Hand-holding investors; Unlocking project bottlenecks, resolving queries and simplifying processes and procedures.

Key projects that need immediate attention:

- Land transfer from concerned Departments to UIIDB for development of World Class Higher Education Institutes, Greenfield Tertiary Care Hospitals and Greenfield Medical College under Service Sector Policy
- Land transfer from Government of India for development of New Integrated Admin City in Dehradun
- Approval and Performance Improvement Plan (PIP) sign-off between State and UPCL for transformation of the power distribution company

The following chapters bring out the policy, programmatic and institutional gaps and challenges faced by the primary, secondary and tertiary sectors on the path of doubling the State Economy.

Finally, the report offers recommendations for accelerating the pace of change as envisaged in the Sashakt Uttarakhand @2025 Implementation Plan and suggests additional measures that State may consider, to shift into high gear to make the vision a reality.

The report is organised in eight chapters and several sections, each covering an important aspect and offering solutions and directions for policy, programmatic and institutional measures to double the State Economy.

CHAPTER – 1: OVERVIEW OF STATE ECONOMY

This chapter provides an analysis of Uttarakhand's fiscal landscape, revenue trends, and policy recommendations. It comprises two main sections: one focusing on key fiscal indicators like GSDP, sectoral shifts, revenue sources, and expenditure patterns, and the other offering policy suggestions for economic revitalization.

The Gross State Domestic Product (GSDP) of Uttarakhand for FY 2023-24 (at current prices) is projected to be ₹3.46 lakh crore crores. This is a growth of more than 13.97% over the GSDP figures for 2022-23 (₹ 3.03 lakh crores AE). The per capita GSDP is estimated at ₹ 2,95,751, reflecting a 7% annualized increase since 2017-18. Expenditure, excluding debt repayment, is set at ₹ 66,179 crore, signifying a 10% rise, while revenue, excluding borrowings, is expected to reach ₹57,133 crores, a 9.7% increase, showcasing effective revenue management.

The State's tax Department collected a total tax of ₹ 31,968 crores (CGST+IGST+SGST+ CESS) during (2023-24) financial year. The tax collections have increased by 15% over the collections of FY 2022-23 (₹ 27,720 crore)

The State's Own Tax Revenue (OTR) jumped from ₹ 17,103 crore in FY 2022-23 (RE) to ₹ 19,620 (RE) crore in FY 2023-24, a 14.17% increase over previous year.

OTR as a percentage of TTR was 61.70 FY 2022-23. OTR contributed a decreased 61.37% to total tax revenues of the State in FY 2023-24.

State excise as a percentage of OTR increased to 22.92% in FY 2022-23 but reduced to 19.78% of the OTR in FY 2023-24 due to spurt in OTR collections in FY 2023-24.

Since 2018-19, the fiscal deficit showed a declining trend as it touched 3.09%. This trend continued even in 2019-20 as it fell to 2.63% of GSDP. The fiscal deficit increased in FY 2022-23 to 2.81% and further increased to 2.99% in FY 2023-24.

Policy Recommendations are to focus more on promoting labour intensive industries, enhancing organic farming and horticulture, bolstering skill development, supporting

MSMEs especially in food processing, biotech, and investing in key sectors like tourism, healthcare, and digital services. Some other suggested measures are: Property tax from resorts and facilities outside the city limits be introduced; user charges to be linked to current inflation rate for revisions, and additional users' charges (drinking water, garbage collection) may be added in electricity bills for efficient collection.

CHAPTER – 2: MACRO ECONOMIC AGGREGATES:

Under Sashakt Uttarakhand @25, the focus is mainly on Core Infrastructure sectors like Agriculture and Allied Sectors, Manufacturing, Tourism, AYUSH and Wellness, Higher Education, Skill Development, Urban Development, Roads, Energy, and Railways.

To fulfil this objective, the Government has promulgated about 30 new policies and amendments to previously promulgated policies, mainly including Macro Industrial Policy, Private Industrial Park Policy-2023, Service Sector Policy-2023, MSME Policy-2023, Start-up Policy-2023, Tourism Policy-2023, Customized Package Policy, Logistics Policy-2023, Export Policy-2023, AYUSH and Wellness Policy, Film Policy-2015 (amended in 2019), Drone Policy-2023, Pumped Storage Project Policy-2023, Solar Energy Policy-2023.

Main highlights of the macroeconomic picture of the State are:

- At current prices, Uttarakhand's GSDP is projected to be ₹ 3,94,675 Cr in FY25. As compared to FY24, the GSDP of the State is estimated to increase at a CAGR of 14% (as per the Uttarakhand budget document for FY25).
- The per capita GSDP of Uttarakhand in 2023-24 (at current prices) is estimated at ₹ 2,95,751 (Uttarakhand FRBM Statements 2024-25).
- Services Sector is the biggest economic segment of the Uttarakhand economy. The Services Sector has displayed a growth of 8.5-9% nominal CAGR during the last 5 years. Its prominently growing sub-sectors in

the State are Tourism, Education, Health, Financial Services, Trade, Communication and Transport.

- Maximum contribution has been derived from the Secondary Sector (47%), as per the Gross Value Added data for FY 24 (Advance Estimates). The Secondary Sector, which is the largest contributor to the GVA includes the sub-sectors of Manufacturing; Electricity, Gas, Water Supply & Other Utility Services; and Construction.
- According to the Uttarakhand Budget Estimates for the year 2024-25, the State's tax revenue is estimated to be ₹ 21,959 Cr in FY 25. This is an estimated 15% jump over the Revised State Budget Estimate for FY 24.
- In a similar way, the component of State's own non-tax revenue is also likely to increase by 17% to ₹ 4,873 Cr during FY 25 as compared to its figure in the revised budget estimate for FY 24.

Resource Augmentation

Several measures are underway to augment the financial resources of the State such as:

- (i) Settling pending tax claims on time,
- (ii) Settling arrears in assessment of taxes, and
- (iii) Recovering the arrears of revenue,
- (iv) Using technology to assess property taxes and their recovery,
- (v) Green cess on out-of-state vehicles other than two-wheelers, electric and CNG vehicles, those registered in Uttarakhand and those engaged in essential services like ambulances and fire brigades

CHAPTER – 3: RESIDENT AGRICULTURE AND ALLIED ACTIVITIES

The agricultural sector in Uttarakhand holds a central place in the State's economy. Characterized by its challenging mountainous terrain and diverse climatic zones, the sector supports a variety of crops including cereals, pulses, fruits, and medicinal plants.

Despite the overall growth in the State's economy, agriculture's share of the Gross State Domestic Product (GSDP) has gradually declined. From 2011-12 to 2023-24, while agriculture's GSDP more than doubled from ₹13.3 thousand crores to ₹9.3 thousand crores, its relative

contribution to the total GSDP fell from 11.5% to 8.5%. The temporary spike to 12% during the pandemic underscored the sector's resilience, as agriculture buffered the State economy when other sectors faced severe downturns. However, agriculture's shrinking share overall reflects the State's economic diversification and the sector's shifting role in a rapidly modernizing economy.

Crop production trends reveal the challenges and gradual evolution of Uttarakhand's agriculture. Cereal production, particularly of wheat and rice, remains dominant, but production figures for food grains and pulses have seen a gradual decrease over recent years. The agricultural labour force has similarly declined in the State, with a drop in households engaged in self-employment in agriculture from 40.5% in 2017-18 to 31.3% in 2023-24. This decline reflects broader shifts, with more families pursuing non-agricultural employment, underscoring the growing influence of economic diversification.

Infrastructure limitations are a major obstacle to agriculture in Uttarakhand. Irrigation infrastructure, essential in the predominantly rain-fed agricultural zones, remains concentrated in lowland areas, leaving higher altitudes underserved. Tubewells provide 58% of irrigation, and canals cover 28%, but this coverage is inadequate for the diverse and often remote farming areas in the State. Consequently, the government has increased its investment in irrigation infrastructure, public expenditures on agricultural mechanization, and cold storage facilities to support high-value crops like horticulture and medicinal plants.

Uttarakhand government has actively promoted sustainable and organic farming to increase crop resilience & environmental sustainability. As traditional farming practices face growing threats from climate change, the State has invested in training programmes to encourage farmers to adopt organic techniques, which align with the global demand for chemical-free produce. Organic farming has become a significant area of focus, leading to an increase in certified organic farmland and registered farmers. Efforts have also extended to the promotion of millets and other traditional, climate-resilient crops suited to the hill regions. Through this approach, the government aims to enhance food security, conserve biodiversity, and maintain sustainable land use.

Technology integration is transforming Uttarakhand's agricultural landscape. Digital marketing platforms, such as the National Agriculture Market (e-NAM), allow farmers to access wider markets and competitive prices by bypassing intermediaries. The adoption of precision agriculture, including the use of satellite imagery and drones, has also improved irrigation efficiency and crop

health monitoring, while modern storage facilities reduce post-harvest losses for perishable produce. State-supported programmes have enhanced farm mechanization, such as tractors, weeding equipment, and drones, to aid in tasks that are labour-intensive and challenging due to the terrain. This modernization enables small farmers to adopt efficient practices that were once out of reach, reducing labour demands and improving productivity.

Additionally, the development of Farmer Producer Organizations (FPOs) has been instrumental in promoting collective farming and increasing bargaining power for small and marginal farmers. Supported by State and central policies, these organizations provide members with access to high-quality seeds, agricultural inputs, and credit, while also improving market access. During 2023, the State registered significant numbers in digital agricultural services, with over 90,000 farmers and nearly 230 FPOs leveraging the e-NAM portal. However, challenges remain in the form of bureaucratic delays, financial constraints, and infrastructure limitations, which limit FPO effectiveness, particularly in remote regions.

Policies aimed at financial support, such as the Pradhan Mantri Kisan Credit Card (PM-KCC) and crop insurance schemes, have also played a critical role. The expansion of credit coverage and crop insurance for farmers has helped reduce financial risks and encouraged the adoption of advanced farming practices. Despite these efforts, barriers persist, including limited banking infrastructure in remote areas, low financial literacy, and the high costs associated with insurance premiums. To address these issues, the State is working to increase farmer awareness of available financial products and facilitate easier access to insurance and credit in rural/remote regions.

The allied sectors, particularly horticulture, animal husbandry, and organic farming, have further expanded Uttarakhand's agricultural base, offering new income sources for rural families. The State has seen increased production in high-value horticultural crops, largely due to the establishment of centres of excellence, quality nurseries, and a cold chain infrastructure that supports the transport of perishable products to wider markets. This diversification not only boosts farm incomes but also contributes to rural employment, stabilizes local economies, and strengthens resilience against economic shocks. Despite notable progress, the sector still faces obstacles such as insufficient storage, transportation challenges, and lack of market linkages, which restrict optimal realisation of the growth potential for high-value crops in the State.

Uttarakhand's agricultural policies and the sector's modernization underscore the State's commitment to

supporting a sector that remains central to rural livelihoods. Continued investments in infrastructure, sustainable practices, and technological advancements, combined with targeted policies to improve credit and market access, reflect a comprehensive approach to overcoming the unique challenges faced by the agricultural sector in the State. Through these efforts, Uttarakhand seeks to build a more resilient, diversified, and sustainable agricultural economy that meets the needs of its people while addressing the environmental challenges posed by its diverse and fragile landscapes.

Looking forward, Uttarakhand must continue to embrace technological innovation, facilitate easier access to financial resources, and promote farmer collectives through FPOs to ensure an inclusive agricultural growth model. The emphasis on cluster farming, precision agriculture, and digital marketing platforms is a step in the right direction, enabling farmers to improve productivity, reduce input costs, and access better markets. However, these initiatives must be supported by a strong policy framework that addresses the socio-economic barriers to adoption, particularly in marginalized rural areas.

Investible Projects under Sashakt Uttarakhand

Government of Uttarakhand has undertaken several investible projects to revamp the agricultural sector, focusing on diverse areas such as horticulture, animal husbandry, fisheries, and agro-industrial development. These initiatives aim to enhance productivity, create value chains, and attract private investments while ensuring sustainable agricultural practices.

Key projects include:

- Development of a Millets Food Park at Sitarganj
- Aroma Park in Kashipur
- Mahak Revolution

While investor outreach for the Millets Food Park is ongoing, the Aroma Park has seen significant progress, with 35 plots allotted to investors and construction initiated on 12 plots. Mahak Revolution, focused on aromatic plantations, has completed its policy drafting phase, awaiting approval to commence applications.

In horticulture, projects like the Development of High-Density Apple Orchards and Controlled Atmosphere (CA) Stores for Apple Storage are in progress. Although these initiatives have faced delays in policy approvals and

amendments to subsidy disbursement processes, efforts to empanel orchard developers continue.

High-Tech Nurseries Development project in Karmi, Bageshwar, has advanced, with land site visits completed and requests for proposals (RFPs) under review.

In animal husbandry and fisheries, the government has prioritized projects such as:

- Integrated Dairy Project in Simali, involving organic milk and Badri cow ghee production,
- O&M of Government Brood Bank and Hatcheries in PPP mode.

While most of these projects are in the preparatory stages, with proposals submitted and RFPs pending, construction of an Integrated Aquapark in Sitarganj has commenced.

Agro-industrial projects include:

- Establishment of a Winery and Distillery Unit
- Animal Waste to Wealth Management Facilities in Rudrapur
- Carbon Credits Project through Afforestation and Pine Needle Fuel

While the winery project is operational on private land, others are awaiting final approvals.

Carbon Credits Project through Afforestation and Pine Needle Fuel aims to combine environmental sustainability with economic benefits, with draft RFPs submitted for departmental review.

Despite these advancements, challenges such as delays in policy approvals, land parcel identification, and investor on-boarding remain. However, with continued focus and expedited approvals, these projects hold the potential to transform Uttarakhand's agricultural landscape by fostering innovation, enhancing productivity, and promoting sustainable development.

Uttarakhand has introduced several policy-driven initiatives to transform the agricultural and allied sectors. These policies emphasize sustainable farming practices, crop diversification, advanced technologies, and value-added processing to improve productivity and farmer livelihoods. However, many are still in various stages of approval and implementation, highlighting the need for expedited progress.

Uttarakhand is emerging as a significant hub for manufacturing, leveraging its unique strengths and strategic investments. The manufacturing sector plays a vital role in the State's economy, contributing substantially to its Gross State Value Added (GSVA) across diverse industries like pharmaceuticals, textiles, and food processing. Over the past decade, this sector has grown due to government incentives, industrial zones, and focused initiatives, despite challenges like geographical constraints. Uttarakhand's manufacturing industry continues to evolve, prioritizing productivity, innovation, and expansion to shape the State's economic future.

The "Sashakt Uttarakhand" framework outlines 150 initiatives to achieve this vision, focusing on investible projects, sectoral initiatives, and policy reforms. Key efforts include promoting green manufacturing, enhancing logistics, fostering startups, and building capacity for improved ease of doing business. These initiatives aim to attract investments, boost industrial growth, and create employment, positioning Uttarakhand as a preferred destination for investments in manufacturing.

It is necessary to give an added thrust to the initiatives and achieve the envisaged milestones in the agreed time. The status as in September 2024 was as under:

- 1 Electronics Manufacturing at EMC, Kashipur: Investor Outreach Ongoing, Land allotted to 6 players, establishment of vital, essential, and desirable services as per MeitY implementation plan are the next steps to be initiated.
- 2 Priority Sector Industry Development at Parag Farms, Udham Singh Nagar: Project submitted; Investor Outreach Ongoing. Next steps are the approval of inception report, market demand analysis report, and tentative master plan.
- 3 AYUSH and Herbal Products Manufacturing at Aroma Park, Kashipur: 80% has been allotted. Identification of land parcel is underway in USN for AYUSH park focusing on Medicines and Equipment
- 4 Plastics Manufacturing at Integrated Industrial Estate Sitarganj, Phase II, Udham Singh Nagar: Under Process with 30-35% allotment done, Investor Outreach Ongoing, Land allotted to 4 players. Next step is to process investor applications through single window portal.

- 5 Wood-based Industries at Nepa Farms, Kashipur: It was under process, investor outreach was ongoing earmarked for ITC Paper and Pulp Mill Project
- 6 Development of Food Park at Sitarganj: Under process. Identification of dedicated land parcels is to be done.
- 7 Feasibility analysis for establishing data centers in hilly regions: Discussions with the department held on 10th October.

Recommendations are: It is essential to develop both backward and forward linkages, allowing local products to serve as raw materials and final goods.

Addressing power challenges, the government should consider installing solar water pumps in hilly regions, making the State more attractive for new industrial units while promoting cost-effective energy solutions.

Establishing research institutes will foster effective production techniques and generate diverse job opportunities, facilitating technological advancements.

Additionally, the State may prioritize warehousing facilities to improve operational efficiency for local businesses, attracting further investment.

An integrated boost output, stimulate growth, and create employment opportunities, thereby reducing migration.

Providing medical insurance for workers in hilly industries can encourage local employment and support new ventures.

Effective implementation and monitoring of government schemes are crucial to achieving targeted outcomes within designated timeframes.

Given the State's unique topography, land should be utilized efficiently, promoting vertical development to maximize resources.

Furthermore, despite existing policies for MSMEs, greater focus on infrastructure, education, and healthcare is necessary to address migration issues.

Lastly, ensuring secure working conditions and protecting labor rights through diligent monitoring will create a safer work environment for all.

A Journey Towards Sustainable Growth and Tourism Excellence

Uttarakhand's economic growth strategy underscores its commitment to sustainable development, enhanced infrastructure, and the promotion of tourism as a key economic driver. Through a combination of strategic projects, policy reforms, and capacity-building initiatives, the State is poised to attract investment, create jobs, and improve the quality of life for its residents.

Tourism Vision of Uttarakhand

In 2023-24, Uttarakhand embarked on a transformative journey to solidify its position as a premier destination for tourism and investment in India. The State's economic growth strategy has been fuelled by sectoral initiatives, investible projects, policy measures, and capacity-building activities that aim to enhance infrastructure, attract private investment, and promote sustainable tourism.

Enhancing Tourism Infrastructure and Investment

A significant focus for Uttarakhand this year has been the development of tourism infrastructure and attracting private investment. The State has identified several key projects and initiatives to drive this agenda.

This chapter details the key projects and initiatives and the status of progress of the same.

- Development of Greenfield Premium Hospitality Establishments: Identification of sites has been completed, efforts to attract major investors have progressed. Memorandums of Understanding (MoUs) with key players have been signed totalling an investment of ₹2,500 crore.
- The State's revised service sector policy has also been approved, strengthening the investment framework.
- Guidelines for the development of greenfield hospitality has been approved by the Uttarakhand Investment and Infrastructure Development Board (UIIDB), and Letters of Award (LoA) would be issued for 5+ sites by FY25.
- Onboarding Private Partners for Refurbishment and O&M of GMVN/KMVN Guesthouses: Clustering of GMVN and KMVN properties has been completed. LoAs are being issued.
- Development of Tourism Products at Identified Circuit Locations: A comprehensive list of potential products identified.
- Operation and Maintenance of the Institute of Hotel Management (IHM) in PPP Mode: The selection of institutes has been completed.
- RFP for the Food Craft Institute (FCI) Almora is being finalised.

Strengthening Policy and Institutional Frameworks

To ensure the successful implementation of its tourism and investment initiatives, Uttarakhand has also focused on strengthening its policy and institutional frameworks:

- Institutional Restructuring of UTDB: A dedicated Sashakt Uttarakhand cell within UTDB is proposed to oversee day-to-day project implementation and investor outreach.
- Merger of KMVN and GMVN: A feasibility study is in progress.
- Selection of Implementation Agency For the OTA Platform: A concept note outlining the vision for a State-led OTA platform has been formulated.
- Appointment of State-led Homestay Aggregator: The tourism department has launched the "Uttarastay" Portal for the facilitation, promotion, and marketing support of homestay operators in place of an aggregator.
- Institutionalising and Globalising Rishikesh as a Yoga Capital: The tender process for master planning, DPR preparation, and construction monitoring was completed and selection of master planning consultants finalised in March 2024.
- Converting Defunct Bridges as Halt Areas With Basic Roadside Amenities: The PWD has identified five unused bridges along key routes, The project will start by developing one or two of

these bridges into restaurants. A wayside amenities policy has been approved in August 2024.

- **Development of Tourism Spots Around Major Destinations:** Several MoUs have been signed with investors to develop premium hospitality establishments across approximately 15 land parcels.
- **Innovative/Specialised Tourism Initiatives:** Efforts are ongoing to refurbish and operate selected guesthouses owned by government agencies in Public-Private Partnership (PPP) mode. Pre-feasibility analysis and property clustering have been completed.
- **In specialised tourism, a Heli-tourism package for Adi Kailash** has been successfully formulated and awarded to a vendor.
- **Completion and Operation of Ropeways:**

Kedarnath ropeway project is underway, with the DPR (Detailed Project Report) completed and tenders issued. Hemkund Sahib ropeway DPR is in place and tenders have been floated. The Nainital ropeway project proposal is being reviewed by the government in collaboration with the National Highways Logistics Management Limited (NHLML). Haridwar ropeway project from Har Ki Pauri to Chandidevi has been approved. The Uttarakhand government has approved developing 46 new ropeway projects to further boost tourism and connectivity across the State.

- **Development of New Tourism Destinations:** Efforts for Land transfer for Integrated Hospitality District, Narendra Nagar are in progress. Planning of heritage projects in Haridwar and Rishikesh is underway.

CHAPTER – 6 CORE & URBAN SECTORS – THE ECONOMIC PILLARS

Uttarakhand government is improving its connectivity and logistics to strengthen the core infrastructure across the State. This will have a multiplier effect in terms of employment generation, local sourcing of selected raw materials and higher local consumption levels. To speed up the process of infrastructure development across the State, the Uttarakhand Investment and Infrastructure Development Board (UIIDB) was formed by an Act of the Government of Uttarakhand in May 2023.

This chapter outlines the progress made by the State in Core Sectors and in Urban Development.

Electricity: Power demand has been outpacing supply (or generation) over the past few years in the State. By December 2023, the electricity generated (4192 MU) was less than half of its demand (11827 MU). To meet this growing demand, the State government needs to focus on developing its hydro and solar power potential. Additionally, there is a need to financially strengthen Uttarakhand Power Corporation Limited (UPCL).

Steel: The State Government has been taking various steps to strengthen the steel sector:

- Providing preference to domestically manufactured iron and steel products
- Ensuring adequate availability of raw materials
- Enhancing the availability of domestically generated scrap

- Preventing manufacturing and import of non-standardized steel and to make available quality steel products
- Steps to enhance competitiveness of India's steel sector through adjustment of Custom Duty, Anti-Dumping Duty (ADD) and Countervailing Duty (CVD)
- Higher capital expenditure to boost the production of steel.

Aviation: The aim of the Uttarakhand Government is to provide safe, convenient, economical and efficient air travel across the entire State. To meet this end, the State Government has not only signed an MoU (Memorandum of Understanding) with the Central Government w.r.t. its Regional Connectivity Scheme; it has also partnered with the private sector to strengthen the air connectivity in the region.

Progress on multiple initiatives that are underway are outlined in this section of the Chapter.

In terms of the policy framework, the Uttarakhand Air Connectivity Scheme was approved in February 2024 to accelerate growth of air connectivity services within Uttarakhand and between Uttarakhand and other key regional hubs.

Further, Heli-services are planned in pilot mode to Pithoragarh and other destinations within Uttarakhand

such as Adi Kailash. There is a proposal to provide international airport status to Dehradun airport, with initial flights to Kathmandu.

Uttarakhand Helipads Promotion Policy was approved in November 2023 to increase the prevalence of heli-transport by establishing helipads and heliports by utilizing private land and capital. Locations for development of helipads / heliports have also been notified by the UCADA.

Roads: Uttarakhand Government is committed to strengthen and expand its existing road network. One important road construction project from the overall economic development perspective is the Delhi-Dehradun Economic Corridor. Currently, the project is under construction, with expected completion by 2025. Some of the more crucial greenfield road development projects underway are the Delhi-Moradabad-Kashipur Road, Haridwar Ring Road, and Dehradun Ring Road.

Railway: The Rishikesh-Karanprayag Railway line is under construction by the Rail Vikas Nigam Limited (RVNL).

This is a 125 km long rail link will be a game changer. The link will significantly lower the travel time as well as travel cost.

The rail line shall be connecting the cities of Devprayag, Srinagar, Rudraprayag, Gauchar and Karnaprayag through the five districts of Dehradun, Tehri, Pauri, Rudraprayag and Chamoli.

The first section of 5.7 km between the existing Virbhadr station and Yog Nagari Rishikesh station was commissioned in March 2020. The remaining railway line from Yog Nagari Rishikesh to Karanprayag is expected to be commissioned in 2025.

Logistics: Notification of Uttarakhand Logistics Policy 2023 has been issued by the State government. The

Uttarakhand Logistics Policy, 2023, aims to create an integrated and efficient logistics ecosystem in the State. Overall, the Uttarakhand Logistics Policy, 2023, has the potential to make Uttarakhand a more attractive destination for businesses and investments, improve the competitiveness of businesses in the State, boost economic growth and employment generation and contribute to sustainable development.

Construction of a Multi Modal Logistics Park (MMLP) in Haridwar District is proposed.

Upgradation of Post-Harvest Apple Logistics (SUPHAL) policy has been formulated in October 2024.

URBAN DEVELOPMENT

The State government has implemented many policy and institutional changes during the past year in Urban Development sector. Some of the important initiatives under various stages of review/preparation/ implementation are as listed below:

- Development of Greenfield Townships as satellite towns / urban centres
- Heritage Planning of Rishikesh and Haridwar
- Raising of financing by provision of additional FAR along TOD
- Levying Development Charges (EDC / IDC) in command area of marquee projects
- Uttarakhand Housing Policy
- Development of Aerocity at Jolly Grant Airport
- Institutional Restructuring / Consolidation of Development Authorities
- Development of New Integrated Admin City in Dehradun
- Tiered spatial planning across 3 planning regions in Uttarakhand

Solid Waste Management: The State Government has adopted various policy measures for improving SWM throughout the State, including ramping up segregation at source.

CHAPTER – 7 HEALTH WELLNESS & EDUCATION – THE ECONOMIC FOUNDATIONS

Uttarakhand's development strategy emphasises improving education and healthcare to drive socio-economic progress. Despite significant advancements in educational accessibility and quality, especially at primary and secondary levels, challenges remain, particularly in rural areas. Higher education institutions still face infrastructure deficits and lack specialised programmes crucial for equipping youth with marketable skills. In healthcare,

Uttarakhand has expanded its infrastructure significantly. However, ensuring adequate medical professionals and affordable services in remote areas remains challenging. The State's initiatives to attract and retain medical staff and improve health awareness are vital for addressing these gaps. Additionally, wellness tourism capitalises on Uttarakhand's natural resources, aiming for global recognition in holistic health.

Education: The development of educational infrastructure is exemplified by projects like the Education City at Dakpatthar and greenfield schools designed to offer world-class resources. Key initiatives aim to improve student-teacher ratios and vocational training through public-private partnerships. The state's efforts align with the National Education Policy 2020, focusing on quality improvement through digital platforms and industry collaborations. To strengthen higher education, Uttarakhand fosters partnerships with international institutions, incentivises establishments with policies like the Service Sector Policy 2023, and advocates for skill development aligned with market demands.

Health Sector: Significant strides have been made in healthcare, with investments in hospitals, clinics, and telemedicine services working to remedy gaps in service delivery. Nevertheless, the state needs more medical professionals in remote areas. Innovative public-private partnership models and continued infrastructure improvements aim to enhance service delivery. Holistic health initiatives like wellness tourism leverage the state's natural advantages, promoting services such as yoga and naturopathy, aligning with national trends and international demand.

Skills Development and Vocational Training:

Establishing Centres of Excellence in key areas and upgrading Industrial Training Institutes by major corporations such as Tata Technologies are noteworthy strides in aligning educational outcomes with industry needs. These initiatives align with the state's goals to foster skilled youth prepared for modern job markets.

Wellness Tourism and AYUSH Integration: Uttarakhand is working towards becoming a wellness hub by integrating AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) with new-age health practices. Initiatives under the AYUSH Policy 2018 focus on setting up wellness centres near religious and tourist hotspots, promoting preventive healthcare, and leveraging the state's serene environment for wellness tourism.

Recommendations:

Despite progress, continual improvement and equitable access to high-quality healthcare and education across the state remain vital. The way forward involves expanding healthcare access in remote areas, embracing digital education, promoting AYUSH practices, and enhancing disaster preparedness. Uttarakhand can ensure inclusive growth and economic resilience for its residents by fostering industry-education linkages and investing in sustainable wellness tourism.

Expand Healthcare Access:

Strengthen the "You Quote, We Pay" scheme with flexible compensation and incentives for service longevity of medical specialists.

Enhance Digital Education:

Develop 'Centres of Excellence' in technical education, focusing on strategic locations and industry collaboration. Create a centralised online portal and offer diverse learning options.

Provide professional development and set clear performance metrics.

Promote AYUSH and Wellness Tourism:

Integrate AYUSH in popular tourist areas with targeted marketing and digital presence. Organise annual wellness festivals and partner with universities for research.

Strengthen Disaster Preparedness:

Scale up Aapaat Mitra and DHAMS programs with NGO partnerships and GIS mapping. Develop mobile apps and maintain volunteer databases for quick disaster response.

Support Industry-Education Linkages:

Establish Industry Research Cells and formalise collaborations with local industries. Incentivise student involvement and host research competitions.

Develop specialised courses and create research grants and online platforms.

CHAPTER – 8 NATURAL RESOURCE MANAGEMENT – PROTECTING THE LEGACY

This chapter outlines the status of natural resource and environment management in the State and describes major challenges faced by multiple implementation arms of the State government in the existing policies and processes of protection, conservation, promotion, development, regulation and management of these valuable resources that have critical importance for the wellbeing of the residents as well as for the entire nation.

The State's diverse geographical and climatic features present both opportunities and challenges for conservation and management. Efforts by the Forest Department, Wildlife Wing, Pollution Control Board, and other organizations are vital in addressing these challenges.

Policies and programmes aim to balance conservation with local needs, promoting sustainable practices and

improving rural livelihoods. Continued efforts and adaptive management strategies are essential for ensuring the long-term sustainability of Uttarakhand's natural resources at the State level. The chapter makes a case for compensation by the Central government for the services rendered by the State and its residents for economic benefits emanating from the Uttarakhand forests for the country's population, which are valued at ₹ 95,112 crores annually.

During the period from 2021-22 to 2023-24, significant progress has been made by the Uttarakhand Forest Department, CAMPA Project, JICA Project, and Uttarakhand Watershed Management Department in addressing environmental and conservation challenges. Forest cover has grown, forest fires are reduced, incidence of man-animal conflict is receding. These achievements reflect a commitment to enhancing forest and watershed management, protecting wildlife, and promoting sustainable development practices in Uttarakhand.

To ensure more productive management of Forest resource of the State technical review on conservation and productivity issues are needed like thrust on increasing broad leaved species instead of conifers. Conifers should be promoted in only such areas where broad leaved species cannot be sustained because of unsuitable soil and site Conditions.

The encouraging census data relating to wildlife in the State indicate that Protected Areas and The Forest areas are

being maintained in best possible conditions to support fauna of the State. Monkey population is declining, tiger population is on the increase.

In view of multiple policies, rules, guidelines and measure being taken by the State for natural resource management, following suggestions are provided as way forward:

- a) Enhancing Community Engagement:
- b) Proactive planning to take up innovative projects in the State for enhancing forest yield.
- c) Strengthening Human-Wildlife Conflict Mitigation efforts
- d) Improving Compensation Mechanisms for rural folk
- e) Investing in Infrastructure
- f) Reducing Industrial Emissions
- g) Treating Wastewater Discharge before enter into water bodies
- h) Controlling Construction Dust
- i) Reducing Vehicle Emissions
- j) Strict Enforcement of Pollution Control Laws
- k) Greater focus on Public Awareness and community action for pollution control
- l) Adoption of Green Technologies
- m) Strengthening Regulatory Framework and its implementation
- n) Enhanced Monitoring and Early Warning Systems for Anticipation of Forest Fires and Landslides
- o) Mainstreaming Community Partnership in protection, conservation and promotion of natural resources and environmental safeguarding.



OVERVIEW OF STATE ECONOMY AND FISCAL DEVELOPMENTS

ABSTRACT

This chapter provides an analysis of Uttarakhand's fiscal landscape, revenue trends, and policy recommendations. It comprises two main sections: one focusing on key fiscal indicators like GSDP, sectoral shifts, revenue sources, and expenditure patterns, and the other offering policy suggestions for economic revitalization.

The Gross State Domestic Product (GSDP) of Uttarakhand for FY 2023-24 (at current prices) is projected to be ₹ 3.46 lakh crore crores. This is a growth of more than 13.8% over the GSDP figures for 2022-23 (3.04 lakh crores AE). The per capita GSDP is estimated at ₹ 2,95,751, reflecting a 7% annualized increase since 2017-18. Expenditure, excluding debt repayment, is set at Rs ₹ 66,179 crore, signifying a 10% rise, while revenue, excluding borrowings, is expected to reach ₹ 57,133 crore, a 9.7% increase, showcasing effective revenue management.

Sector-wise, the primary sector's contribution has decreased, with the secondary sector, notably manufacturing and construction, experiencing substantial growth. The service sector, encompassing transportation and financial services, continues to expand steadily. Policy recommendations focus on promoting labour intensive industries, enhancing organic farming, bolstering skill development, supporting MSMEs, and investing in key sectors like tourism, healthcare, and digital services. These strategies address challenges such as infrastructure limitations, environmental vulnerabilities, jobless growth, agricultural issues, and economic disparities, aiming to propel Uttarakhand towards sustainable and inclusive economic growth aligned with the Central Budget 2023-24 objectives.

1. Introduction

This chapter contains two major sections. The first section highlights the State's significant fiscal developments. GSDP, import-export profile, sectoral changes, trends in GST collections, non-GST revenue, state tax collection and non-tax revenue, capital and revenue expenditure. The second portion contains policy recommendations.

Economic Landscape, Revenue and Fiscal Management

Uttarakhand's economic trajectory showcases its robust and dynamic nature. For the fiscal year 2023-24, the Gross State Domestic Product (GSDP) is projected to reach ₹ 3.46 lakh crore, marking a commendable 13.8% growth over the previous year (₹ 3.04 crores). This growth is supported by a well-structured financial plan. The State's

expenditure, excluding debt repayment, is estimated at ₹ 66,179 crore, reflecting a 10% increase from the revised estimates of 2022-23.

Per Capita GSDP, Reflecting on the economic well-being of its citizens, the per capita GSDP of Uttarakhand for 2023-24 is estimated at ₹ 2,95,751 showing an annualized increase of 7% since 2017-18. This steady rise in per capita income underscores the State's ongoing efforts to enhance the quality of life for its residents.

The State's expenditure for 2023-24, excluding debt repayment, is estimated at ₹ 66,179 crore, marking a 10% increase from the revised estimates of 2022-23. On the revenue front, Uttarakhand's receipts, excluding borrowings, are anticipated to be ₹ 57,133 crore for 2023-

24, a 9.7% rise from the revised estimates of the previous year. This increase underscores the State's effective revenue-generating strategies and efficient fiscal management. Uttarakhand is set to maintain a revenue surplus of 1.3% of GSDP (₹ 4,310 crore) for 2023-24, improving from 0.8% in the previous year. The fiscal deficit is targeted at 2.7% of GSDP (₹ 9,047 crore), consistent with the revised estimates of the previous year.

Policy Highlights and Sectoral Growth

The State's policy initiatives reflect its vision for sustainable and inclusive growth. The "Empowered Uttarakhand" programme aims to achieve significant milestones by 2025, focusing on investment in human capital, enhancing healthcare infrastructure, and balancing ecological preservation with economic development. A noteworthy initiative is the promotion of horticulture through the establishment of 50,000 polyhouses and the development of six aroma valleys, including the Cinnamon Valley in Nainital and the Mint Valley in Haridwar.

• Empowered Uttarakhand by 2025

The State aims to achieve significant milestones by 2025 through initiatives focused on human capital investment, enhanced healthcare infrastructure, and a balanced approach to ecology and economy.

• Horticulture and Agriculture

A notable policy thrust is the promotion of cluster-based horticulture with the establishment of 50,000 polyhouses over the next three years. This initiative includes the development of six 'aroma valleys' such as the Cinnamon Valley in Nainital and Mint Valley in Haridwar, fostering agricultural innovation and sustainability.

• Reconstruction and Resilience

In response to environmental challenges, Uttarakhand has allocated ₹ 1,000 crore for the reconstruction of towns affected by subsidence, including Joshimath, ensuring the resilience and safety of its communities.

• Sectoral Contributions and Growth

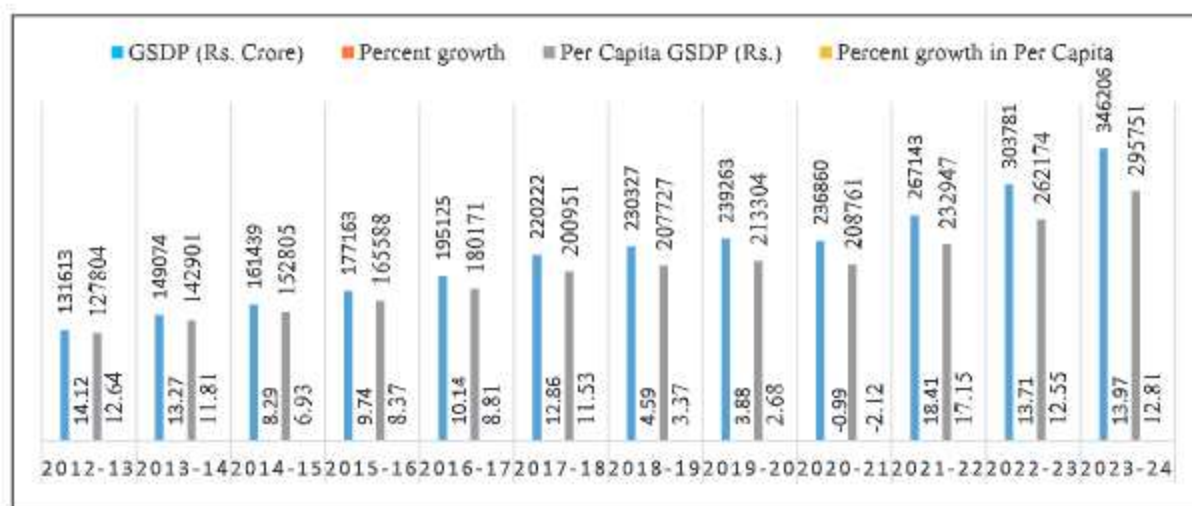
The diverse economic sectors of Uttarakhand contribute significantly to its GSDP. In 2023-24, the agriculture sector is expected to grow by 1.6%, recovering from a contraction in the previous year. The manufacturing sector continues to be a powerhouse, with an anticipated growth of 9.2%. The services sector, vital for tourism and other industries, is projected to grow by 7.6%. These sectors contribute 10%, 47%, and 43% to the State's economy, respectively.

2. General Overview of Uttarakhand GSDP and NSDP in 2023-24

From ₹ 1.31 lakh crore in 2012-13 to ₹ 3.46 lakh crore by the end of 2023-24, Uttarakhand's gross State domestic product has grown continuously. Except for the year 2020, the average growth in GSDP over the last 10 years has been more than 8%. The steady growth number shows how the State economy has changed over time. Based on the per capita GSDP data, the per capita income has gone up from 2.37 lakh rupees in 2012-13 to 2.95 lakh rupees in 2023-24.

According to the Net State Domestic Product (NSDP), the number has been going up steadily since 2012. In 2012, Uttarakhand's NSDP was 1.17 lakh crore rupees, and in 2013-14, it was 1.31 lakh crore rupees. The number kept going up and in 2023-24, the NSDP reached 3.04 lakh

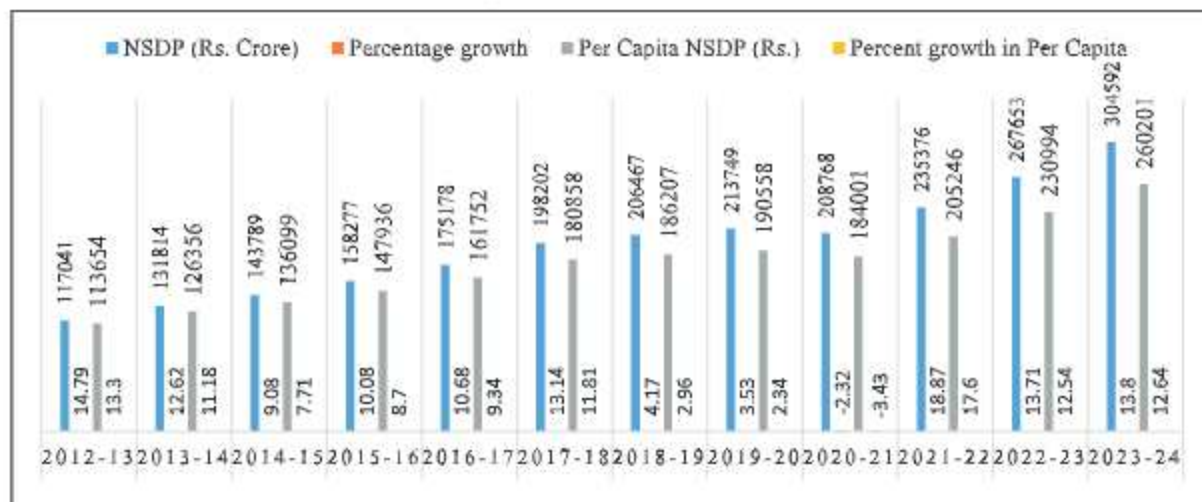
Figure 1: GSDP FY 2012-13 to 2023-24 (At current prices)



Source: Directorate of Economics & Statistics Department of Planning Government of Uttarakhand

crores. In 2012-13, the NSDP went up by 14%, and then in the next three years, it went up by 12%, 9%, and 10%. In 2013, 2014, 2015, 2016, 2017, and 2018, the average percentage stayed as high as 10% each year. The growth has picked up again in the last and current financial years. The data shows that the per capita income has also improved through this period.

Figure 2: NSDP 2012-13 to 2023-24 (at current prices)



Source: Directorate of Economics & Statistics Department of Planning Government of Uttarakhand

agriculture, fisheries, mining, forestry, and livestock has decreased in value from 9.74% in 2015 to 8.49% in 2023-24. There is a continuous fall in the contributions made by the primary sector which basically resembles the national trend. Standalone contribution of agriculture has decreased from 8.53% in 2015 to 8.49% in 2023-24.

The secondary sector or manufacturing has grown significantly over the years. With a consistent contribution to the net value added of the State. Data shows that the contribution of secondary sector has increased from 48.44% in 2015 to 50.29% in 2023-24. Over the last decade percentage contribution of manufacturing sector to the State economy have stayed still, which is indicative of need for added thrust to development and more focused revamping of the manufacturing sector to achieve the goal of doubling the State economy.

2.1. Percentage change to Net Value Added of different sectors to NSDP of Uttarakhand

The changes in the share of different economic activities to the net value added at constant prices in Uttarakhand show a different perspective of economic growth. It can be seen that the total contribution of primary sector including

The contribution of service/tertiary sector in the national economy is higher than manufacturing sector however, the figures depict a different story in the case of Uttarakhand. Data shows that in 2015 the contribution of tertiary sector in the State economy was 34.18% that increased to 42.1% in 2023-24.

The above figures highlight change in the contributions of the primary, secondary and tertiary sectors in the growth of the State economy over the last 10 years. Increasing urbanization, migration and change in peoples' perceptions resulting in decrease in the availability of labour in agriculture are some of the factors due to which agriculture and its contribution to State income demonstrate a decreasing trend, decreasing from 12.50% to 9.36% between 2012-13 to 2023-24. The contribution of

Table 1: Sector Wise Contribution to State Economy 2015-16 (at constant prices)

Item	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Agriculture, Forestry and Fishing	8.53	8.05	7.43	7.41	7.61	9.09	8.52	8.4	7.41
Crops	3.74	3.62	3.35	3.18	3.23	4.52	4.18	4.1	3.44
Livestock	2.58	2.4	2.28	2.27	2.28	2.28	2.17	2.15	2.08
Forestry and Logging	2.18	2	1.78	1.94	2.08	2.25	2.14	2.11	1.86
Fishing and Aquaculture	0.03	0.02	0.02	0.03	0.03	0.02	0.03	0.03	0.04
Mining and Quarrying	1.21	1.48	1.74	1.62	1.48	1.59	1.07	0.95	1.08
Primary	9.74	9.53	9.16	9.03	9.09	10.68	9.6	9.36	8.49

Item	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Manufacturing	38.44	38.57	38.33	37.19	36.04	39.2	39.54	40.08	36.16
Electricity, Gas, Water Supply & other Utility Services	2.51	2.45	2.63	2.68	2.81	3.8	3.99	3.93	4.35
Construction	7.49	7.52	7.14	7.48	7.27	7.69	8.37	9.16	9.78
Secondary	48.44	48.53	48.1	47.36	46.12	50.7	55.99	53.19	50.29
Transport, Communication & Broadcasting Services	6.5	5.71	4.75	4.35	4.77	7.28	6.75	6.3	8.6
Railways	0.1	0.08	0.06	0.05	0.04	0.14	0.13	0.13	0.12
Transport by Means Other than Railways	1.85	1.84	1.82	1.72	1.86	2.25	2.09	1.95	2.55
Storage	0	0.01	0	0.01	0	0	0	0	0
Communication & Services Related to Broadcasting	4.54	3.78	2.87	2.57	2.87	4.88	4.52	4.2	5.93
Trade, Repair, Hotels and Restaurants	11.73	12.29	13.05	14.07	14.74	11.5	11.95	11.71	13.93
Financial Services	2.99	2.74	2.76	2.77	2.84	3.5	3.38	3.36	3.38
Real Estate, Ownership of Dwelling & Professional Services	4.13	4.06	4.09	4.32	4.67	5.88	5.76	5.56	5.75
Public Administration	3.13	3.13	3.42	3.13	2.71	3.94	4.08	4.03	4.32
Other Services	5.7	5.73	6.13	5.88	6.01	6.47	6.52	6.45	6.12
Tertiary	34.18	33.66	34.2	34.51	35.74	38.6	38.46	37.44	42.1
Net State Domestic Product	100	100	100	100	100	100	100	100	100

Source: Directorate of Economics & Statistics Department of Planning Government of Uttarakhand

manufacturing has remained stable for many years and is now increasing its contribution to the State economy, which is good for the growth of economy and employment. This is very different from national economic perspective where services sector dominates the contribution to the national GDP.

2.2. Contribution of Different Sectors to the Uttarakhand GSDP

Figure 4 showcases an overview of the contribution of different sectors to the State GSDP. Along agriculture forestry and fishing have grown its contribution from ₹ 1330209 at 2011-12 constant prices to ₹ 1578006 lakhs in

Figure 3: Primary, Secondary & Tertiary Sectors Contribution to GSDP (at constant prices 2011-12)



Source: Directorate of Economics & Statistics Department of Planning Government of Uttarakhand

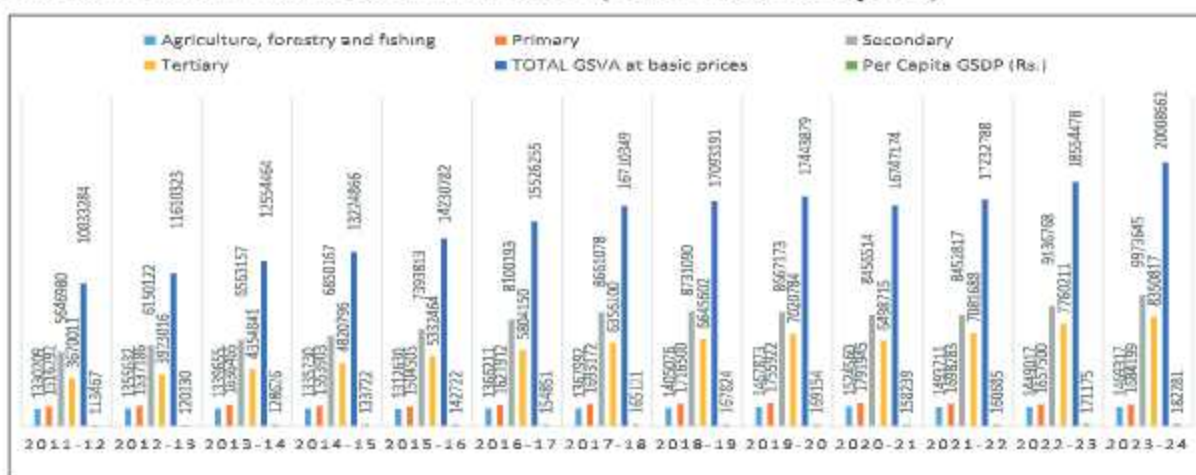
2021-22. Agriculture, forestry, and fishing are the major components of the primary sector. Total contribution of primary sector changed from ₹15,16,292 lakhs to ₹18,61,372 lakh rupees in 2021-22. Data shows a clear upward trend in the contribution of the secondary sector, which includes manufacturing, utilities, and construction. Using 2011-12 as the base year, the total manufacturing output has gone from ₹56,46,980 lakhs in 2011-12 to ₹99,73,646 lakhs in 2023-24. The data also shows that there has been a lot of growth in the State's construction and utilities industries. As the data in the figure shows, the State's manufacturing sector has been growing steadily over the past decades. In the last decade, the total amount of output has almost doubled. The services sector contributes a very important part to the Uttarakhand economy. Most of

the State's service industries, like transportation, roads, storage, financial services, government, and railways, have grown over time. Keeping 2011 as the 'base year', the total output of services was ₹36,70,011 lakhs, which rose to ₹58,04,150 lakhs in 2016-17 and the total is projected to reach ₹83,50,817 lakhs in 2023-24. Growth has also been seen in railways, other forms of transportation besides communication services, and broadcasting.

3. State Fiscal Indicators: Patterns, Deficit, and Capital Ratio

The revenue receipts of Uttarakhand have grown considerably over the last four years. Tax revenues increased from ₹27,720 Crore in FY 2022-23 to ₹31,968 crores in the revised 2023-24 budget estimates.

Figure 4: Sectoral Contribution to Uttarakhand GSDP (at 2011-12 constant prices)



Non-tax revenues were ₹2756 in FY 2021-22 and grew to ₹4175 crore in 2023-24. In recent years the total capital receipts increased from ₹7,935.07 in 2021-22 to ₹19,535.28 in 2023-24. Total receipts are estimated to reach ₹63,774 crores in the 2022-23 as per the budget estimates.

It is not just revenue, which has shown growth; expenditure has also increased over the years and the major increase can be seen on revenue account including interest payments, capital account, loan payments and loans and advances. Total expenditures increased from ₹50,640.05 crores in 2021-22 to ₹77,407.08 crores in 2023-24. Revenue deficit decreased in 2021-22 but suddenly increased to ₹2,334 crores in 2021-22 and to ₹2,460 in 2022-23.

Fiscal deficit as well as primary deficits also shows unusual hikes in the last three to four years' time. The fiscal deficit

was ₹3,735.83 crores in 2021-22 which can increase to ₹9,046.91 crores in recent 2023-24 estimate. The primary deficits in the State may increase from 666 crores to ₹2,485 crores in the last financial year 2023-24.

In the figure above the estimates of annual revenue growth are depicted. The trend is upward in most of the revenue receipts, capital receipts, tax revenue, non-tax revenue, recovery of and borrowings. Revenue receipts and recovery of loans show the biggest jump in the previous year's estimates.

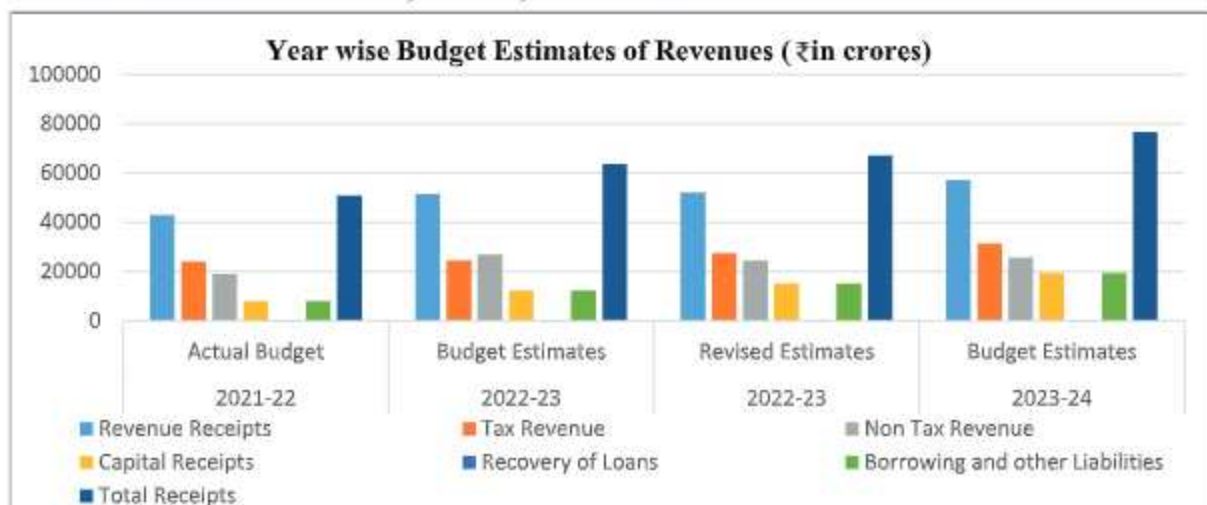
Expenditures trends are shown in the figure below. Major expenditure items are shown in the revenue account, loan payments and on capital account. Expenditure has increased over the years and has grown exponentially. The increase in revenue is matched with an increase in expenditure.

Table 2: Fiscal Indicators of Uttarakhand Economy

	Actual Budget	Budget Estimates	Revised Estimates	Budget Estimates
	2021-22	2022-23	2022-23	2023-24
Revenue Receipts	43056.99	51474.27	52044.86	57057.26
Tax Revenue	24082.37	24500.72	27519.85	31402.48
Non Tax Revenue	18974.62	26973.55	24525.02	25654.78
Capital Receipts	7935.07	12300.28	15241.98	19535.28
Recovery of Loans	17.08	25.28	22.98	25.28
Borrowing and other Liabilities	7917.99	12275	15219	19460
Total Receipts	50992.06	63774.55	67286.84	76592.54
On Revenue Account	38928.95	49013.31	49594.24	52747.71
Interest Payments	4938.83	6017.85	6017.85	6161.40
On Capital Account	11711.10	16558.18	18159.41	24659.37
Capital Outlay	7533.50	10840.27	10471.48	13133.80
Loan Payment	3830.15	5568.24	7578.24	11227.63
Loans and Advances	347.46	149.67	109.69	297.95
Total Expenditure (9+11)	50640.05	65571.49	67753.65	77407.08
Revenue Deficit (-) / Surplus (+) (1-9)	4128.04	2460.96	2450.62	4309.55
Fiscal Deficit ((1+5)-(9+12+14))	3735.83	8503.70	8107.57	9046.91
Primary Deficit (17-10)	-1203.00	2485.85	2089.72	2885.51

Source: Uttarakhand Budget document 2022-23

Figure 5: Revenue Estimates of 2020-21, 2021-22, 2022-23 and 2023-24



Source: Uttarakhand Budget document 2022-23

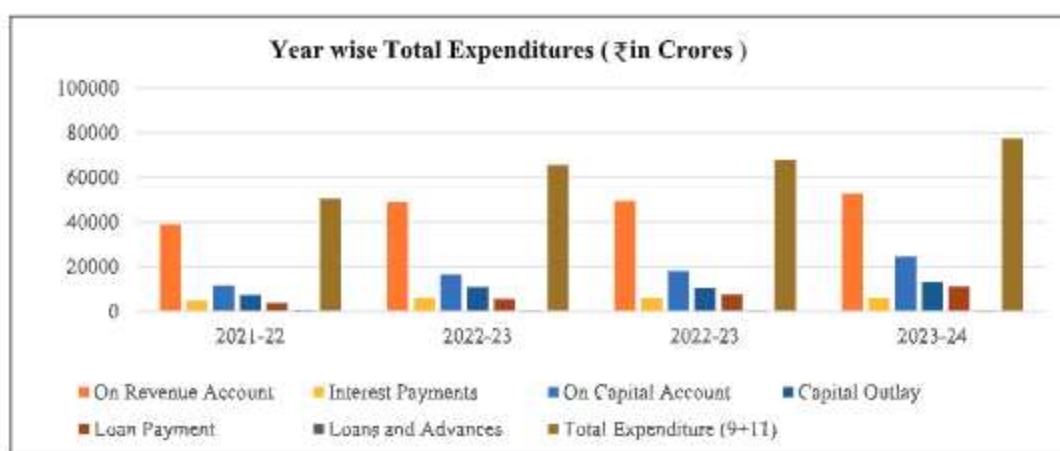
4. State GST, Revenue, and Tax Collection, Non-GST Tax

In this part of the chapter will discuss the State GST and its collections from various sources and highlight revenue from non-GST sources.

4.1. CGST, SGST, IGST, CESS

During FY 2023-24, the State's tax Department had collected a total tax of ₹ 2,148.43 crore (CGST+IGST+SGST+CESS). This tax collection is approx. 13% more than the collections of the last financial year 2022-23,

Figure 6: Expenditures Estimates of 2020-21, 2021-22, 2022-23 and 2023-24



Source: Uttarakhand Budget document 2023-24

amounted as ₹1,886.59 crore (CGST+ IGST+SGST +CESS).

Improved GST collections depict improvement in the economic activity. The State's performance in terms of GST collection is way ahead when compared to its overall economic performance. This suggests that the State had well navigated the challenges to the economic activity faced in the last financial year and has been successful in improving its GST collections. The details of the Tax Collection (CGST + IGST + SGST + CESS) by Uttarakhand State Tax Department are provided in the Table below.

The total collection is based on separate accounts of CGST, IGST, SGST and Cess. SGST and IGST have contributed more than CGST in the previous years. The data points for State goods and services tax (SGST) indicates that over the period of two years the tax collection has greatly improved both due to new registrations and stability. The SGST collections exhibit a cyclical trend. Causes may be due to seasonal changes, tourism flow and general consumption patterns in the State. Percentage growth in CGST collection is 17% in 2023-24 as compared to the previous year. Data shows a cyclical trend with periodic highs in some months and downward trend for a couple of following months.

Table 3: Details of the Tax Collection (CGST+IGST+SGST+CESS) by Uttarakhand State Tax Department during FYs 2022-23 and 2023-24 (₹ in crores)

Year	CGST			SGST			IGST			CESS			Total		
	2022-23	2023-24	%+/-	2022-23	2023-24	%+/-	2022-23	2023-24	%+/-	2022-23	2023-24	%+/-	2022-23	2023-24	%+/-
April	426.27	387.32	-9%	584.84	554.33	-5%	863.93	1191.84	38%	11.55	14.94	29%	1886.59	2148.43	14%
May	257.42	307.32	19%	358.22	411.49	15%	680.9	702.97	3%	12.07	9.32	-23%	1308.61	1431.18	9%
June	257.79	327.37	27%	369.99	438.6	19%	642.75	745.08	16%	10.39	11.5	11%	1280.92	1522.5	19%
July	269.02	318.28	18%	389.22	415.18	7%	722.23	863.17	20%	9.43	10.49	11%	1389.9	1607.12	16%
August	223.87	309.16	38%	335.35	382.06	14%	527.01	653.02	24%	7.98	8.68	9%	1094.21	1352.92	24%
September	237.84	268.34	13%	362.87	387.54	7%	688.88	725.58	5%	10.78	11.17	4%	1300.37	1392.36	7%
October	280.59	379.42	35%	404.58	550.34	36%	918.38	894.56	-3%	9.06	10.1	11%	1612.61	1834.42	14%
November	243.52	313.35	29%	387.54	485.55	25%	639.08	791.52	24%	9.89	10.21	3%	1280.03	1600.63	25%
December	250.66	294.06	17%	375.65	421.38	12%	616.83	744.4	21%	9.36	9.83	5%	1252.5	1469.67	17%

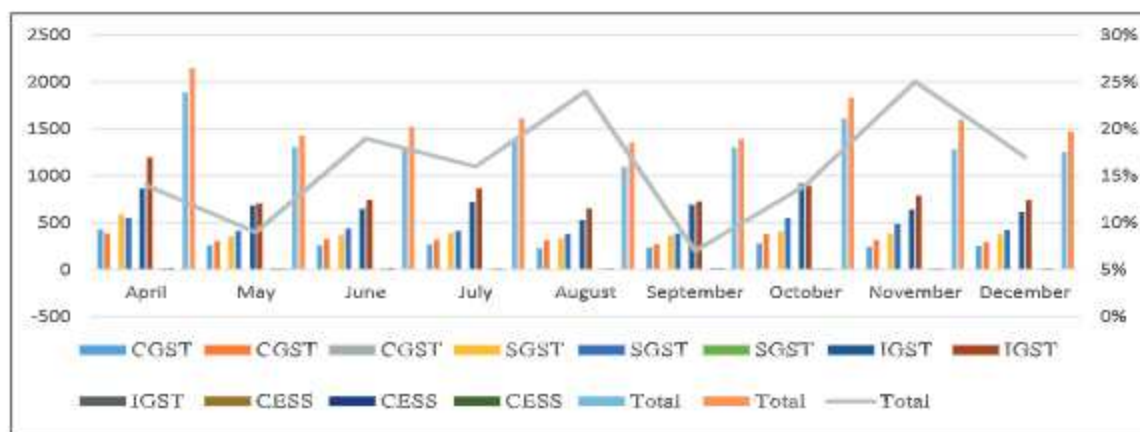
Source: Uttarakhand State Tax Department

4.2. Non-GST Revenue Growth Dynamics

In table below all the non GST revenue figures are depicted. The data points highlight, total tax revenue, own tax revenue, State excise, stamp and registration and other fees. The table shows that the State's Total Tax Revenue

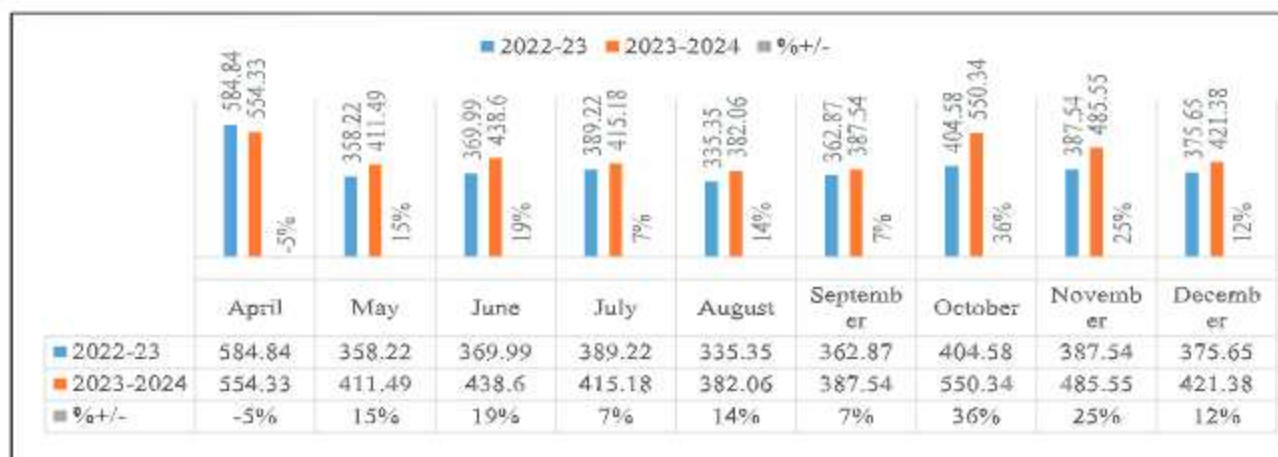
(TTR) witnessed an increasing trend upto FY 2018-19, as the collections rose from ₹ 6,865.55 crores in 2010-11 to ₹ 20,199.68 crores in 2018-19. However, TTR fell to ₹ 18,414.99 crores during 2019-20. The TTR has since FY 2021-22 reaching ₹ 31,402.00 crores in FY 2023-24.

Figure 7: Total Tax Collection (CGST, SGST, IGST, and Cess) of 2022-23 -2023-24



Source: Uttarakhand State Tax Department

Figure 8: SGST Trends over the months in 2022-23-24



Source: Uttarakhand State Tax Department

Uttarakhand's Own Tax Revenue (OTR) grew in absolute terms between 2002-03 and 2016-17, increasing from ₹ 4,405.48 crores during FY 2010-11 to ₹ 10,897.31 crore in FY 2016-17. Thereafter OTR saw upheaval from 2017-

18 till 2020-21 remaining mostly stagnant. OTR has since risen from ₹14,122.22 crores in 2021-22 to reach ₹ 19,982.68 crores in 2023-24.

Figure 9: CGST Trends over the months in 2022-23 and 2023-24



Source: Uttarakhand State Tax Department

4.3 State Excise and its Percentage in Own Tax Revenues (OTR)

Major Non-GST Revenues of the State consist of State Excise and Stamps and Registration fees. Analysis of trends in these revenues from 2010-11 to 2023-24 shows that revenue from the State excise has gone up from 17.83% of OTR in 2014-15 to 19.76% in 2023-24, it fell to 17.49% in 2016-17; increasing to 22.25% during 2017-18. However, as indicated in Figure 11, the State excise as a percentage of own tax revenue declined to 14.21% in 2018-19 but showed improvement since 2019-20 jumping to 23.68% in 2019-20 and continued to increase to 24.84% in 2020-21 and 22.92% in 2022-23 but fell in 2023-2024 to 19.76%.

4.4 Stamps and Registration Fees

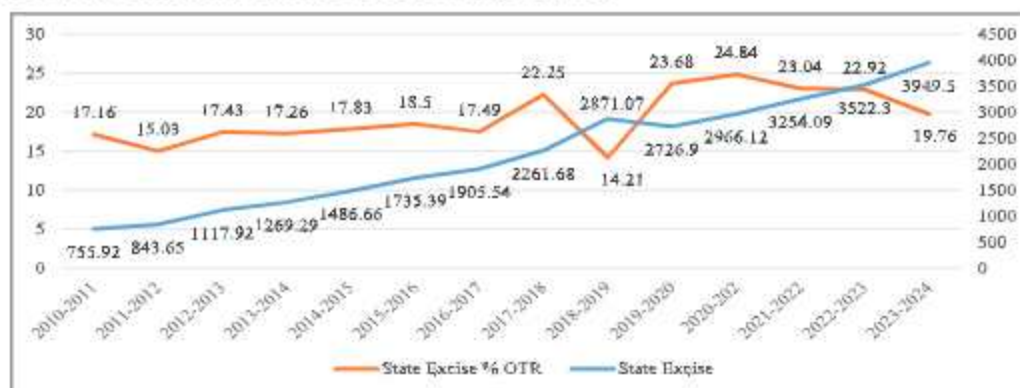
Stamps and Registration Fees as a percentage of OTR witnessed an increasing trend from 2010-11 to 2023-24. It rose from 9.99% to 10.32% during this period. Except during 2012-13 and 2015-16, it registered a declining trend from 2007-08 and continued this trend till 2016-17, to touch 7.12%. But in 2017-18, Stamps and Registration Fees as a percentage of OTR improved to 8.68%. It fell sharply to 5.02% of the OTR in 2018-19, which is in fact the lowest since the inception of the State, as depicted in this figure below. Stamps and registration fee as a percentage of own tax revenue rebounded to 9.31% in 2019-20. The momentum for the next financial year changed and Stamps and Registration Fees as a percentage

Table 4: Details of Total Tax Revenues (TTR), OTR and Non-GST OTR of Uttarakhand

Major Non-GST Revenues							
Year	Total Tax Revenue	Own Tax Revenue	OTR as % of TTR	State Excise	State Excise % OTR	Stamps and Registration Fees	Stamps and Registration Fees % OTR
2010-2011	6865.55	4405.48	64.17	755.92	17.16	439.5	9.99
2011-2012	8481.66	5615.62	66.21	843.65	15.03	524.05	9.34
2012-2013	9687.13	6414.25	66.22	1117.92	17.43	648.4	10.1
2013-2014	10928.72	7355.34	67.3	1269.29	17.26	686.71	9.34
2014-2015	12130.77	8338.47	68.74	1486.66	17.83	714.06	8.56
2015-2016	14710.98	9377.79	63.75	1735.39	18.5	870.67	9.28
2016-2017	17308.88	10897.31	62.96	1905.54	17.49	777.58	7.12
2017-2018	17249.84	10164.93	58.93	2261.68	22.25	882.26	8.68
2018-2019	20199.68	12188.09	60.33	2871.07	14.21	1015.43	5.02
2019-2020	18414.99	11513.45	62.52	2726.9	23.68	1071.75	9.31
2020-2021	18506.31	11937.58	64.5	2966.12	24.84	1107.26	9.27
2021-2022	24019.04	14122.22	58.8	3254.09	23.04	1487	10.53
2022-2023	24500.72	15370.55	62.74	3522.3	22.92	1590.05	10.34
2023-2024	31402.00	19982.68	63.63	3949.5	19.76	2062.93	10.32

Sources: i) Budget Documents, Government of Uttarakhand; ii) Department of Excise Duty, Government of Uttarakhand
iii) Department of Stamps and Registration, Government of Uttarakhand

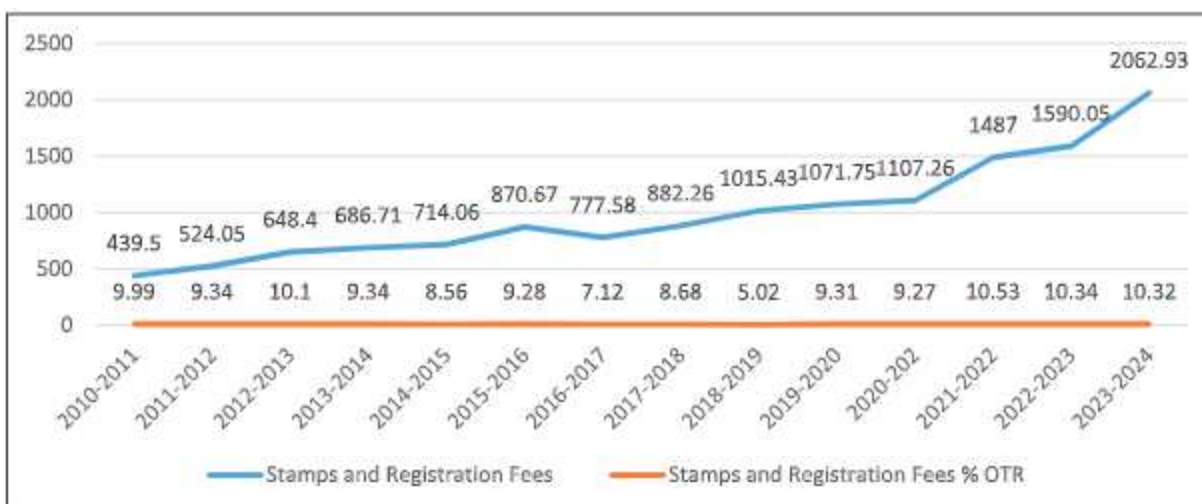
Figure 10: State Excise and State Excise as Percentage of OTR



Source: Department of Excise Duty, GoUK

of OTR remained at 9.27% during 2020-21 and then increased to 10.32% 2023-24.

Figure 11: Stamps and Registration Fees as a Percentage of Own Tax Revenue (OTR)



Source : Department of Stamps and Registration

5. GROWTH DRIVERS OF THE STATE ECONOMY-A SWOT ANALYSIS

Tourism has emerged as a major industry, significantly contributing to the State's economy. Sectors like pharmaceuticals, horticulture, MSMEs education and manufacturing have become increasingly prominent. The State boasts strengths such as a favourable environment for tourism, manufacturing, and agricultural innovations, which are crucial for economic growth. Despite challenges posed by the mountainous and hilly terrain, these can be mitigated through strategic planning and development. Opportunities abound in sectors like tourism, manufacturing, horticulture, pharmaceuticals, health and wellness. However, threats such as environmental impact of hydropower plants, lack of waste management systems, overcrowding in certain popular areas of the State, and environmental risks like the recent land subsidence in Joshimath need to be carefully managed to ensure sustainable growth.

Growth Drivers

Tourism:

- **Pilgrimage Tourism:** Places like Haridwar, Rishikesh, Kedarnath, Badrinath, and Hemkund Sahib attract millions of pilgrims annually.
- **Adventure Tourism:** The State's diverse geography offers opportunities for trekking, river rafting, skiing,

and camping.

- **Eco-Tourism:** National parks like Jim Corbett and Rajaji attract wildlife enthusiasts.

Hydropower:

- **Renewable Energy:** Uttarakhand's rivers provide substantial hydroelectric power potential. Projects like the Tehri Dam significantly contribute to the State's energy production.

Agriculture and Horticulture:

- **Organic Farming:** There is a growing focus on organic farming practices, with products like fruits, vegetables, and medicinal plants gaining popularity.
- **Horticulture:** The State's climate supports a variety of fruits, including apples, plums, kiwi and peaches, which are significant for the local economy.

Industrial Development:

- **Special Economic Zones (SEZs):** Areas like Haridwar and Pantnagar have seen rapid industrial growth, hosting numerous manufacturing units.
- **Pharmaceuticals:** Dehradun and Haridwar have become hubs for pharmaceutical industries, attracting investment and generating employment.

Education and Healthcare:

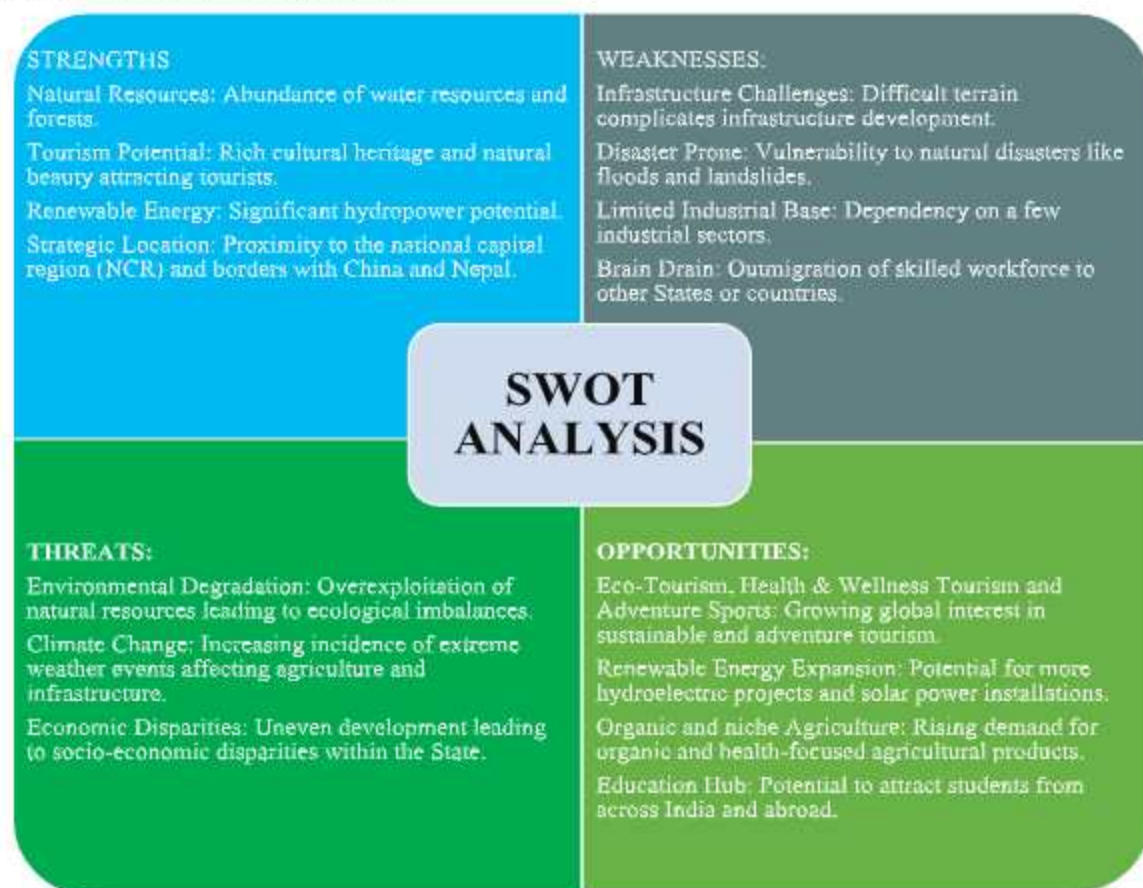
- **Educational Institutes:** Dehradun has become a centre for education with renowned institutions like IIT

Infrastructure Development:

- **Road Connectivity:** Projects like the Char Dham Highway, upgrading the road network to all-weather roads, Delhi-Dehradun expressway expected to become operational in early 2025, would significantly improve connectivity in the hilly regions.

Roorkee, IIM Kashipur, Forest Research Institute, and numerous boarding schools.

- **Healthcare Facilities:** Improved healthcare infrastructure, including specialty hospitals and medical colleges, is contributing to the State's development.



- **Rail and Air Connectivity:** The expansion of the Dehradun airport, operationalisation of airports in Pant Nagar and Pithoragarh, establishment of helipads, increasing helicopter services and new railway lines are enhancing accessibility.

6 Central Budget 2023-24 and its Link with Uttarakhand Budget Policies to Achieve Doubling State Economy in 5 Years

The Central Budget 2023-24 has laid out several initiatives and financial allocations that align with Uttarakhand's ambitions to double its economy within five years. By leveraging the central government's provisions, Uttarakhand aims to implement State-specific policies that can drive significant economic growth. By aligning its budget policies with the Central Budget 2023-24, Uttarakhand aims to capitalize on these national initiatives to drive local growth. The synergy between central allocations and State-

specific strategies will be crucial in achieving the goal of doubling Uttarakhand's economy within the next five years. This collaborative approach ensures that the State leverages all available resources and opportunities for comprehensive and sustainable economic development. Here are key areas where the Central Budget supports Uttarakhand's economic objectives:

Infrastructure Development:

- **Central Budget Allocation:** The Central Budget has allocated substantial funds for national highway projects and rural infrastructure development. Specific allocations for the Char Dham highway project and the all-weather road initiative are set to improve connectivity in Uttarakhand.
- **State Policy Linkage:** Uttarakhand plans to enhance its infrastructure by using these funds to upgrade roads, bridges, and rural connectivity. Improved infrastruc-

ture will boost tourism, reduce transportation costs, and facilitate smoother movement of goods and people.

Tourism Promotion:

- Central Budget Allocation: The budget has earmarked funds for tourism development, focusing on sustainable and eco-friendly projects.
- State Policy Linkage: Uttarakhand aims to utilize these funds to develop new tourist circuits, improve facilities at pilgrimage sites, and promote adventure and eco-tourism. This will attract more tourists, generating higher revenue and employment in the sector.

Agriculture and Rural Development:

- Central Budget Allocation: Significant funds are dedicated to agricultural development, including support for organic and millet farming, agri-tech innovations, and rural livelihood programmes.
- State Policy Linkage: Uttarakhand plans to channel these resources into enhancing its agricultural productivity, promoting organic farming, and developing agri-tourism. This will increase farmers' incomes and create new economic opportunities in rural areas.

Renewable Energy and Hydropower:

- Central Budget Allocation: The central government has increased funding for renewable energy projects, with a focus on hydroelectric and wind power and solar energy.
- State Policy Linkage: Uttarakhand, rich in water

resources, aims to expand its hydroelectric projects and invest in solar and wind power installations. This will not only provide clean energy but also attract investments and create jobs in the renewable energy sector.

Healthcare and Education:

- Central Budget Allocation: There are increased allocations for healthcare infrastructure and educational facilities, including funding for medical, nursing and para-medical colleges and skill development centres.
- State Policy Linkage: Uttarakhand will use these funds to improve healthcare services, build new hospitals, and upgrade educational institutions. Better healthcare and education will enhance the quality of life, making the State more attractive for investments and skilled professionals.

Industrial Development:

- Central Budget Allocation: The budget supports the development of Special Economic Zones (SEZs) and industrial corridors.
- State Policy Linkage: Uttarakhand plans to develop new SEZs and industrial parks, attracting domestic and foreign investments. These zones will create jobs, boost manufacturing, and contribute significantly to the State's GDP.

Section-II

Policy Suggestions (Challenges & Way Forward)

Policy Suggestions for Revamping Economic Sectors and Boosting Economic Growth of Uttarakhand State to Achieve the Target of Doubling the Economy.

Current Challenges Facing Uttarakhand's Economy

Augmenting Other State Taxes - Land Revenue, Hotel Receipt Tax, Entertainment Tax & Electricity Duty

- Challenge: Rates of Taxes and Duties require to be reviewed and rationalised in keeping with the current prices. Coverage of population is required to be optimised. Better compliance through oversight and use of technology.

Improving Financial Health of Local Elected Bodies:

- Challenge: Multiple strategies need to be customised in each urban area to facilitate the lives of urban residents

and visitors and at the same time financed through innovative means of financing.

Infrastructure Limitations:

- Challenge: The mountainous terrain of Uttarakhand presents significant challenges for infrastructure development, particularly in remote and hilly areas.
- Impact: Poor connectivity hampers transportation of goods and people, restricts access to markets and services, and deters investment in these regions.

Skill Mismatch and Outmigration:

- Challenge: There is a gap between the skills of the local workforce and the needs of emerging industries. Additionally, many skilled workers migrate to other States or countries for better opportunities.

- Impact: This mismatch and outmigration lead to a shortage of skilled labour in Uttarakhand, affecting the growth and competitiveness of local industries.

Jobless Growth in the Industrial Sector:

- Challenge: The growth in Uttarakhand's industrial sector has been capital-intensive, leading to minimal job creation. A large portion of the workforce in the secondary sector is employed in construction, which offers temporary and often unstable employment.
- Impact: This trend fails to provide sustainable employment opportunities for the local population, leading to underemployment and migration for better job prospects.

Environmental Vulnerability:

- Challenge: Uttarakhand is highly prone to natural disasters such as landslides, floods, and earthquakes. The recent subsidence in Joshimath highlights the risks associated with environmental degradation and poorly planned construction.
- Impact: These disasters cause significant loss of life and property, disrupt economic activities, and deter tourism and investment.

Agricultural Challenges:

- Challenge: The agricultural sector faces issues such as fragmented landholdings, inadequate irrigation facilities, and limited access to modern technology, lack of storage facilities and access to markets.
- Impact: These issues result in low productivity and income for farmers, making agriculture less viable and leading to rural distress.

Healthcare and Education Infrastructure:

- Challenge: Despite improvements, healthcare and education facilities in Uttarakhand, especially in rural and remote areas, remain inadequate. Positioning doctors and technicians in health facilities in the remote areas, remains a challenge.
- Impact: Poor healthcare and educational infrastructure limit human capital development, affecting overall productivity and economic growth.

Economic Disparities:

- Challenge: There is a significant economic disparity between the plains and the hilly regions of Uttarakhand.
- Impact: Uneven development leads to socio-economic imbalances, with rural and hilly areas lagging in terms of economic opportunities and living standards.

Limited Industrial Diversification:

- Challenge: The State's industrial base is narrow, heavily reliant on a few sectors such as pharmaceuticals, and construction.

- Impact: Lack of diversification makes the economy vulnerable to sector-specific downturns and limits overall economic resilience.

Tourism Dependency and Seasonality:

- Challenge: While tourism is a major economic driver, it is highly seasonal and concentrated in specific and limited areas.
- Impact: Seasonal fluctuations lead to unstable income for those dependent on tourism, and over-reliance on a few tourist hotspots can lead to environmental degradation.

Way Forward:

Other State Taxes (Land Revenue, Hotel Receipt Tax, Entertainment Tax & Electricity Duty)

- Review and rationalise thresholds and rates of the above four revenue sources.
- Promote Uttarakhand as an all-season destination by organising widely promoted annual calendar of year-round events to attract local population and visitors from outside the State, to enhance entertainment tax avenues.

Non-Tax Revenue (Forestry, Power and Royalties from Minor Minerals)

Enhancing collections from the three major sources of non-tax revenue require innovative approaches, public private partnerships, transparency in the processes and optimal management of the available resources.

Sectors like forestry and wildlife, power, tourism, tertiary medical care, higher education and urban services offer a plethora of opportunities to improve non-tax revenue.

- Enhance accountability at every stage of processing of forest produce, and streamline auction procedures, to harness the large scope for revenue receipts on this front.
- Tap eco-tourism as a sustainable revenue source for the forest department, which can be taken up also in public private partnership mode, in which case it should be ensured that the private players do not violate the environmental regulations of the State.
- Valuation of ecosystem services flowing from Uttarakhand for incorporation into national accounting – the green bonus.
- Bring in best practices to sustainably manage, expand and develop a value chain for forest industry, which would not only create jobs but also improve revenue generating potential. These value chains, in turn could be supported by market linkages.
- Exclusively develop Small and Medium Forest Enterprises (SMFEs) to boost revenues, in line with

the practices of many developing countries across the world. Thus, endeavours would be made to develop an eco-system that promotes employment and revenue generation from forests in the State.

- vi. Strategies to be designed and implemented to bridge the gap between ever growing demand for forest products of the State and the existing supply, by incorporating better forest management practices as demonstrated by several countries across the world.
- vii. Scope in hydro and solar power needs to be actively harnessed to make Uttarakhand a power surplus State.
- viii. A recent study by IIFM in Uttarakhand provides economic estimates for as many as 21 ecosystem services from the forest areas of State. The study findings indicate that the monetary value of flow benefits emanating from the Uttarakhand forests is approximately ₹95,112 crores annually. This requires proactive representation to the Government of India to access this funding for sustaining the eco-system and providing large scale employment to mountain communities for managing eco-system services.
- ix. Establishing "The Uttarakhand Environment Services Trust" is a way forward to garner non-traditional financial resources for environmental protection and deployment of hill communities for environmental protection of natural resources and regenerative work.
- x. Strategic disinvestment of available land through PPP projects for tourism, wellness resorts, technology parks, industrial parks, amusement parks, cable car systems, car parks cum commercial centres and highway service centres, would serve dual purpose of inviting capital investment leading to sustained revenue streams while realising funds for capex, triggering a virtuous cycle of capex supported additional revenue streams.

Primary Sector: Agriculture and Allied Activities

Promotion of Organic Farming:

- Policy Suggestion: Increase subsidies and technical support for organic farming practices. Develop a certification system to help farmers market their products as organic, both domestically and internationally.
- Impact: Higher market prices for organic products can boost farmers' incomes and encourage sustainable farming practices.

Diversification and Value Addition:

- Policy Suggestion: Encourage diversification into high-value crops like medicinal plants, herbs,

improved horticulture and floriculture practices and off-season vegetables. Establish processing units and cold storage facilities to add value to agricultural produce.

- Impact: Diversification can reduce dependency on traditional crops, increase farmers' income, and create job opportunities in processing and logistics.

Water Resource Management:

- Policy Suggestion: Implement watershed management programmes and promote micro-irrigation techniques to optimize water usage.
- Impact: Efficient water management can enhance agricultural productivity and ensure sustainability in water-scarce regions.

Secondary Sector: Manufacturing and Industrial Activities

Encouraging Labour-Intensive Industries:

- Policy Suggestion: Provide incentives for setting up labour-intensive industries like textiles, handicrafts, and food processing. Reduce the focus on capital-intensive sectors.
- Policy Suggestion: Encourage skill development of workers in line with the requirement of labour intensive industries to provide ready workforce and build a positive eco-system.
- Impact: This can generate more employment opportunities and reduce jobless growth in the industrial sector.

Skill Development and Vocational Training:

- Policy Suggestion: Establish more skill development centres focusing on industry-specific skills, particularly for the local youth. Collaborate with industries to design training programmes that meet their needs.
- Impact: A skilled workforce can attract more industries to the State and improve employment rates.

Support for MSMEs (Micro, Small, and Medium Enterprises):

- Policy Suggestion: Provide easier access to credit, subsidies, and technical support for MSMEs. Develop industrial clusters to provide shared infrastructure and services offering plug and play facilities in industrial parks set up in hilly districts of the State.
- Impact: Strengthening MSMEs can boost local manufacturing, create jobs, and contribute to balanced regional development.

Tertiary Sector: Services

Tourism Infrastructure Development:

- Policy Suggestion: Invest in improving tourism infrastructure, including accommodation, transport, and digital connectivity. Promote lesser-known tourist destinations to reduce pressure on popular sites.
- Policy Suggestion: Lease out underutilised accommodation facilities owned by the GMVN, KMVN, PWD, Forest, Health, AYUSH and other government departments, to private players to operate affordable stay options to tourists in multiple locations and set up elder care homes.
- Impact: Enhanced infrastructure can attract more tourists, distribute them across the state, reduce congestion at few over crowded locations, extend the stay of tourists, and spread economic benefits across the State.

Healthcare and Wellness Tourism:

- Policy Suggestion: Develop Uttarakhand as a hub for healthcare and wellness tourism by upgrading healthcare facilities and promoting traditional medicine and wellness centres.
- Impact: This can attract domestic and international tourists, generate revenue, and create jobs in the healthcare and hospitality sectors.

IT and Digital Services:

- Policy Suggestion: Promote the growth of IT parks and digital service centres in cities like Dehradun, Haridwar, Rishikesh and Haldwani. Provide incentives for tech start-ups and remote working facilities.
- Impact: Developing the IT sector can create high-

paying jobs, retain local talent, and diversify the economy.

Cross-Sectoral Policies

Sustainable Development Practices:

- Policy Suggestion: Integrate environmental sustainability into all economic activities. Encourage eco-friendly technologies and practices across sectors.
- Impact: Sustainable practices can protect Uttarakhand's fragile ecosystem while promoting long-term economic growth.

Infrastructure Development:

- Policy Suggestion: Continue to improve road, rail, and air connectivity, particularly in remote and hilly areas. Enhance digital infrastructure to support various economic activities.
- Impact: Better infrastructure can facilitate smoother movement of goods and people, attract investments, and support overall economic development.

Public-Private Partnerships (PPPs):

- Policy Suggestion: Encourage PPPs in various sectors like education, healthcare, tourism and infrastructure. Provide a clear regulatory framework and incentives for private investments.
- Impact: PPPs can bring in expertise, efficiency, and additional resources, accelerating economic growth and development.

By focusing on these targeted policy suggestions, Uttarakhand would create a more balanced, sustainable, and inclusive economy and help address the current challenges and harness the State's unique strengths, paving the way for robust economic growth in the coming years.



MACRO ECONOMIC AGGREGATES AND STATE RESOURCE AUGMENTATION

EXECUTIVE SUMMARY

Under Sashakt Uttarakhand @ 25, the focus is mainly on Core Infrastructure sectors like Agriculture and Allied Sectors, Manufacturing, Tourism, AYUSH and Wellness, Higher Education, Skill Development, Urban Development, Roads, Energy, and Railways.

To fulfil this objective, the Government has promulgated about 30 new policies and amendments to previously promulgated policies, mainly including Macro Industrial Policy, Private Industrial Park Policy-2023, Service Sector Policy-2023, MSME Policy-2023, Start-up Policy-2023, Tourism Policy-2023, Customized Package Policy, Logistics Policy-2023, Export Policy-2023, AYUSH and Wellness Policy, Film Policy-2015 (amended in 2019), Drone Policy-2023, Pumped Storage Project Policy-2023, Solar Energy Policy-2023.

Main highlights are as follows:

- At current prices, Uttarakhand's GSDP is projected to be ₹ 3,94,675 Cr in FY25. As compared to FY24, the GSDP of the State is estimated to increase at a CAGR of 14% (as per the Uttarakhand budget document for FY25).
- The per capita GSDP of Uttarakhand in 2023-24 (at current prices) is estimated at ₹ 2,95,751 (Uttarakhand FRBM Statements 2024-25).
- Services Sector is the biggest economic segment of the Uttarakhand economy. The Services Sector has displayed a growth of 8.5-9% nominal CAGR during the last 5 years. Its prominently growing sub-sectors in the State are Tourism, Education, Health, Financial Services, Trade, Communication and Transport.
- Maximum contribution has been derived from the Secondary Sector (47%), as per the Gross Value Added data for FY 24 (Advance Estimates). The

Secondary Sector, which is the largest contributor to the GVA includes the sub-sectors of Manufacturing; Electricity, Gas, Water Supply & Other Utility Services; and Construction.

- According to the Uttarakhand Budget Estimates for the year 2024-25, the State's tax revenue is estimated to be ₹ 21,959 Cr in FY 25. This is an estimated 15% jump over the Revised State Budget Estimate for FY 24.
- In a similar way, the component of State's own non-tax revenue is also likely to increase by 17% to ₹ 4,175 Cr during FY 25 as compared to its figure in the revised budget estimate for FY 24.

State of The Economy:

Uttarakhand is one of the fastest growing states in India owing to rising capital investments, tax benefits and a supportive industrial policy. Few crucial growth drivers of the State economy are hill agriculture, especially horticulture including aromatic and medicinal plants; tourism; Micro, Small and Medium Enterprises (MSME); renewable energy (mainly small hydro-power) and Information Technology (IT), apart from others.

The State Government has taken the initiative of Sashakt Uttarakhand @25 to include Uttarakhand among the leading States of the country, under which it is proposed to double the economy/GSDP (Gross State Domestic Product) of the State in the next 5 years i.e. to ₹ 5.5 lakh Crore by the year 2027.

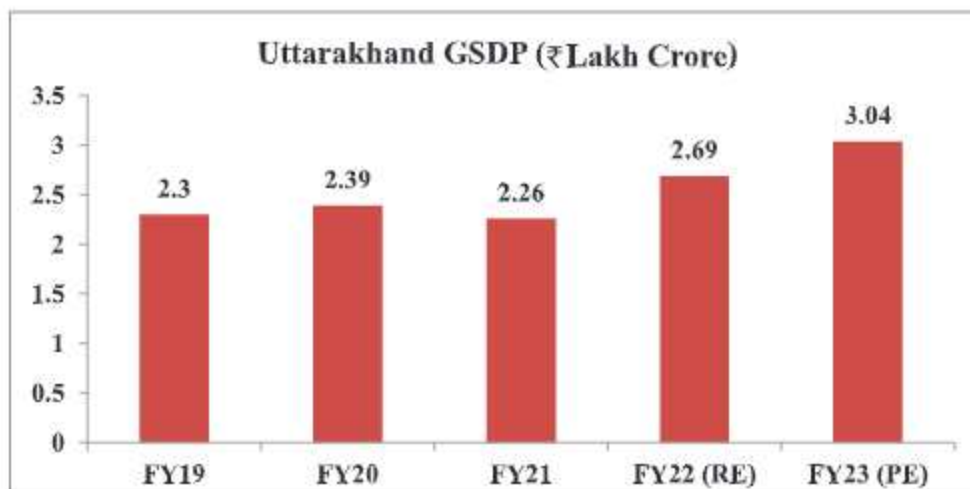
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Tourism Policy-2023, Customized Package Policy, Logistics Policy-2023, Export Policy-2023, AYUSH and Wellness Policy, Film Policy-2015 (amended in 2019), Drone Policy-2023, Pumped Storage Project Policy-2023, Solar Energy Policy-2023.

These targets would be met as the State's economy/GSDP gets strengthened gradually. Let us now take a look at the current state of Uttarakhand's Gross Domestic Product.

At current prices, Uttarakhand's GSDP is projected to be ₹ 3,94,675 Cr in FY25. As compared to FY24, the GSDP of the State is estimated to increase at a CAGR of 14% (as per the Uttarakhand budget document for FY25). Going few years back, at current prices, Uttarakhand's GSDP was projected to be ₹ 3.04 Lakh Crore (Provisional Estimates) for FY23. This was an estimated increase of CAGR of 13.11% over the earlier year's GSDP of ₹ 2.69 Lakh Crore.

Figure 2.1: State's Economic Growth Remains Strong

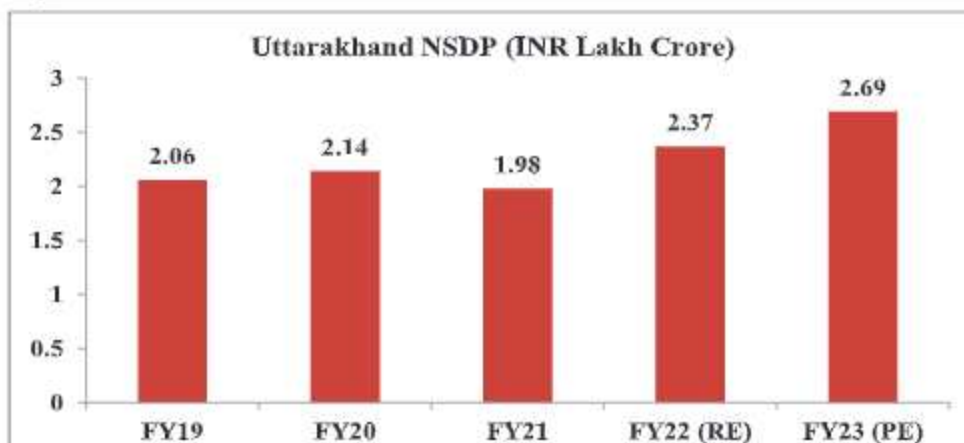


Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

Similar to the above trend, the State's NSDP (Net State Domestic Product) at current prices also grew at an accelerated pace of 13.56 % to ₹ 2.69 Lakh Crore in FY 23 (PE) over the previous year.

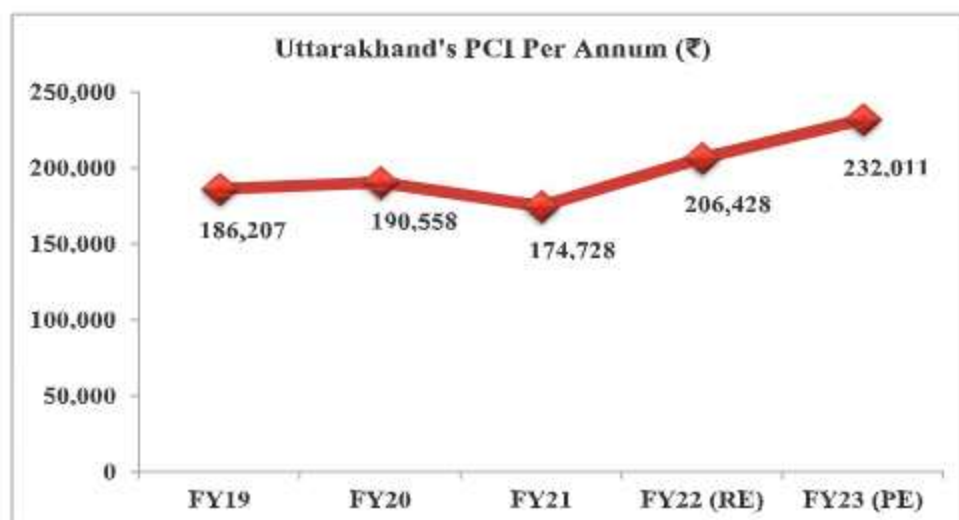
The Per Capita NSDP Income per annum at current prices (PCI) across Uttarakhand stood at around ₹2,32,000 during FY 2023, as per the provisional estimates. This income has seen a steady rise over the past few years since FY19, except during FY21, when it saw a drop of 8.3%, mainly due to the impact of the Covid-19 pandemic.

Figure 2.2: Steady Growth in State's NSDP



Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

Figure 2.3: State's Per Capita Income on the Rise



Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

More recent data from the Uttarakhand FRBM Statements 2024-25 suggests that the per capita GSDP of Uttarakhand in 2023-24 (at current prices) is estimated at ₹ 2,95,751. Over the last two years alone, the per capital income of Uttarakhand has jumped by more than 25%.

Structure of The Economy:

Situated at the foothills of Himalayas, Uttarakhand is one of the fastest growing States in India today. The main reason is massive growth in capital investment arising from conducive industrial policy and generous tax benefits. Constituted in the year 2000 as the 27th State of India, Uttarakhand's growth in the first decade of formation was driven mainly by the Manufacturing Sector. This was followed by a growing Services Sector in the second decade of the State's formation. At present, however, the Services Sector is the biggest economic segment of Uttarakhand economy. The Services Sector has displayed a growth of 8.5-9% nominal CAGR during the last 5 years. Its prominently growing sub-sectors in the State are Tourism, Education, Health, Financial Services, Trade, Communication and Transport.

The second most flourishing sector in the State is the Manufacturing Sector, which continues to grow by leaps and bounds. Manufacturing sector grew by 9.2% in 2023-24, over an 8.1% growth in 2022-23. In this sector, Uttarakhand has highest competitive advantage in the sub-sectors of AYUSH, Consumer Goods, Defence, Wood products, Electronics/Electricals that needs to be further strengthened, prioritised and incentivised. There is a need to attract private investment into these areas. Moreover, fresh investment requires to be distributed widely,

especially in hilly areas through promoting MSMEs to further the “one district two products” concept.

Another initiative could be increasing the area under industry cover through filling existing industrial estates, where investment in infrastructure has already been made. Finally, accelerated development of logistics infrastructure through creation of cold chains, warehousing, storage and air cargo facilities would provide further impetus to manufacturing in the State.

Amidst the main commercial hubs in the State; Dehradun, Haridwar, Udham Singh Nagar and Haldwani continue to remain the main focal points for booming economic activity, employment generation and thriving urbanization.

Important sub-sectors:

Tourism: The overall growth of the State economy has largely been driven by the tourism sector, especially during the last two decades. More recently, two years ago in 2021-22, tourism accounted for 37% of the State GSDP while its contribution is expected to be close to 44% in 2023-24. The Uttarakhand Government has targeted tourist spending to grow from ₹ 25,000 Cr to ₹80,000 Cr by FY30. Planning is also underway for leveraging Haridwar and Rishikesh for development of religious tourism corridors. Going forward, the State could focus on high value tourist segments through premium tourism projects based on themes with high growth potential.

Construction: The historical growth rate of this sub-sector between FY12-FY20 is calculated to be 9.3%. It's CAGR

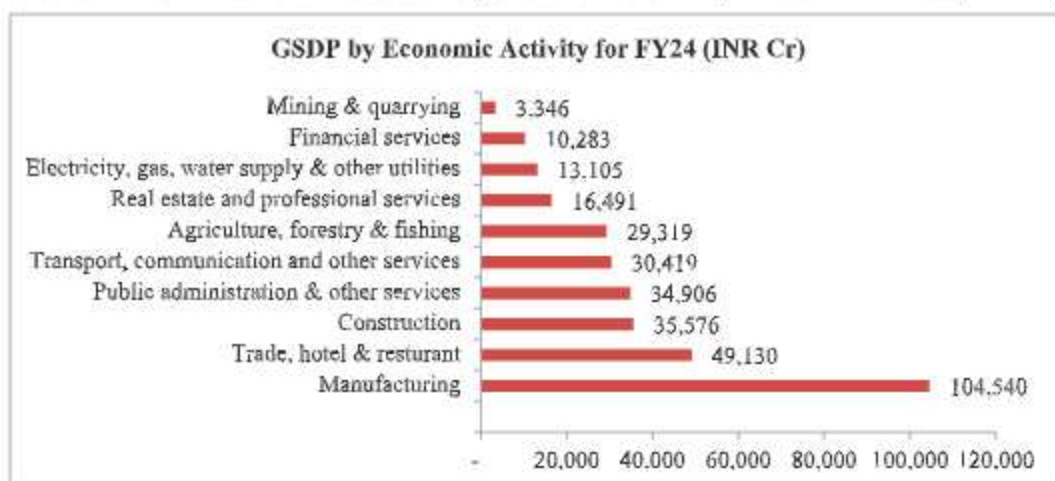
during FY22-FY27 is projected to be as high as 20.4% (Uttarakhand's GSDP projections at Current Prices, Sashakt Uttarakhand @ 25). The State aims for industrial development, large infra creation and urbanization led by a strong focus on construction.

AYUSH and Wellness: An extremely high potential sub-sector in Uttarakhand, AYUSH and wellness could take the State's growth to the next level by positioning the State as a wellness hub by developing and strengthening healing centres, naturopathy and Ayurvedic centres. This will need

a complete transformation throughout the entire value chain that includes Cultivation, Manufacturing, Wellness, Healthcare and Research.

Elder Care, Rehab Centres and Hospices: Uttarakhand offers salubrious climate to establishment of elder care facilities and hospices in PPP mode in the vicinity of medical facilities. This would promote longer stay visitors and provide employment to local population, thus contributing to economic growth.

Figure 2.4: Provisional Estimates of State's GSDP by Economic Activity at Current Prices, FY24 (₹ Cr)



Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

According to the provisional estimates of the State's GSDP by economic activity at current prices for FY24, Manufacturing Sector tops the Sectoral contribution at

₹1.05 Lakh crores. This is followed by 'Trade, Hotel and Restaurants' Sector, contributing ₹ 49,130 crores to the State exchequer for the year.

Table 2.1: Trends in GSDP by Economic Activity at Current Prices (2011-12 to 2022-23AE)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21RE	2021-22PE	2022-23AE
Manufacturing	4365135	5082899	5440406	5874343	6369703	7031813	7597807	7786973	7743996	7795821	9272668	10364663
Trade, repair, hotels and	1192896	1408869	1615981	1788267	2038605	2427074	2852400	3547891	3689725	2905865	3538801	3910997.6
Agriculture, forestry and	1330209	1536644	1579096	1611420	1628381	1694580	1916830	1988482	2337206	2598503	2721108	3024190.8
Construction	883766	936950	1242406	1297607	1313471	1416292	1592085	1786953	1801386	1752887	2132804	2571992.8
Transport, storage,	691812	811658	934918	1066333	1279864	1300141	1239123	1316962	1527023	1655796	1759970	1864415.4
Real estate, dwelling	588825	671182	739177	814718	843880	911476	1009473	1107176	1162775	1188518	1326195	1415090.5
Public administration	404304	315475	483906	609171	666093	758235	942142	904937.6	845291.5	969693.6	1102282	1175033.6
Electricity, gas, water &	398079	416111	375058	431295	556863	579225	667288	714204.6	741333.1	770280.9	891285.8	1023532
Financial services	293318	320421	359123	402327	447958	453355	531140	590718.4	643719	770936	865761.1	990430.73
Mining and quarrying	186083	205725	354844	236697	202791	253822	302687	341085.8	286113.1	225425.7	221841.4	222339.64

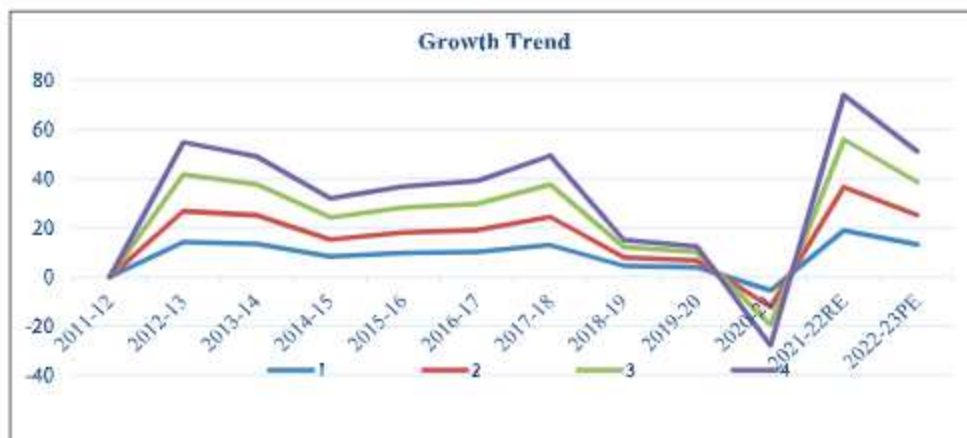
RE - Revised Estimates, PE - Provisional Estimates, AE- Advance Estimates New Series Estimates, Base Year 2011-12.

Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

A closer look at the trends in State GSDP by Economic Activity at current prices (2011-12 to 2022-23AE) indicates that the activities which have rapidly grown over the past few years in their respective contribution to the Uttarakhand gross state domestic product are Manufac-

turing, 'Trade, repair, hotels and restaurants', 'Agriculture, forestry and fishing', and Construction (please refer chart below). The contribution of Mining has remained almost stagnant over the years.

Figure 2.5: Growth Trend over the Years



Source: Diagrammatic representation of First Advance Estimates of State Domestic Product of Uttarakhand

Percentage Growth in GSDP over years showed a significant dip in 2020-21 with a negative growth rate with a Peaks in 2021-22RE before slightly decreasing in 2022-23PE.

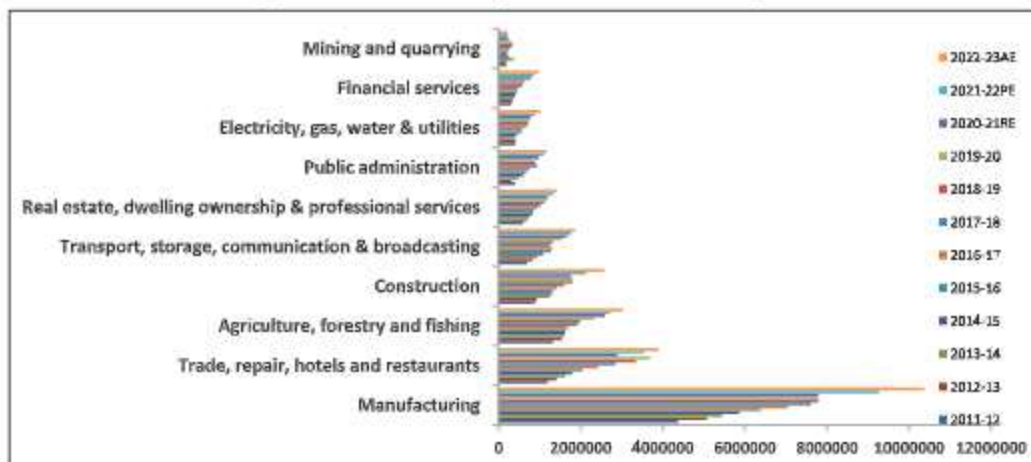
Percentage Growth in Per Capita GSDP over the years shows a similar trend to GSDP, with a notable dip in 2020-21 followed by a recovery in 2021-22RE and a slight decrease in 2022-23PE.

Percentage Growth in NSDP and Percentage Growth in Per Capita NSDP over the years, also showed a similar trend

with a significant dip in 2020-21 followed by a recovery in 2021-22RE and a slight decrease in 2022-23PE.

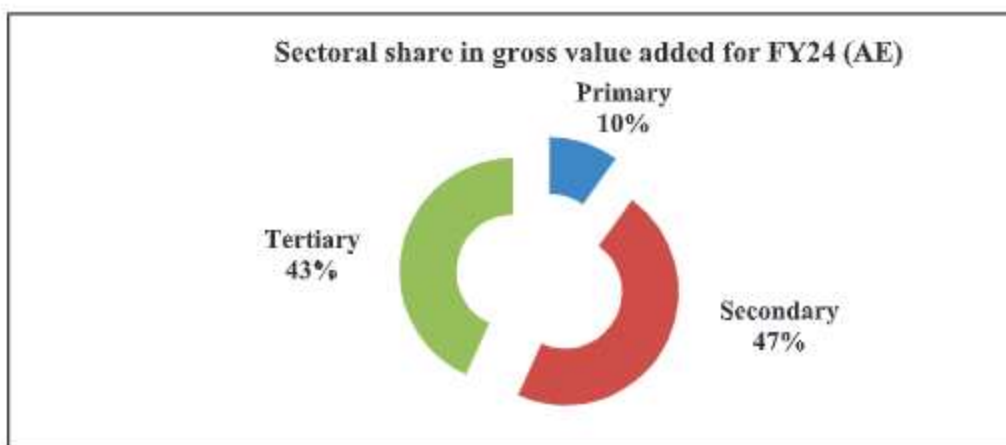
Hence it can be summarised that in the period FY 2012-13 to 2019-20 the values show a general decreasing trend with minor fluctuations. In the year 2020-21 all parameters show a significant dip, indicating a negative growth rate with a year 2021-22RE showing a sharp recovery in growth rates. The recovery in 2021-22RE indicates a rebound in economic activities, although the growth rates slightly decrease in 2022-23PE.

Figure 2.6: Trends in State GSDP by Economic Activity at Current Prices (2011-12 to 2022-23AE)



Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

Figure 2.7: Share of Different Economic Activities to the Gross Value Added at Current Prices



Source: First Advance Estimates of State Domestic Product of Uttarakhand (2021-22 TO 2023-24 AE with base year, 2011-12)

Maximum contribution has been derived from the Secondary Sector (47%), as per the Gross Value Added data for FY 24 (Advance Estimates). The Secondary Sector, which is the largest contributor to the GVA includes the sub-sectors of Manufacturing; Electricity, Gas, Water Supply & Other Utility Services, and Construction.

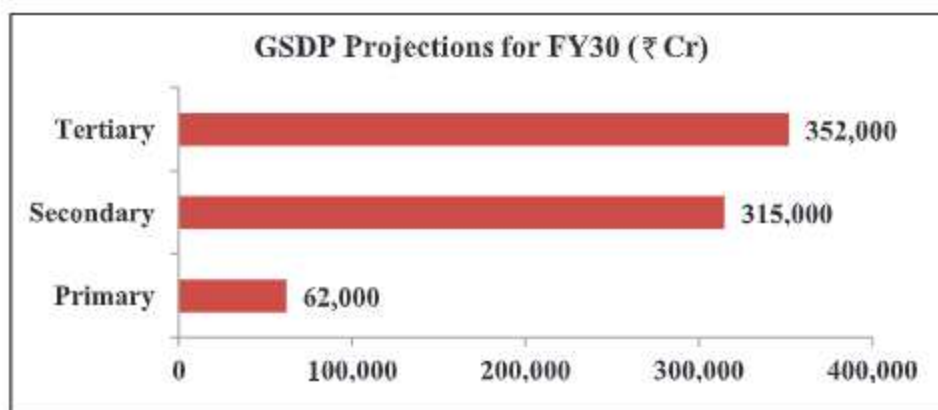
The Tertiary Sector (43% share in GVA) includes a variety of services namely Transport, Storage, Communication & Services Related to Broadcasting; Railways; Transport by means other than Railways; Storage, Communication & Services related to Broadcasting; Trade, Repair, Hotels and Restaurants; Financial Services; Real Estate, Ownership of

Dwelling & Professional Services; Public Administration; and Other Services.

The sub-sectors included under the Primary Sector (10% share in GVA) are Agriculture, Forestry and Fishing and Mining & Quarrying.

Fuelled by various initiatives being undertaken across multiple sub-sectors, the State's GSDP is expected to multiply at a rapid pace with the Tertiary Sector expected to become the topmost contributor to the State economy (refer Figure 2.6 for Sectoral Projections for FY30).

Figure 2.8: Projections for State GSDP at Current Prices for FY30 (₹ Cr)



Source: Sashakt Uttarakhand @25

Uttarakhand government has targeted to give a big boost to the Tertiary Sector including those covered under AYUSH, Health, Higher Education and Tourism. This will automatically drive up the downstream segments such as Repairs and Trade Services.

The Secondary Sector will be getting a big push through the infrastructure creation initiatives planned over the next few years. Apart from this, creation of greenfield townships and implementation of the Manufacturing Policy will also drive the Sector's growth.

Uttarakhand's initiatives towards the Primary Sector including crop yield improvement, nursery expansion, and the development missions for Apple and Kiwi farming and processing will go a long way in fostering the Sector's growth.

Gross Fixed Capital Formation:

The Gross Fixed Capital Formation (GFCF) represents the

gross value of the goods, which are added to the domestic capital stocks during a year. It comprises the expenditure on the acquisition as well as own account production of fixed assets.

In terms of asset types, the GFCF has been classified into buildings, roads, transport, machinery and other capital assets.

Table 2.2: Capital formation by Type of Assets and Industry of Use (Uttarakhand), Account IV, 2020-21 (₹ Lakh)

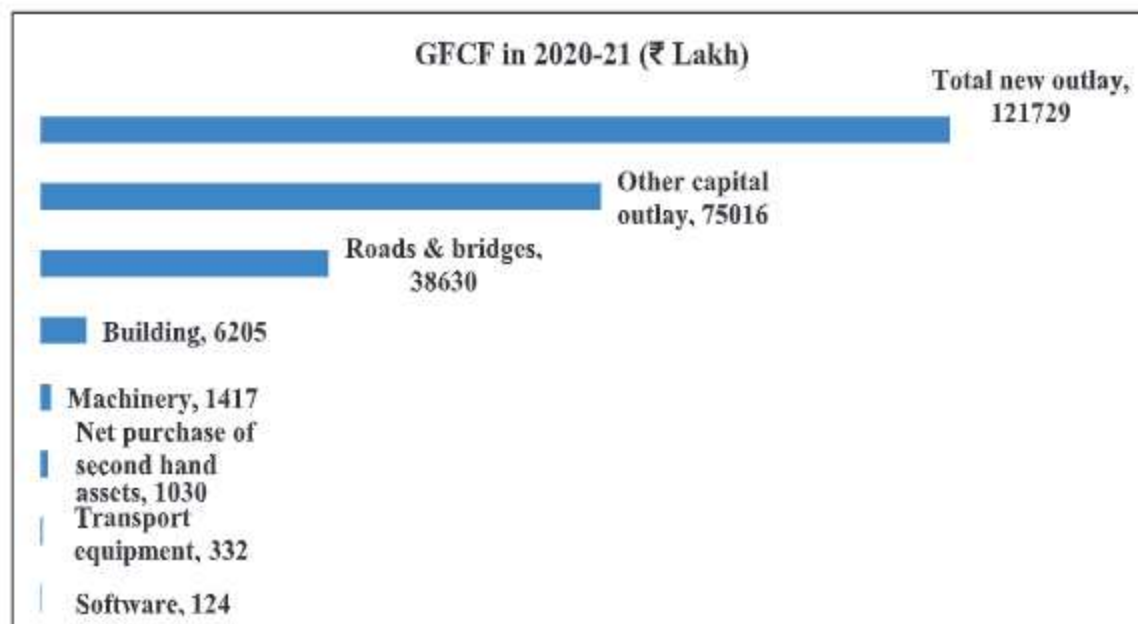
	Building	Roads / Bridges	Other Capital Outlay	Transport Equipment	Machinery	Software	Cultivated Assets	Animal Stock	Total new outlay	Net purchase of 2 nd hand assets	Gross fixed capital formation
Total	6205	38630	75016	332	1417	124	0	0	121729	1030	122755
Construction	2566	32803	38092	174	109	0	0	0	73749	9	73753
Water Supply	335	513	7633	0	0	0	0	0	8481	183	8663
Other Services (education, health, sanitation)	213	1734	4252	1	276	0	0	0	6474	382	6856
Public Administration & Defence	3092	3582	25039	157	1033	124	0	0	33026	456	33482

Source: Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2020-21

Total gross fixed capital formation (GFCF) was ₹1,22,755 Lakh in FY21 for Uttarakhand as a whole. Its largest contributor was construction sector (₹ 73,753 Lakh),

followed by Public Administration & Defence (₹ 33,482 Lakh) for the year.

Figure 2.9: GFCF of Uttarakhand in FY21



Source: Economics-cum-Purpose Classification of Local Bodies Budget, Uttarakhand, 2020-21

In terms of asset type, the top-most contributor to the GFCF for FY21 was Total New Outlay (₹. 1,21,729 Lakh) followed by Other capital Outlay (₹ 75,016 Lakh) and Roads & Bridges (₹ 38,630 Lakh).

Overall, the GFCF is a measure reflecting the level of economic development of a place. It is also useful in planning and allocation of financial resources. The production capacity of any place is directly proportional to the level of its capital formation. In yet another type of classification, the GFCF has two main constituents: public sector and private sector. The GFCF (Public Sector) of Uttarakhand comprises of the Central & State share. The Central share includes the share of supra regional sector (Railway, Finance and Communication), Central DCUs, Central NDCUs, Central Autonomous Institution and Central Administrative Departments in the estimation of GFCF (Public Sector) of the State. The State share includes the share of State

Administration Department, State Departmental Enterprises, State Non-Departmental Enterprises, State Autonomous Institutions and Local Bodies in the estimation of GFCF (Public Sector) of the State.

Further, the Asset-Wise Classification of Public Sector GFCF is as follows:

- Dwellings, Other Buildings and Structure
- Machinery and Equipment
- Cultivated Biological Resources
- Intellectual Property Produce

Finally, the GFCF (Private Sector) is divided into its contribution from the Private Corporate and the Household Sectors. GFCF contribution estimates of Private Corporate and Household Sectors are not being prepared in the State.

Figure 2.10: Public Sector GFCF of Uttarakhand



Source: Gross Fixed Capital Formation of Uttarakhand (Public Sector) 2011 -12 to 2016-17PE

BANKING SECTOR

Banks and financial institution continue to play an important role in the economic development of Uttarakhand. State Bank of India continues to have the largest network of branches in the State. It has close to 535 branches in Uttarakhand.

SBI is followed by the Punjab National Bank which has around 365 branches in the State.

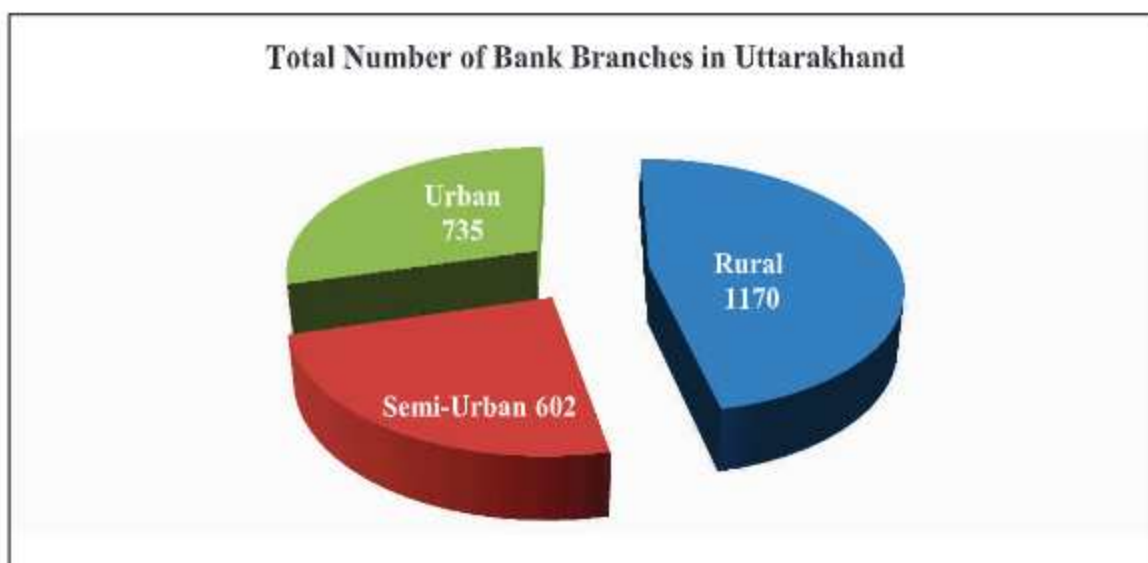
Yet another prominent bank of the State is the Uttarakhand Gramin Bank which also has a widespread network in the

State, having 216 Rural branches, 41 Semi-Urban branches & 29 Urban branches.

Overall, Nationalised Banks have the highest number of branches in Uttarakhand, followed by Regional Banks and Private Banks.

By September 2023, the State had a total network of 2,507 bank branches. Out of these, 29% were operating in the urban areas (735 banks), 24% in semi-urban areas (602) while 47% were set-up in the rural areas (1170).

Figure 2.11: Total Number of Bank Branches in Uttarakhand, September 2023



Source: Aarthik Sarvekshan 2023-24, Uttarakhand

Table 2.3: Uttarakhand District Wise Progress under PMJDY (as on 30.09.2023)

District	Rural	Urban	Male	Female	Total	Number in actual and amount in ₹ Cr				
						Zero Balance a/c	Deposits held in a/c	Rupay Card Issued	Rupay Card Activated	Aadhaar Seeded
Rudraprayag	53335	0	22531	30773	53335	2825	51.7	31349	14137	38242
Bageshwar	54539	136	23056	31478	54675	4686	42.55	30551	11879	41508
Chamoli	64501	12347	37736	42421	80185	3675	75.82	59839	20980	55227
Almora	115385	10627	52722	78297	131191	6204	139.46	90124	33843	99920
Pithoragarh	77780	7311	42332	47050	89419	6606	64.39	42594	17302	71305
Haridwar	355937	497069	463264	439890	903087	83443	419.91	702414	282074	710949
Dehradun	223896	276810	250914	265100	516247	51463	373.01	404521	167729	376733
Pauri Garhwal	119064	15288	63266	81223	144513	10717	130.64	80529	32916	113079
Champawat	54048	8298	27743	37158	64933	4568	56.24	37744	13064	52334
Nainital	169427	117707	130373	169034	299501	17447	266.88	176147	69111	240160
Tehri Garhwal	131772	6265	58979	80909	139924	6678	124.36	85111	29619	108485
Udam Singh Nagar	379648	412993	440885	460022	901102	70324	455.34	622803	221735	747391
Uttarkashi	86186	10861	44405	54165	98584	5896	71.06	77505	26766	64296

Source: Aarthik Sarvekshan 2023-24, Part I, Uttarakhand

Looking at the Uttarakhand District wise progress under PMJDY, as on September 2023, maximum bank deposits were located in Udam Singh Nagar, totalling ₹ 455.34 Cr. This was followed by Haridwar (₹ 419.9 Cr).

The highest number of Rupay Cards issued were in Haridwar (7,02,414), which was closely followed by Udam Singh Nagar (6,22,803).

Table 2.4: District Wise Digital Transaction in Uttarakhand (as on 30.9.2023)

Number in actual and amount in ₹ Cr

District	BHIM/UPI		BHIM Aadhaar		Bharat QR Code		IMPS		Cards (Debit & Credit)		USSD	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
Rudraprayag	2663274	470.10	5412782	728.88	1045	0.47	58269	334.68	125427	57.14	123992	24.67
Bageshwar	2421636	398.08	3977649	465.65	385	0.19	55098	255.26	164184	68.33	111692	22.99
Pauri Garhwal	8125483	1642.90	14776134	1812.04	9669	10.81	195888	2870.44	572751	313.36	460884	89.88
Haridwar	56162402	52949.71	20706269	3026.98	51990	68.35	2220096	31447.43	2915153	1182.52	447998	79.30
Pithoragarh	3384153	644.26	12217057	1466.51	1706	2.87	91417	694.39	190001	94.58	374497	74.76
Chamoli	3641804	575.90	9982682	1183.00	2810	1.10	71547	422.13	195318	81.24	251753	51.10
Almora	5316873	955.78	12487219	1398.98	2666	3.47	113240	784.67	507104	203.21	274344	50.92
Champawat	2992205	528.89	4519588	596.93	51	1.31	90411	313.90	165336	70.59	100315	20.91
Nainital	22520396	13122.52	17735949	2477.34	24227	37.53	663796	10850.68	1623385	692.82	586426	117.62
Dehradun	80738887	64617.23	48104045	7216.94	144043	174.36	2537579	57109.90	5459099	2335.08	2177138	444.42
Tehri Garhwal	6978973	1211.34	10301783	1357.90	455	0.58	151905	617.19	405452	205.20	207960	40.14
Udam Singh Nagar	49370702	35126.44	17849568	2491.81	85648	99.16	1927012	45953.91	3046965	1329.58	411809	82.05
Uttarkashi	4032115	690.75	6794469	898.91	647	0.60	109635	839.85	239444	101.12	97233	20.35

Source: Aarthik Sarvekshan 2023-24, Part I, Uttarakhand

The District wise digital transaction data for Uttarakhand, as on September 30, 2023 suggests that the highest number of BHIM/UPI transactions took place in Dehradun worth ₹ 64,616.23 Cr. On the other hand, the lowest number of BHIM/UPI transactions took place at Bageshwar District worth ₹ 398.08 Cr during the same time period.

The maximum number of Card transactions (Credit and Debit) took place in Dehradun worth ₹ 2335.08 Cr till September 30, 2023. The lowest amount of transactions were recorded in Rudraprayag (₹ 68.33 Cr).

Table 2.5: Uttarakhand Bank Wise Progress under PMJDY (as on 30.09.2023)

Number in actual and amount in ₹ Cr

Bank	Rural	Urban	Male	Female	Total	Zero balance a/c	Deposits held in a/c	Rupay Card issued	Rupay Card activated	Aadhaar Seeded
SBI	369976	334885	332534	371925	704861	20079	412.79	672820	141985	462516
PNB	326815	348950	329267	346460	675765	83633	421.32	706618	303402	549012
Bank of Baroda	205955	248727	311320	327604	639054	24804	536.97	468505	137981	557696
Union Bank of India	150960	70277	111756	109481	221237	27499	106.12	119234	77893	172823
Canara Bank	109322	66367	86414	89275	175689	23870	128.8	90090	19560	141420
Central Bank of India	24378	32836	27245	29969	57214	3469	35.51	28476	28476	39214
Punjab & Sind Bank	29065	12627	18969	22712	41692	3624	11.55	1247	1230	31722
UCO Bank	70016	23134	45283	47459	93150	9651	73.77	53923	0	59280
Indian Overseas Bank	47922	17947	30821	35017	65869	6851	35.93	65869	60747	48572

Bank	Rural	Urban	Male	Female	Total	Zero balance a/c	Deposits held in a/c	Rupay Card issued	Rupay Card activated	Aadhaar Seeded
Bank of India	26557	26352	36574	35165	71806	1863	44.15	53553	49050	65715
Indian Bank	45702	70671	58571	57770	116373	10514	54.97	37788	16956	75733
Bank of Maharashtra	3565	16093	10279	9379	19658	3623	6.51	14339	14339	17873
Uttarakhand G Bank	397749	31359	182232	246876	429108	30294	337.73	64963	44152	386165
Prathama UP G Bank	1961	0	1167	952	1961	32	0.66	879	439	1351
Co-operative Bank	53525	26123	34962	46955	81919	10322	47.58	17036	14409	64657
The Nainital Bank Ltd	10790	7586	11643	16659	28302	3178	0	5134	4439	20385
Axis Bank	1819	9109	7789	3134	10928	2823	4.72	9309	6840	3937
ICICI Bank	4289	1457	3057	2689	5746	1720	0.78	5738	3608	1434
IDBI Bank	3869	9965	7914	5920	13834	2065	4.37	7753	0	8621
HDFC Bank	1121	13780	4902	9999	14901	2437	6.08	14901	14901	5582
J&K Bank	0	1123	721	402	1123	128	0.3	0	0	879
Federal Bank	0	72	52	20	72	8	0.11	36	29	42
Indus Ind Bank	31	995	830	196	1026	42	0.27	785	246	994
Karnataka Bank	0	3905	2724	1179	3905	1127	0	1674	369	2768
South Indian Bank	0	9	6	3	9	5	0	6	3	6
Yes Bank	68	71	89	50	139	69	0.02	133	96	26
Kotak Mahindra Bank	63	1272	1068	267	1335	796	0.35	415	2	1187
Bandhan Bank	0	0	0	0	0	0	0	0	0	0
IDFC First Bank	0	18	15	3	18	6	0	5	1	18
Ujjivan Small Fin. Bank	0	0	0	0	0	0	0	0	0	0
Utkarsh Small Fin Bank	0	0	0	0	0	0	0	0	0	0
Jana Small Fin. Bank	0	2	2	0	2	0	0	2	2	1
Shivalik Small Fin Bank	0	0	0	0	0	0	0	0	0	0

Looking at the State Banks' progress under PMJDY, as on 30.09.2023, while SBI held the largest amount of account holders (7,04,861) in the whole of Uttarakhand, the maximum amount of deposits were held in the Bank of

Baroda worth ₹ 536.97 Cr. on the other hand, PNB issued the largest number of Rupay Cards (7,06,618) till September 30, 2023 in the State.

Table 2.6: Uttarakhand Bank Wise Total Investment Credit under Digital Transaction (as on 30.9.2023)

Number in actual and amount in ₹ Cr

Bank	BHIM/UPI		BHIM Aadhaar		Bharat QR Code		IMPS		Cards (Debit & Credit)		USSD	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
SBI	50	0.00	184820608	25110.28	0	0.00	14056	1.21	23621	4.27	5588436	1111.17
PNB	81827984	13257.17	3614	0.76	0	0.00	2666171	2001.63	5797886	2354.65	0	0.00

Bank	BHIM/UPI		BHIM Aadhaar		Bharat QR Code		IMPS		Cards (Debit & Credit)		USSD	
Bank of Baroda	22700619	2758.71	25672	5.69	0	0.00	300414	522.78	1543730	522.16	985	0.07
Union Bank of India	21577012	2966.71	6700	1.73	0	0.00	674654	598.37	87902	1.09	0	0.00
Canara Bank	20170525	3861.40	7	0.00	0	0.00	28	0.24	1662392	636.97	5073	0.95
Central Bank of India	49023	199.67	57	0.01	0	0.00	22397	126.90	29778	86.11	0	0.00
Punjab & Sind Bank	2616086	276.22	0	0.00	138946	59.02	11196	19.69	202875	72.43	0	0.00
Uco Bank	0	0.00	0	0.00	183	0.04	266689	163.59	378346	167.51	0	0.00
Indian Overseas Bk	0	0.00	1	0.00	0	0.00	1591	26.48	70921	12.97	0	0.00
Bank of India	103	0.01	2332	0.98	0	0.00	1719	44.25	46809	12.95	0	0.00
Indian Bank	1387821	140.91	0	0.00	0	0.00	32249	44.49	108869	32.57	0	0.00
Bank of Maharashtra	940	0.33	0	0.00	836	0.10	371	0.28	0	0.00	0	0.00
Uttarakhand G Bank	170599	1144.92	0	0	0	0	8163	140.06	113606	247.68	0	0.00
Prathama UP G Bank	80	0.01	300	0	0	0	999	0	110	0	0	0.00
Co-operative Bank	0	0	0	0	801	3.19	79966	54.25	606696	313.77	0	0.00
The Nainital Bank Ltd	49721	609.52	0	0	0	0	0	0	16563	19.19	0	0.00
Axis Bank	149401	6077.76	0	0	75480	68.58	41299	141423.59	75349	308.82	0	0.00
ICICI Bank	113435	619.35	15	0	103499	242.29	37537	502.24	28654	59.98	0	0.00
IDBI Bank	8306106	1204.14	4355	1.51	0	0	26024	75.38	1898	0.52	188	0.00
HDFC Bank	63198665	13265	0	0	5629	2.58	2488310	4297.3	4065444	1589.85	0	0.00
J&K Bank	1548	26.42	0	0	0	0	1085	11.77	1914	9.98	0	0.00
Federal Bank	3296	0.74	0	0	0	0	19041	24.79	9199	3.24	0	0.00
Indus Ind Bank	6258196	1318.99	0	0	0	0	739441	796.27	2635	0.29	0	0.00
Karnataka Bank	742045	81.39	0	0	0	0	12903	30.54	63869	20.6	0	0.00
South Indian Bank	35151	8.28	0	0	0	0	3041	11.2	6123	2.46	0	0.00
Yes Bank	2882801	684.13	711	0.23	1867	24	354791	703.78	292360	95.55	0	0.00
Bandhan Bank	4371002	957.15	0	0	0	0	249431	266.51	197431	73.19	0	0.00
K Mahindra Bank	10858180	123371.12	0	0	0	0	199287	500.4	0	0	31359	6.91
IDFC First Bank	0	0	0	0	0	0	15848	64.05	680	0.28	0	0
Ujjivan Small Fin. Bank	657816	66.13	0	0	0	0	4169	12.82	96041	49.05	0	0
Utkarsh Small Fin Bank	0	0	0	0	0	0	5223	14.78	55119	27.72	0	0
Jana Small Fin. Bank	141105	22.04	0	0	0	0	5769	12.27	9400	3.36	0	0
Shivalik Small Fin Bank	79593	15.68	822	0.68	0	0	731	2.56	13399	5.59	0	0

Source: Aarthik Sarvekshan 2023-24, Part I, Uttarakhand

The data on Bank wise total investment credit under digital transaction (as on 30.9.2023) for Uttarakhand suggests that PNB had the largest amount transactions under BHIM/UPI (₹13257.17 Cr). The same bank also held the highest number and amount of Card transactions (Debit and Credit) worth ₹ 2354.65 during the same time.

State Revenue Augmentation:

According to the Uttarakhand Budget Estimates for the

year 2024-25, the State's tax revenue is estimated to be ₹ 21,959 Cr in FY 25. This is an estimated 15% jump over the Revised State Budget Estimate for FY 24.

In a similar way, the component of State's own non-tax revenue is also likely to increase by 17% to ₹ 4,873 Cr during FY 25 as compared to its figure in the revised budget estimate for FY 24.

Table 2.7: Major Sources of State's own-tax revenue (₹ Cr)

	FY23, Actual	FY24, Budgeted	FY24, Revised	FY25, Budgeted	% chg from RE FY24 to BE FY25
State GST	7,341	8,788	8,788	10,201	16%
State Excise	3,526	3,950	3,900	4,439	14%
Stamp Duty & Registration Fee	1,987	2,063	2,256	2,665	18%
Sales Tax / VAT	2,555	2,603	2,603	2,504	-4%
Taxes on Vehicles	1,212	1,475	1,375	1,550	13%
Taxes and Duties on Electricity	294	550	360	550	53%
Land Revenue	65	54	38	50	32%

Source: Annual Financial Statement, Revenue Budget and Uttarakhand Budget FY 25

In terms of break-up of the constituents of major sources of Uttarakhand's own-tax revenue, the contribution of State GST is expected to rise by 16% in BE FY25 as compared to RE FY24. In a similar trend, the share of State excise and that of Stamp Duty & Registration Fees is also likely to be up by 14% and 18% respectively in BE FY25 as compared to RE FY24.

The contribution of State tax/VAT is likely to drop by 4% for the same period comparison though.

In terms of share, State GST is estimated to be the largest source of own tax revenue (45% share) for BE FY25 figures.

Table 2.8: Break-up of the State Government's Receipts (in ₹ Cr)

Items	2022-23 Actuals	2023-24 Budgeted	2023-24 Revised	2024-25 Budgeted	% change from RE 2023- 24 to BE 2024- 25
State's Own Tax	17,103	19,983	19,620	22,509	15%
State's Own Non-Tax	4,367	4,762	4,175	4,873	17%
Share in Central Taxes	10,617	11,420	12,348	13,637	10%
Grants-in-aid from Centre	16,997	20,893	18,483	19,533	6%
Revenue Receipts	49,083	57,057	54,627	60,553	11%
Non-debt Capital Receipts	29	75	74	124	67%
Net Receipts	49,112	57,133	54,701	60,677	11%

Sources: Annual Financial Statement, Uttarakhand Budget 2024-25

In 2024-25, Uttarakhand's own tax revenue is planned to be 37% of its total revenue receipts, as per the recommendation of the Comptroller and Auditor General (CAG) in 2022. In line with the CAG report, the State government is augmenting its tax revenue by adopting the following measures:

- (i) Settling pending tax claims on time
- (ii) Settling arrears in assessment of taxes, and
- (iii) Recovering the arrears of revenue

Public Finance:

The State government is adopting several measures to augment revenue collection. These are outlined below.

Status of milestones against each implementation item, Uttarakhand is provided in the table below. which are being implemented by the Government of

Description	Milestone Achieved	Next Step
Blueprint for augmenting state finances - Identifying and detailing levers for: <ul style="list-style-type: none"> - Institutional structuring - Improving collection efficiency - Technological up-gradation 	List of reforms to be undertaken suggested and discussed with Secretaries across: <ul style="list-style-type: none"> - Mining - Water - GST - Stamp duty and registration fees - Excise duty - Real estate and urban development - Asset monetization (carbon credits, commercializing timber cultivation) - Transformation of State public sector units - Advertisements 	Discussion on implementation of action plan formulated across the activities with Secretary
Guidelines for Dividend Distribution	Submitted to Dept. (Aug'24)	Cabinet approval
Institutional structure for strengthening and monitoring of SPSUs	Submitted to Dept. (Sep'24)	Approval of plan and formation of Bureau of Public Enterprises
Reforms and action plan for strengthening public financial management (World Bank)	Components and preliminary cost estimates across financial reforms shared with department (Sep'24)	Submission to World Bank

Source: Sashakt Uttarakhand @25

AGRICULTURE AND ALLIED SECTORS

EXECUTIVE SUMMARY

The agricultural sector in Uttarakhand holds a central place in the State's economy and cultural heritage, providing livelihoods to a significantly large rural population. Characterized by its challenging mountainous terrain and diverse climatic zones, the sector supports a variety of crops including cereals, pulses, fruits, and medicinal plants. Despite these strengths, Uttarakhand faces geographical challenges such as limited arable land, small land holdings, susceptibility to soil erosion, and dependence on rain-fed farming. These issues restrict productivity and increase vulnerability to climate change, highlighting the need for policy interventions.

Historically, Uttarakhand has prioritized agriculture since becoming a separate State in 1999. This focus is not only due to agriculture's economic contributions but also its role in social stability, food security, and rural employment. Despite the overall growth in the State's economy, agriculture's share of the Gross State Domestic Product (GSDP) has gradually declined. From 2011-12 to 2023-24, while agriculture's GSDP more than doubled from ₹13.3 thousand crores to ₹29.3 thousand crores, its relative contribution to the total GSDP fell from 11.5% to 8.5%. The temporary spike to 12% during the pandemic underscored the sector's resilience, as agriculture buffered the State economy when other sectors faced severe downturns. However, agriculture's shrinking share overall reflects the State's economic diversification and the sector's shifting role in a rapidly modernizing economy.

Crop production trends reveal the challenges and gradual evolution of Uttarakhand's agriculture. Cereal production, particularly of wheat and rice, remains dominant, but production figures for food grains and pulses have seen a gradual decrease over recent years. The agricultural labour force has similarly declined in the State, with a drop in households engaged in self-employment in agriculture from 40.5% in 2017-18 to 31.3% in 2023-24. This decline reflects broader shifts, with more families pursuing non-

agricultural employment, underscoring the growing influence of economic diversification.

Infrastructure limitations are a major obstacle to agriculture in Uttarakhand. Irrigation infrastructure, essential in the predominantly rain-fed agricultural zones, remains concentrated in lowland areas, leaving higher altitudes underserved. Tubewells provide 58% of irrigation, and canals cover 28%, but this coverage is inadequate for the diverse and often remote farming areas in the State. Consequently, the government has increased its investment in irrigation infrastructure, public expenditures on agricultural mechanization, and cold storage facilities to support high-value crops like horticulture and medicinal plants.

Uttarakhand government has actively promoted sustainable and organic farming to increase crop resilience and environmental sustainability. As traditional farming practices face growing threats from climate change, the State has invested in training programmes to encourage farmers to adopt organic techniques, which align with the global demand for chemical-free produce. Organic farming has become a significant area of focus, leading to an increase in certified organic farmland and registered farmers. Efforts have also extended to the promotion of millets and other traditional, climate-resilient crops suited to the hill regions. Through this approach, the government aims to enhance food security, conserve biodiversity, and maintain sustainable land use.

Technology integration is transforming Uttarakhand's agricultural landscape. Digital marketing platforms, such as the National Agriculture Market (e-NAM), allow farmers to access wider markets and competitive prices by bypassing intermediaries. The adoption of precision agriculture, including the use of satellite imagery and drones, has also improved irrigation efficiency and crop health monitoring, while modern storage facilities reduce

post-harvest losses for perishable produce. State-supported programmes have enhanced farm mechanization, such as tractors, weeding equipment, and drones, to aid in tasks that are labour-intensive and challenging due to the terrain. This modernization enables small farmers to adopt efficient practices that were once out of reach, reducing labour demands and improving productivity. Additionally, the development of Farmer Producer Organizations (FPOs) has been instrumental in promoting collective farming and increasing bargaining power for small and marginal farmers. Supported by State and central policies, these organizations provide members with access to high-quality seeds, agricultural inputs, and credit, while also improving market access. During 2023, the State registered significant numbers in digital agricultural services, with over 90,000 farmers and nearly 230 FPOs leveraging the e-NAM portal. However, challenges remain in the form of bureaucratic delays, financial constraints, and infrastructure limitations, which limit FPO effectiveness, particularly in remote regions.

Policies aimed at financial support, such as the Pradhan Mantri Kisan Credit Card (PM-KCC) and crop insurance schemes, have also played a critical role. The expansion of credit coverage and crop insurance for farmers has helped reduce financial risks and encouraged the adoption of advanced farming practices. Despite these efforts, barriers persist, including limited banking infrastructure in remote areas, low financial literacy, and the high costs associated with insurance premiums. To address these issues, the State is working to increase farmer awareness of available financial products and facilitate easier access to insurance and credit in rural/remote regions.

The allied sectors, particularly horticulture, animal husbandry, and organic farming, have further expanded Uttarakhand's agricultural base, offering new income sources for rural families. The State has seen increased production in high-value horticultural crops, largely due to the establishment of centres of excellence, quality nurseries, and a cold chain infrastructure that supports the transport of perishable products to wider markets. This diversification not only boosts farm incomes but also contributes to rural employment, stabilizes local economies, and strengthens resilience against economic shocks. Despite notable progress, the sector still faces obstacles such as insufficient storage, transportation challenges, and lack of market linkages, which restrict optimal realisation of the growth potential for high-value crops in the State.

Uttarakhand's agricultural policies and the sector's modernization underscore the State's commitment to supporting a sector that remains central to rural livelihoods. Continued investments in infrastructure, sustainable

practices, and technological advancements, combined with targeted policies to improve credit and market access, reflect a comprehensive approach to overcoming the unique challenges faced by the agricultural sector in the State. Through these efforts, Uttarakhand seeks to build a more resilient, diversified, and sustainable agricultural economy that meets the needs of its people while addressing the environmental challenges posed by its diverse and fragile landscapes.

Agriculture and Allied Sectors in Uttarakhand

The agricultural sector in Uttarakhand is a crucial component of the State's economy and cultural identity, deeply intertwined with the livelihoods of its largely rural population. Characterized by its unique mountainous terrain and diverse climatic zones, Uttarakhand supports a wide range of agricultural practices and crops. The State's topography, with high-altitude regions and varying microclimates, enables the cultivation of diverse crops, including cereals, pulses, horticultural produce, and medicinal plants. However, these geographical features also present challenges, such as limited arable land, soil erosion, and dependence on traditional rain-fed farming systems, which can restrict productivity and increase vulnerability to climate change.

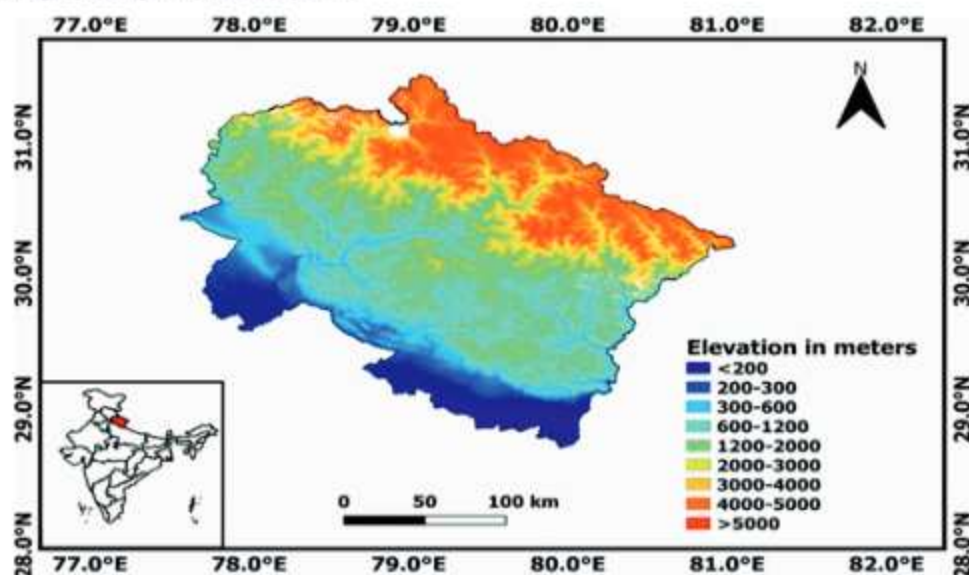
Despite these challenges, agriculture remains central to Uttarakhand's socioeconomic structure. A large portion of the population depends on it for sustenance, employment, and income generation, especially in rural areas where alternative livelihoods are limited. The sector plays a foundational role in sustaining rural communities and in supporting food security within the State. Recognizing the importance of agriculture, State policies have increasingly focused on strengthening the sector through initiatives aimed at enhancing productivity, promoting sustainable practices, and supporting diversification into high-value crops like horticulture and medicinal plants. As Uttarakhand continues to develop and diversify economically, agriculture remains a critical focus of State planning, reflecting its ongoing importance to both the local economy and the welfare of the population.

Figure-3.1 shows the topographical variations in Uttarakhand and illustrates the region's varied elevation levels, ranging from less than 200 meters to over 5,000 meters above sea level. The colour gradient from blue to red depicts the State's elevation distribution, with lower elevations represented in blue and higher elevations in shades of orange and red. This visualization clearly highlights the geographical diversity of Uttarakhand, with its relatively low-lying areas in the southern plains and steep elevation gains as one moves northward towards the Himalayas.

The map indicates that most of Uttarakhand's lowland areas, shown in blue and green, are in the southern and southwestern regions, where elevations are less than 600 meters. These areas are more accessible and suitable for agricultural activities, which rely on relatively flat terrain and favourable climate. Moving northwards, the elevation increases sharply, with extensive high-altitude zones depicted in yellow, orange, and red. These regions, reaching elevations above 4,000 meters, form part of the Himalayan mountain range, with limited accessibility and challenging conditions for agriculture due to steep slopes and harsher climatic conditions.

This diverse topography has significant implications for Uttarakhand's agriculture, as different zones are suited to specific types of crops and farming practices. The lowland areas support conventional agriculture, while the higher elevations, although less suitable for farming, may be used for horticulture, medicinal plants, and animal husbandry. Furthermore, this topographical variation affects rainfall patterns, water availability, and temperature gradients, all of which influence the agricultural practices and livelihoods in Uttarakhand. In the subsequent sections we shall delve into the details of the agricultural sector in the State.

Figure-3.1: Topography Map of Uttarakhand



Source: Vinodhkumar, B., Jose, A.M., Rao, K.K. et al. Future precipitation extremes over base Himalayan Uttarakhand region: analysis using the statistically downscaled, bias-corrected high-resolution NEX-GDDP datasets. *Theor Appl Climatol* 149, 1239–1253 (2022). <https://doi.org/10.1007/s00704-022-04111-7>

3.1 An Overview of the Sector

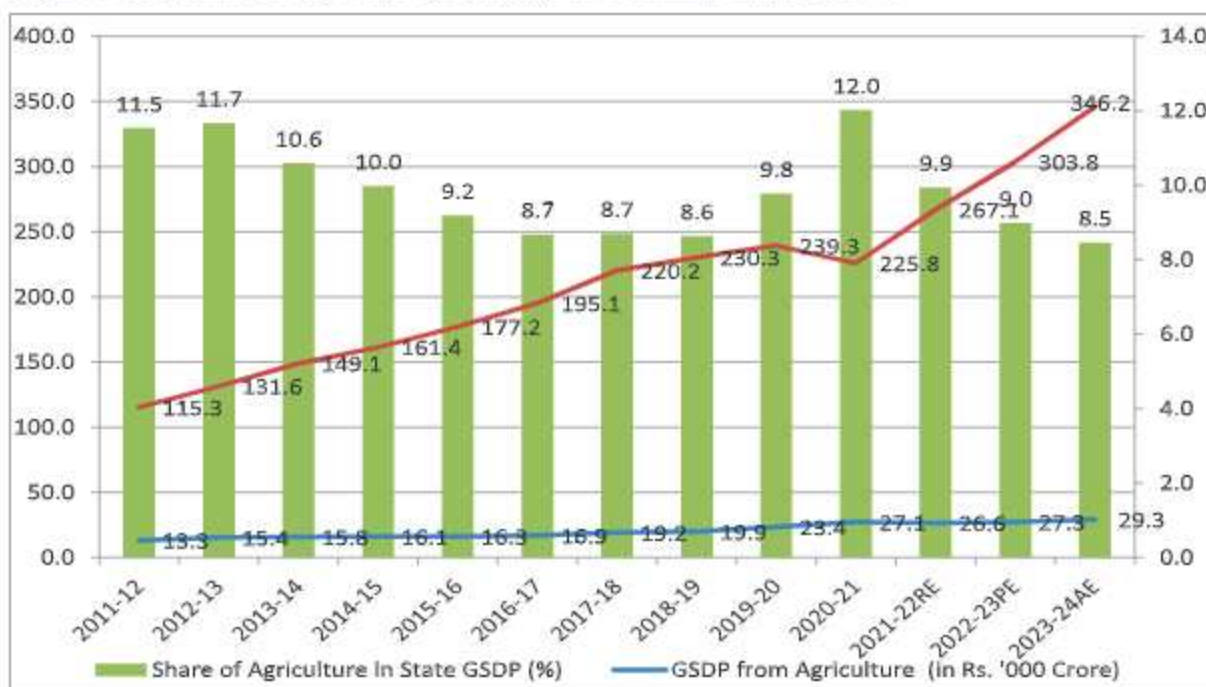
Since its inception in 1999, policymakers of Uttarakhand have prioritized the agricultural sector due to its significant capacity for labour absorption and crop diversification. Despite only 14% of the State's total area being arable, agriculture plays a crucial role in generating income and employment. Additionally, the sector has demonstrated considerable resilience in the face of the COVID-19 pandemic in recent years.

Uttarakhand's geography and climatic conditions create a unique and favourable environment for diverse agricultural practices. Nestled in the northern part of India, this hilly State is characterized by a varied topography that ranges

from the snow-capped peaks of the Himalayas to fertile valleys and forested regions. The State's climate varies significantly with altitude, encompassing cold, temperate, and subtropical zones. This diverse climate allows for the cultivation of a wide range of crops, from temperate fruits like apples and plums in the higher altitudes to rice, wheat, and sugarcane in the lower foothills and plains. The presence of numerous rivers and streams supports irrigation, although much of the agriculture is rainfed. These geographical and climatic conditions not only support traditional farming but also provide opportunities for high-value horticulture and organic farming, contributing significantly to Uttarakhand's agricultural diversity and productivity.

3.1.1. Performance of Agricultural Sector in Recent years

Figure-3.1.1: Share of Agriculture, Forestry and Fishing in State GSDP



Source: DES, Uttarakhand

Figure-3.1.1 illustrates the performance of Uttarakhand's agricultural sector from 2011-12 to 2023-24, highlighting trends in the Gross State Domestic Product (GSDP) from agriculture, the total State GSDP, and the share of agriculture in the State's economy. Over this period, the GSDP from agriculture has shown a steady upward trajectory. Starting at ₹ 13.3 thousand crores in 2011-12, it has gradually risen to reach ₹ 29.3 thousand crores by 2023-24. This increase reflects sustained growth in agricultural output over the years, with significant jumps at certain points, notably between 2019-20 and 2020-21, where agricultural GSDP increased from ₹ 23.4 thousand crores to ₹ 27.1 thousand crores. This jump may indicate strong growth or recovery in the sector, perhaps driven by favourable conditions or government support.

The overall State GSDP has expanded consistently throughout this period, demonstrating robust economic growth in Uttarakhand. From ₹ 115.3 thousand crores in 2011-12, the State GSDP has more than tripled, reaching ₹ 346.2 thousand crores in 2023-24. This substantial increase indicates a diversified economic expansion across multiple sectors within the State. However, while both the agricultural GSDP and the total State GSDP have grown, agriculture's share within the State GSDP has gradually declined, falling from 11.5% in 2011-12 to 8.5% in 2023-24. This trend suggests that, although agriculture remains

an essential part of Uttarakhand's economy, other sectors have grown at a faster pace, reducing the relative contribution of agriculture to the State's economic output. An interesting anomaly occurs in 2020-21, where agriculture's share of the GSDP temporarily spikes to 12.0%. This unusual increase likely reflects the economic impact of COVID-19, which affected sectors like services and industry more severely than agriculture, thus elevating agriculture's proportionate share in the economy that year. In the following years, the share of agriculture in the GSDP resumed its downward trend, reaching 8.5% by 2023-24, which indicates a post-pandemic recovery or expansion in other sectors that outpaced growth in agriculture. Uttarakhand's agricultural sector has demonstrated absolute growth, yet its relative share in the State economy has diminished over time, reflecting a shift towards economic diversification or industrialization. This shift underscores the evolving economic structure of Uttarakhand, where non-agricultural sectors contribute increasingly to economic growth, while agriculture remains resilient, particularly in times of broader economic disruptions.

In Uttarakhand, wheat is the predominant crop, followed closely by rice. The State also cultivates a variety of other grains, pulses, sugarcane, oilseeds, fruits, vegetables, spices, and fodder crops. Traditional mixed cropping has

been a longstanding practice among farmers in the State's hilly regions. Table 3.1.1 reveals recent trends in the production of major crops in Uttarakhand over the five-year period from 2019-2020 to 2023-2024. A general observation indicates a slight but consistent decrease in the production of key food crops, particularly cereals, food grains, and pulses, with only oilseeds experiencing modest fluctuations over the years. Uttarakhand's agricultural

production data over these years shows a steady reduction in the production of major food grains, with oilseeds as the only category showing minor resilience. This trend could reflect shifting agricultural dynamics in the region or underlying factors impacting crop yields, such as climatic challenges. The information in Table-3.1.2 shows the area and productivity under these major crop groups in last few years.

Table-3.1.1: Production of Major Crops in Uttarakhand in Recent Years (in lakh MT)

S.No.	Year	Cereals	Pulses	Food Grains	Oilseeds
1	2019-2020	18.33	0.58	18.92	0.23
2	2020-2021	19.19	0.57	19.76	0.22
3	2021-2022	18.29	0.57	18.86	0.26
4	2022-2023	16.99	0.53	17.52	0.29
5	2023-2024#	16.63	0.51	17.13	0.26

#Second Advanced Estimate. Source: Source: Pragati Prativedan 2023-24 and Budget Digdarshika 2024-25

Table-3.1.2: Area, Production, and Productivity of Major Crops in Uttarakhand Over the Last Three Years

S.No.	Crop	Year	2021-22	2022-23	2023-24#
1	Total Pulses	Area (Ha)	53808	53154	53423
		Production (MT)	57231	53658	50008
		Productivity (Qtl/Ha)	10.64	10.1	9.36
2	Total Grains	Area (Ha)	751384	717866	706643
		Production (MT)	1886519	1752879	1712532
		Productivity (Qtl/Ha)	25.11	24.41	24.23
3	Total Oilseeds	Area (Ha)	26510	27998	28063
		Production (MT)	25879	28842	25930
		Productivity (Qtl/Ha)	9.73	10.32	9.24

#Second Advanced Estimate. Source: Source: Pragati Prativedan 2023-24 and Budget Digdarshika 2024-25

Table-3.1.3: Percentage Distribution of Households Engaged in Agriculture in Uttarakhand

Year	Self-Employed in Agriculture	Casual Labour in Agriculture	Non-Agricultural Employment
2017-18	40.5	2.5	57
2018-19	33.1	3.4	63.5
2020-21	39.1	2	58.9
2021-22	36.9	1.3	61.8
2023-24	31.3	3.1	65.6

Source: PLFS Annual Reports (various years)

Table 3.1.2 shows a clear decline in the share of households engaged in agriculture, indicating a gradual shift away from agricultural activities. In 2017-18, a significant proportion of households (40.5%) were self-employed in agriculture, while only a small fraction (2.5%) were engaged as casual labourers, resulting in a total of 43% of

households involved in agricultural employment. This proportion of self-employment in agriculture declines over the years, reaching 31.3% by 2023-24. This downward trend in self-employment may reflect growing challenges in the agricultural sector, possibly including issues related to profitability, labour, and productivity, driving

households to seek alternative employment opportunities. Casual labour in agriculture remains a minor component throughout the period, with modest fluctuations. The total percentage of households in agricultural employment (including casual employment) decreases from 43% in 2017-18 to 34.4% in 2023-24. This trend indicates a shift away from agriculture as a primary livelihood, which could be due to economic diversification, urban migration, or a shift in labour towards other sectors. This decline reflects a broader trend of rural transformation where agriculture is no longer the primary occupation for many households, possibly due to emerging opportunities in non-agricultural sectors or limitations within agricultural income and sustainability. Despite the observed decline in Uttarakhand's agricultural sector performance, agriculture remains an indispensable component of the State's economy and a cornerstone of its policy framework. The sector is not only a primary source of livelihood for a significant portion of the rural population but also a crucial part of the State's identity, deeply tied to the cultural and social fabric of the region. Given the unique topography and climatic conditions, agriculture in Uttarakhand supports a variety of crops and practices that contribute to food security, biodiversity conservation, and sustainable land use.

State policymakers continue to prioritize agriculture because of its role in supporting rural employment, reducing poverty, and stabilizing local economies. Recognizing the challenges the sector faces—such as limited arable land, soil erosion, and changing weather patterns—the government remains committed to strengthening agricultural resilience. This includes initiatives aimed at improving infrastructure, expanding access to markets, encouraging sustainable practices, and promoting crop diversification, particularly in high-value and climate-resilient crops suited to the region's environment.

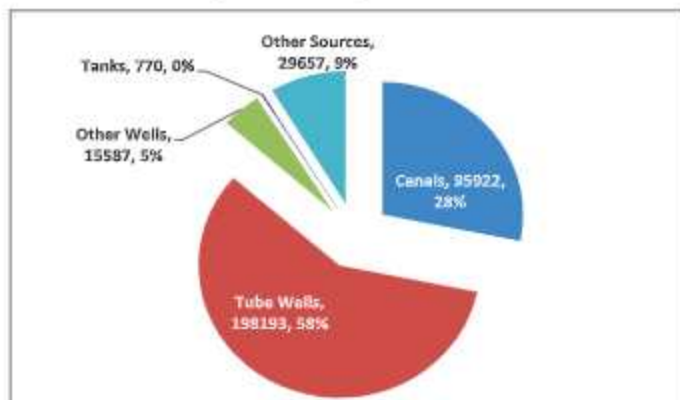
Moreover, agriculture serves as a safety net for rural communities, providing stability in times of economic uncertainty and limited job opportunities in urban areas. The State's development plans continue to integrate agricultural policies with rural development programmes, aiming to boost productivity, enhance income for smallholders, and ensure long-term sustainability. Although its contribution to Gross State Domestic Product (GSDP) has relatively decreased as other sectors have grown, agriculture's broader impact on social stability, economic inclusion, and environmental conservation makes it a vital area for State intervention and resource allocation. Thus, even amid structural changes in Uttarakhand's economy, agriculture remains a strategic priority in State policy, reflecting its essential role in both present and future development agendas.

3.2 Challenges in Agricultural Infrastructure and Investment

Given the unique geographical and socio-economic conditions of the region, the agricultural sector here presents both significant opportunities and distinct challenges, which have been addressed through various strategic initiatives. The State is characterized by its terraced fields, diverse climatic zones, and traditional farming practices. Given these challenges, the infrastructure base in the State is typically low compared to its peers. Most of the non-irrigated areas being in the hilly region, there is a need to explore and utilise alternate irrigation sources such as rainwater harvesting, check dams, hydam for lift irrigation etc. to enhance the net irrigated area as well as the cropping intensity in the State. Large scale adoption of modern technologies like drip irrigation, sprinklers etc. can also be adopted for enhancing the scope of the sector. It is in this context that an increase in public expenditure on irrigation and flood control in recent years holds a lot of significance for the fate of agriculture in the State.

Figure-3.2.1 shows the composition of irrigation potential in the State. Around 58 percent of the total irrigation potential in the State comes from the tubewells irrigating around 1.98 lakh hectare of land in the State, followed by canals (28 percent) irrigating around 96 thousand hectares. Wells, tanks and other sources provide for the rest of the irrigation needs in the State. Most of the irrigation facility from tubewells and canals are concentrated in the plain districts of the State. Table-3.2.1 provides a glimpse of the irrigation infrastructure available in the State. It is estimated that the command area under State run canal irrigation projects is around 3.19 lakh hectares although the actual use is less due to uneven surface of the terrain in some parts of the State where pump sets can provide a substantial support to the farmers.

Figure-3.2.1: Composition of the Irrigation Potential in Uttarakhand (in Hectares)



Source: Uttarakhand Irrigation Department

Table-3.2.1: Irrigation Infrastructure in Uttarakhand

Length of Canals (in Km)	11081
Length of Lift Canals (in KM)	201
State Run Tube Wells (Nos)	981
Number of Pump Sets (Boring/ Free Boring)	54361
Hauj (Nos)	29507
Gool (Nos)	23715
Hydrum (No)	1493
C.C.A. Under State Canal (Lakh Hect.)	3.18
Net Irrigated Area in Hect. (NIA)	340129
Gross Irrigated Area in Hect. (GIA)	569769

Source: Uttarakhand Irrigation Department

In terms of post-harvest infrastructure, the State needs to make a significant improvement

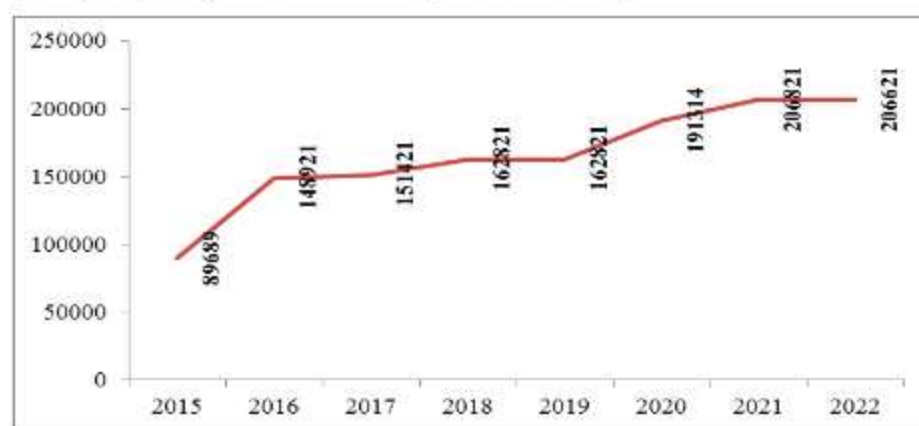
Table-3.2.2 shows that the utilisation of the storage capacity of foodgrains under FCI has been only 40 percent in the year 2023. Of a total foodgrain capacity of 1.81 lakh metric tonnes under FCI, around 0.72 lakh metric tonnes

could be utilised in the year 2023. At the same time the cold storage facility in the State is 206621 metric tonnes in the year 2022 (Figure-3.2.2).

Table-3.2.2: Storage Capacity of Foodgrains and Utilization under FCI (in Lakh Metric Tonnes) upto 31st March 2023

Year	Total Capacity	Stocks Held	Utilisation Percentage
2019	1.85	1.41	76
2020	1.92	1.68	88
2021	1.85	1.55	84
2022	2.13	1.42	67
2023	1.81	0.72	40

Source: RBI Handbook of Statistics on Indian States 2023

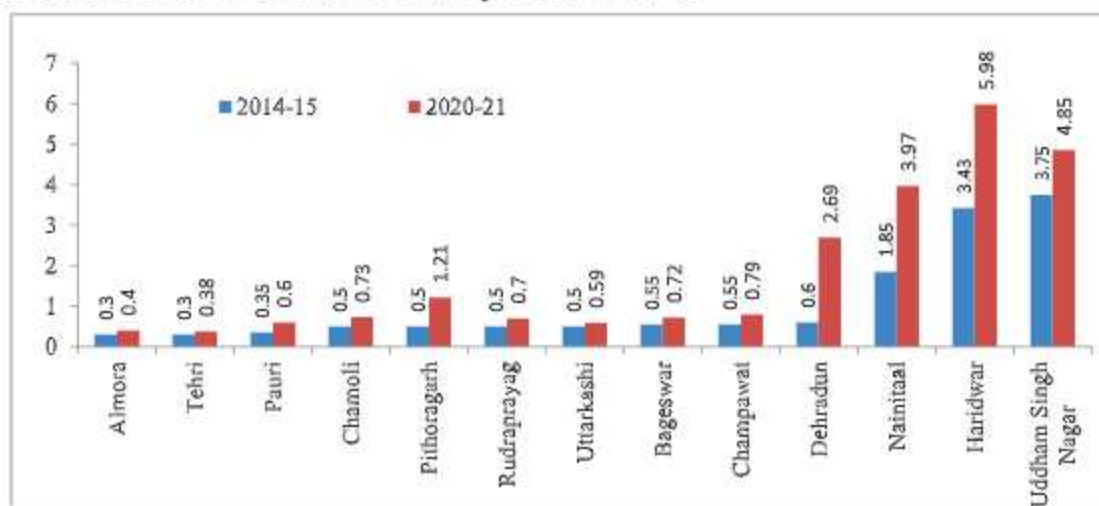
Figure 3.2.2: Cold Storage Capacity in Uttarakhand (Metric Tonnes)

Source: RBI Handbook of Statistics on Indian States 2023

The efforts towards rapid mechanisation of the sector in the State may face significant challenges due to infrastructural bottlenecks. It is estimated that the average availability of farm power in hilly regions of the State is about 0.61 KW/Ha compared to around 4.37 KW/Ha power available

in the tarai and plain region of the State. This poses a substantial challenge for the sectoral development in the hilly areas where around 89 percent farmlands are not irrigated. Figure-3.1.3 shows the district wise variations in the farm power availability during 2014-15 and 2020-21.

Figure 3.2.3: District wise Farm Power Availability in Uttarakhand



Source: Department of Agriculture, Government of Uttarakhand

Investment in Agricultural Infrastructure has been prioritized by the State government, with a focus on improving irrigation systems, market access, and storage facilities. The government has implemented programmes such as the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and other schemes aimed at enhancing water efficiency. Over the past few years, investments have been channelled into building check dams, rainwater harvesting systems, and micro-irrigation facilities, particularly in the hilly areas where water scarcity is an issue.

In addition, the State has also made substantial efforts to promote organic farming. Uttarakhand has the potential to become a leader in organic farming, capitalizing on the growing global demand for organic produce. The government has facilitated training programmes for farmers, along with certification processes, which will eventually lead to greater marketability of agricultural products from the State.

Table-3.2.3: Public Investment in Uttarakhand Agriculture (₹ Crore)

	2021-22 (Accounts)	2022-23 (Budget Estimates)	2022-23 (Revised Estimates)	2023-24 (Budget Estimates)
Total Public Investment in Agriculture and Allied Activities	4333	5505	4925	6745
Irrigation and flood control	721	1365	1020	1507
Food Storage and Warehousing	582	462	377	852

Note: Includes revenue, capital and loan disbursements in agriculture and allied activities and irrigation.

Source: RBI State Finances: Study of Budgets

Public investment in Uttarakhand's agriculture has shown a clear upward trend from 2021-22 to 2023-24, reflecting the State government's increasing focus on strengthening the agricultural sector.

Total investment grew from ₹4,333 crore in 2021-22 to ₹6,745 crore in the 2023-24 budget estimates, indicating a strategic commitment to bolstering agriculture and allied activities.

This investment surge is particularly evident in irrigation and flood control, where allocations jumped from ₹721

crore in 2021-22 to ₹1,507 crore in 2023-24, underscoring the priority placed on water management in a State that faces significant challenges due to its diverse topography and susceptibility to natural disasters. However, the data also reveals fluctuations, especially in 2022-23, where the revised estimates for both irrigation and food storage were lower than the original budget projections, suggesting possible difficulties in fund utilization or adjustments based on emerging needs.

The 2023-24 budget shows a renewed emphasis on post-harvest infrastructure, with food storage and warehousing

allocations more than doubling from the revised 2022-23 estimates to ₹852 crore. This substantial increase points to a concerted effort to reduce food wastage and improve food security, which are critical for sustaining agricultural productivity in the region. Overall, these investment patterns reflect a comprehensive approach by the Uttarakhand government to enhance agricultural infrastructure, improve resilience against environmental challenges, and secure the livelihoods of farmers.

In the year 2018, government of Uttarakhand proposed a draft agricultural policy with a vision for revamping agriculture in the mountain state. One of the key objectives of the policy was to double farmers' income by 2022. This was to be achieved through a combination of measures, including increasing agricultural productivity, reducing input costs, and improving market access. However, the efforts were marred by COVID 19 and many public policies including agriculture could not get due prioritisation. Still the directives and the efforts had some positive outcomes in this direction. The policy also emphasized the need to adopt sustainable agricultural practices that are resilient to climate change. This includes promoting organic farming, protecting traditional crop varieties, and enhancing soil health through natural fertilizers and composting. The policy advocates for integration of agriculture with allied sectors such as horticulture, animal husbandry, and fisheries to provide additional income streams for farmers.

Investible Projects under Sashakt Uttarakhand

Government of Uttarakhand has undertaken several investible projects to revamp the agricultural sector, focusing on diverse areas such as horticulture, animal husbandry, fisheries, and agro-industrial development. These initiatives aim to enhance productivity, create value chains, and attract private investments while ensuring sustainable agricultural practices.

Key projects include:

- Development of a Millets Food Park at Sitarganj
- Aroma Park in Kashipur
- Mahak Revolution

While investor outreach for the Millets Food Park is ongoing, the Aroma Park has seen significant progress, with 35 plots allotted to investors and construction initiated on 12 plots. Mahak Revolution, focused on aromatic plantations, has completed its policy drafting phase, awaiting approval to commence applications.

In horticulture, projects like the Development of High-Density Apple Orchards and Controlled Atmosphere (CA)

Stores for Apple Storage are in progress. Although these initiatives have faced delays in policy approvals and amendments to subsidy disbursement processes, efforts to empanel orchard developers continue.

High-Tech Nurseries Development project in Karmi, Bageshwar, has advanced, with land site visits completed and requests for proposals (RFPs) under review.

In animal husbandry and fisheries, the government has prioritized projects such as:

- Integrated Dairy Project in Simali, involving organic milk and Badri cow ghee production,
- O&M of Government Brood Bank and Hatcheries in PPP mode.

While most of these projects are in the preparatory stages, with proposals submitted and RFPs pending, construction of an Integrated Aquapark in Sitarganj has commenced.

Agro-industrial projects include:

- Establishment of a Winery and Distillery Unit
- Animal Waste to Wealth Management Facilities in Rudrapur
- Carbon Credits Project through Afforestation and Pine Needle Fuel

While the winery project is operational on private land, others are awaiting final approvals.

Carbon Credits Project through Afforestation and Pine Needle Fuel aims to combine environmental sustainability with economic benefits, with draft RFPs submitted for departmental review.

Despite these advancements, challenges such as delays in policy approvals, land parcel identification, and investor on-boarding remain. However, with continued focus and expedited approvals, these projects hold the potential to transform Uttarakhand's agricultural landscape by fostering innovation, enhancing productivity, and promoting sustainable development.

3.3 Modern Farming Practices and Mechanization

Agriculture in Uttarakhand is undergoing significant transformation, driven by efforts to modernize farming practices, increase productivity, and improve sustainability. The State government has been implementing policies and initiatives aimed at promoting the adoption of modern agricultural technologies while addressing the unique challenges of Uttarakhand's diverse terrain.

For the fiscal year 2023-24, the government has aligned its agricultural strategy with national priorities such as Atmanirbhar Bharat and Digital India, focusing on increasing the use of technology, enhancing irrigation, and supporting organic farming.

Organic Agriculture:

One of the key areas of focus is the promotion of organic farming. Uttarakhand, with its rich biodiversity and diverse climatic zones, has been recognized for its potential to lead in organic agriculture. As part of this initiative, the government has introduced plans to expand the area under organic cultivation by providing subsidies for certification and organizing training programmes for farmers.

Market linkages have been enhanced to promote the sale of organic produce both domestically and internationally, increasing the income of local farmers.

Precision agriculture has emerged as a priority area. This includes the use of satellite imagery, drones, and sensor-based irrigation systems, designed to optimize the use of water, fertilizers, and pesticides. The goal is to reduce input waste, improve yields, and enhance the sustainability of farming practices across the State. The recent data shows a significant decline in the use of chemical fertilisers in the State over last five years which can be attributed to the organic focus (Table-3.3.1).

Table-3.3.1 Consumption of Main Chemical Fertilizers (in Metric Tonnes) in Uttarakhand

Year	Urea	D.A.P	N.P.K	M.O.P	Total
2020-21	2,39,961	34,003	29,956	5,865	3,09,785
2021-22	2,05,051	34,199	26,470	6,985	2,72,705
2022-23	2,13,631	52,687	17,004	4,129	2,87,451
2023-24 (Expected)	2,13,340	36,716	18,236	5,170	2,73,462

Source: Pragati Prativedan 2023-24 and Budget Digidarshika 2024-25

Under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), the government has invested in expanding irrigation coverage through micro-irrigation systems, check dams, and rainwater harvesting, with particular attention to water-scarce areas in the hilly regions. These interventions are designed to address the State's dependence on erratic rainfall and support farmers in making better use of available water resources.

The State has made efforts to improve market access for farmers through the digitization of agricultural marketing. The introduction of online platforms like the National Agriculture Market (e-NAM) enables farmers to access real-time price information and sell their produce to buyers across the country, enhancing price discovery and reducing the role of intermediaries.

Significant progress has been made in *adopting modern farming practices* during the fiscal year 2023-24. The area under organic farming has expanded by approximately

15%, with more farmers receiving certification and training. Additionally, the use of precision farming technologies, including drones for crop monitoring and pest management, has increased by 25%, particularly in horticulture and the cultivation of medicinal plants.

Irrigation coverage has improved significantly, with micro-irrigation systems installed across 20,000 hectares of agricultural land, benefiting farmers in regions where traditional irrigation methods were insufficient.

In terms of digital market platforms, over 10,000 farmers have registered on e-NAM, enabling them to reach broader markets and secure better prices for their produce.

Several new cold storage facilities have become operational, reducing post-harvest losses for perishable crops, and agro-processing units have increased by 12%, allowing farmers to add value to their produce.

Table-3.3.2: Progress of SMAM for the Year 2023-24

S.No.	Component	Targets		Achievements	
		Physical in Numbers	Financial in ₹Lakhs	Physical in Numbers	Financial in ₹Lakhs
1	Custom Hiring Centres (40% Subsidy)	10	40	10	40
2	Farm Machinery Bank	100	400	100	400

S.No.	Component	Targets		Achievements	
		Physical in Numbers	Financial in ₹Lakhs	Physical in Numbers	Financial in ₹Lakhs
3	Agri Drone FPO	30	225	18	112
4	Agri Drone CHC	12	48	0	0
5	Tractor	75	266	75	233.75
6	Power Weeder	2400	1347.5	2300	1321.34
7	Reaper Cum Binder	43	100	28	70
8	Tractor Driven/Engine Operated Equipment	974	560.264	728	488.12
9	Manual/Animal operated equipment	280	25.2	280	21.76
10	Horticultural / Post harvest equipment	433	233.23	295	157.62
11	Small Implements	0	35	0	35
12	Management and Administrative Charges	0	20	0	20
	Grand Total	4307	3300.45	3564	2900.09

Source: Department of Agriculture

The progress report of the Sub-Mission on Agricultural Mechanization (SMAM) for the year 2023-24 shows a mixed performance across various components in terms of both physical achievements and financial expenditures.

Custom Hiring Centres (CHCs) and Farm Machinery Banks fully met their targets, with 10 CHCs and 100 machinery banks established, utilizing ₹40 lakhs and ₹400 lakhs respectively.

The tractor component achieved its physical target of 75 units but fell slightly short financially, spending ₹233.75 lakhs against the ₹266 lakh target.

Power Weeder nearly reached its goal, with 2300 units achieved out of 2400, and an expenditure of ₹1321.34 lakhs, reflecting efficient use of the allocated budget.

On the other hand, some components showed under-performance. For instance, the Agri Drone for Farmer Producer Organizations (FPO) reached only 60% of its target, with 18 drones against a target of 30, spending ₹112 lakhs compared to the allocated ₹225 lakhs. Worse, the Agri Drone CHC component saw no progress, failing to achieve any physical or financial targets.

The Reaper Cum Binder also fell short, achieving only 28 units out of 43, while the tractor-driven and engine-operated equipment reached 74.8% of its physical target, with 728 units achieved and ₹488.12 lakhs spent out of the targeted ₹560.264 lakhs.

The horticultural and post-harvest equipment component performed similarly, achieving 68.1% of its physical target and spending 67.6% of its financial allocation.

The manual and animal-operated equipment component met its physical target of 280 units but spent only ₹21.76 lakhs out of the allocated ₹25.2 lakhs. The overall progress indicates that out of the total physical target of 4307 units, 3564 were achieved, which translates to 82.75% of the target.

Financially, ₹2900.09 lakhs were spent out of the total ₹3300.45 lakh allocation, reflecting an 87.88% utilization. While many components show promising progress, the lack of progress in the Agri Drone CHC component and the shortfalls in others like the Agri Drone FPO, Reaper Cum Binder, and horticultural equipment suggest areas that need further attention and resources to fully meet the targets.

Availability of Quality Seeds

Availability of quality seeds in the hill districts has been a priority for the State government. Over the years, the focus has been on ensuring that farmers have access to high-quality, disease-resistant seed varieties that are suited to the region's diverse climatic conditions. For FY 2023-24, policies under the National Food Security Mission (NFSM) and State-level initiatives have emphasized increasing the availability of certified seeds through seed distribution programmes and local seed banks. Additionally, hybrid seeds and indigenous varieties that are climate-resilient have been promoted. However, barriers

remain, particularly in terms of reaching remote areas where transportation infrastructure is inadequate. Despite progress, a gap still exists in ensuring timely seed

distribution to all farmers, particularly those in the higher-altitude regions. Table 3.3.3 shows progress in the distribution of quality seeds during last four years.

Table 3.3.3 Year wise Distribution of Quality Seeds 2020-21 till 2023-24 (in Quintals)

Year	Department of Agriculture	Department of Cooperation	TDC	NSC	Private Organisations	Total
2020-21	39662	13200	4319	2210	94409	153800
2021-22	39088	9042	4180	1638	95937	149885
2022-23	41312	323	2834	5525	98406	148400
2023-24	40157	0	2592	1550	102578	146877

Source: Pragati Pratibedan 2023-24

The table detailing the year-wise distribution of quality seeds from 2020-21 to 2023-24, measured in quintals, reveals trends in contributions from various entities such as the Department of Agriculture, Department of Cooperation, TDC, NSC and private organizations.

In 2020-21, the total distribution of seeds reached 153,800 quintals, with private organizations leading the contributions at 94,409 quintals, which represented 61.4% of the total. The Department of Agriculture contributed 39,662 quintals, while the Department of Cooperation added 13,200 quintals. TDC and NSC, though smaller contributors, supplied 4,319 and 2,210 quintals respectively.

Moving to 2021-22, the total seed distribution slightly decreased to 149,885 quintals, though private organizations continued to dominate with 95,937 quintals, accounting for 64% of the total. The Department of Agriculture's contribution saw a small decline to 39,088 quintals, and the Department of Cooperation's share fell significantly to 9,042 quintals. During this period, TDC and NSC provided 4,180 quintals and 1,638 quintals respectively.

In 2022-23, the total distribution further dropped to 148,400 quintals. Private organizations expanded their

share, contributing 98,406 quintals, which formed 66.3% of the total distribution. The Department of Agriculture slightly increased its contribution to 41,312 quintals, while the Department of Cooperation's contribution plummeted to just 323 quintals. TDC contributed 2,834 quintals, and NSC saw a sharp rise in its contribution to 5,525 quintals.

In 2023-24, the total seed distribution declined to 146,877 quintals, with private organizations further strengthening their position by contributing 102,578 quintals, making up 69.8% of the total. The Department of Agriculture contributed 40,157 quintals, while the Department of Cooperation recorded no contribution at all, marking a significant shift. TDC and NSC also saw reductions in their contributions, providing 2,592 and 1,550 quintals respectively.

Overall trend across these years indicates a steady decline in the total distribution of quality seeds, accompanied by a growing reliance on private organizations, which have consistently increased their share. Meanwhile, government departments like the Department of Cooperation have seen a drastic reduction in their role, particularly in 2023-24 when their contribution dropped to zero, while the Department of Agriculture has maintained a relatively steady input.

Table-3.3.4 Registered Areas (in hectares) for Certified Seed Production in Uttarakhand (2019-2020 to 2023-2024)

District	2019-20	2020-21	2021-22	2022-23	2023-24
Udham Singh Nagar	97801.83	81223.71	80395.39	81574.94	88687
Nainital	11717.79	11962.9	11652.85	13408.85	14341.32
Haridwar	1926.71	1694.08	1478.72	1317.2	1787.42
Dehradun	453.82	322.56	389.57	215.25	214.95
Almora	153.15	206.56	151.42	181.85	219.15
Uttarkashi	4.32	1.62	2	0	0
Tehri	96.36	46.5	7.4	16.6	7.6
Pauri	211.3	278.9	265.92	180.23	192.07

District	2019-20	2020-21	2021-22	2022-23	2023-24
Chamoli	2.8	7.2	0	0	0
Rudrapur	1.9	0	0	0	0
Pithoragarh	117.99	82.088	103.28	101.39	104.25
Champanaut	2.8	0	3	0	0
Bageshwar	26.42	11.6	29.48	55	44.5
	112517.2	95837.72	94479.03	97051.31	105598.3

Source: Prati Prativedan 2023-24

Cluster Farming has emerged as a key reform to improve agricultural productivity and enhance market linkages in the hill districts. Under the Cluster-Based Development Programme, the government has encouraged farmers to form Farmer Producer Organizations (FPOs) to increase the collective bargaining power of small and marginal farmers. During FY 2023-24, several clusters focusing on the cultivation of high-value crops such as horticultural products, medicinal plants, and organic produce have been formed. The programme has shown promise in Chamoli, Pithoragarh, and Almora, where farmers have started to benefit from improved market access. However, progress has been uneven, as many clusters face challenges in accessing markets due to poor road connectivity, and the lack of cold storage facilities has led to post-harvest losses. The adoption of cluster farming is also hindered by farmers' reluctance to shift from traditional individual farming practices to a collective model.

Improving Crop Productivity:

To improve crop productivity, the government of Uttarakhand has introduced several measures aimed at improving both yield and quality. The State has actively promoted the use of organic farming techniques, soil health management, and improved irrigation systems such as micro-irrigation. Additionally, the introduction of high-yielding seed varieties and agronomic practices suited to the hill regions has been prioritized.

The 2023-24 plans have focused on encouraging the cultivation of off-season vegetables and horticultural crops which offer higher returns. While these efforts have shown positive results in districts like Nainital and Bageshwar, productivity levels are still below the national average in many parts due to fragmented landholdings, inadequate access to technology, and poor irrigation coverage. The erratic weather patterns caused by climate change have further impacted crop yields, making it necessary to invest more in climate-resilient farming practices.

Promotion of Millets Cultivation:

One significant policy initiative has been the push to include local millets in the Minimum Support Price (MSP)

system. Uttarakhand's indigenous millet varieties, such as finger millet (Ragi) and barnyard millet (Jhangora), are both nutritionally rich and climate-resilient, making them suitable for cultivation in the hill regions. The government has introduced policies to mainstream millets as part of the National Millet Mission, and for FY 2023-24, efforts have been made to promote their cultivation through incentives and market support. Despite this, barriers persist in terms of formalizing MSP for these millets, especially since the infrastructure to procure and store these crops is still underdeveloped. Awareness among farmers regarding millet cultivation and its benefits also remains limited in some regions, slowing adoption.

Promotion of Customised Strategies/Solutions for Different Agro-Climatic Regions:

Recognizing the varied agro-climatic zones in Uttarakhand, the State has adopted a bouquet of strategies promoting customised solutions for different regions to maximize farmer incomes. In the lower plains, where fertile soil and irrigation facilities are better developed, farmers have been encouraged to adopt high-value cash crops like sugarcane, wheat, and paddy, whereas in the mid-altitude zones, the emphasis has been on horticulture and organic farming. In the high-altitude regions, the government has focused on promoting the cultivation of medicinal plants, millets, and traditional crops that are resilient to the colder climate and erratic rainfall patterns.

The 2023-24 plans have emphasized the importance of developing a diversified cropping pattern that aligns with local ecological conditions. Progress in this area has been encouraging, particularly in districts like Rudrapur and Tehri, but challenges remain in scaling up these efforts across the State. Limited access to market information, inadequate extension services, and fragmented landholdings have prevented the widespread adoption of region-specific cropping patterns.

Overall, while the State has made commendable progress in promoting seed and crop management, the barriers of infrastructure, market linkages, and climate variability continue to limit the full potential of these initiatives. Going forward, the government aims to increase

investments in rural infrastructure, strengthen farmer training programmes, and expand market access to ensure

that these programmes benefit a larger number of farmers in the hill districts.

Table-3.3.5: District-wise Details of Farmers with Organic Certification in Uttarakhand

Sl.	District	2021-22	2022-23	2023-24
1	Dehradun	5006	8169	8091
2	Nainital	12082	11733	11701
3	Uttarkashi	7948	8937	8907
4	Tehri Garhwal	9965	12736	12625
5	Chamoli	12452	11469	11370
6	Haridwar	4080	4369	4350
7	Udham Singh Nagar	3371	3777	3689
8	Almora	16191	17034	16971
9	Rudrapur	13602	15905	15315
10	Champani	4155	4555	4415
11	Pithoragarh	9263	6698	6545
12	Bageshwar	3057	5754	5681
13	Pauri Garhwal	14324	22859	22589
	Total	1,15,496	1,33,995	1,32,249
	Total Farmers Registered under USOCO	1,74,864	3,57,190	2,91,063
	Registered Area (hectares)	1.95 lakh	6.17 lakh	4.87 lakh

Source: Pragai Prativedan 2023-24

Government of Uttarakhand has prioritized modern farming practices and mechanization to improve agricultural efficiency, enhance productivity, and promote sustainability in the sector. Several initiatives and projects address the adoption of advanced technologies, mechanized solutions, and sustainable practices to meet the diverse needs of the State's agro-climatic zones (QPR, July-Sept 2024).

High-Density Apple Farming:

One major focus area is the adoption of high-density apple farming under the UTPADAC policy. This initiative involves the empanelment of professional orchard developers to promote modern techniques in orchard management. Although initial efforts faced challenges due to the absence of technically qualified applicants, amendments to cost benchmarks and subsidy disbursement processes have set the stage for renewed efforts through revised Expressions of Interest (EOIs).

In the realm of precision agriculture, the government has advanced the development of High-Tech Nurseries for apples and other crops in government orchards. Site visits, proposal submissions, and draft Requests for Proposals (RFPs) for apple nurseries are already underway. This initiative emphasizes mechanized propagation techniques and efficient nursery practices to support high-value horticultural crops.

Controlled Atmosphere Storage of Apples

The government has also made strides in promoting controlled atmosphere storage for apples under the SUPHAL Policy, which ensures the preservation of harvested produce using modern storage technology. However, delays in policy approvals have slowed implementation.

Impetus to Dairy Sector

Mechanized dairy and livestock projects, such as the Integrated Dairy Project in Simli, leverage technology for organic milk production, cheese manufacturing, and other dairy products.

Modernisation of Fisheries

Mechanization efforts extend to fisheries, with plans for modern hatcheries, including those for tilapia and carp, through public-private partnerships. These projects focus on employing advanced hatchery techniques and efficient management systems, with preparatory stages such as RFP drafting and departmental reviews currently underway.

Thrust to Modern Farming Practices

Mechanization initiatives include equipment subsidies and precision farming practices that enable farmers to adopt

tools like power weeders and drones. These programmes address the productivity gaps between plains and hills, ensuring that technological advancements are accessible across the State.

Looking ahead, the State government remains committed to addressing the existing barriers and accelerating the adoption of modern farming practices.

Digital Infrastructure Expansion

Plans are underway to expand digital infrastructure to ensure better internet connectivity in rural areas, allowing more farmers to access precision farming technologies and digital marketplaces.

Financial Support to Small and Marginal Farmers

Financial support will be provided to small and marginal farmers to lower the costs associated with modern agricultural inputs, making the adoption of these technologies more accessible.

Improving Transportation Networks

A key priority is to improve transportation networks reaching rural markets, as this will enhance market access and reduce post-harvest losses.

Climate Resilient Farming Focus

There is continued focus on developing climate-resilient farming techniques to help farmers adapt to the growing threats posed by climate change.

The adoption of modern farming practices in Uttarakhand is progressing steadily, with a strong focus on sustainability, technology, and market access. While there are challenges, the government's policies and initiatives are creating an environment that supports agricultural modernization, offering hope for a more resilient and prosperous future for farmers in the State.

3.4 Water and Soil Management

Uttarakhand, with its diverse topography ranging from the fertile plains to the fragile mountainous regions, has placed significant emphasis on sustainable water and soil management practices. As a State with a primarily agrarian economy, effective management of water and soil resources is crucial for enhancing agricultural productivity and ensuring food security. Over the past few years, the State government has focused on promoting technologies and practices that conserve water and improve soil health,

with special attention to rain-fed areas and hill regions that are particularly vulnerable to soil erosion and water scarcity.

The Cabinet Committee on Economic Affairs has approved the inclusion of the *Jamrani Dam Multipurpose Project* of Uttarakhand under the Pradhan Mantri Krishi Sinchayee Yojana-Accelerated Irrigation Benefit Programme (PMKSY-AIBP). The project will receive central assistance in the ratio of 90% from the centre and 10% from the State for the remaining work components. The estimated cost of the project is ₹ 2,584.10 crore, with ₹1,557.18 crore coming from central assistance to Uttarakhand. The project is scheduled to be completed by March 2028 and will provide additional irrigation for 57,000 hectares in the districts of Nainital and Udham Singh Nagar in Uttarakhand, as well as Rampur and Bareilly in Uttar Pradesh. It will also supply 42.70 Million Cubic Meters (MCM) of drinking water to Haldwani and surrounding areas, benefiting more than 10.65 lakh people. Additionally, the project includes a hydroelectric power generation capacity of about 63.4 million units, with an installed capacity of a 14 MW power plant (PIB, October 2023).

For the fiscal year 2023-24, several policies and plans have been developed to advance the adoption of modern water and soil management technologies. The government, in alignment with national programmes like the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and National Mission for Sustainable Agriculture (NMSA), has promoted micro-irrigation techniques such as drip and sprinkler systems to enhance water use efficiency. These systems are designed to target water directly to the root zones, reducing water wastage and enhancing crop yields. Additionally, the government has been encouraging the construction of check dams, rainwater harvesting structures, and contour trenches to manage water runoff, particularly in hilly areas prone to erosion.

Soil health management has also been a priority, with initiatives aimed at improving soil fertility and preventing degradation. Under the Soil Health Card Scheme, farmers are provided with detailed reports on the nutrient status of their soils, enabling them to adopt balanced fertilization practices. Table-3.4.1 provides a district wise summary of soil testing done during 2024-25. The government is also promoting the use of bio-fertilizers and organic amendments to maintain soil health while minimizing the use of chemical inputs. Furthermore, the development of soil conservation infrastructure, such as terracing, has been supported in the hill regions to prevent erosion and improve land stability.

Table- 3.4.1: District wise Status of Soil Testing in Uttarakhand during 2024-25

District	Total Test Allotted	No. of Samples Collected	Test Completed & SHC Generated	Collected as % of tests allotted	Test complete as % of tests allotted
Almora	9000	4501	705	50.0	7.8
Bageshwar	4000	2651	1200	66.3	30.0
Chamoli	6500	3947	1935	60.7	29.8
Champawat	4000	2640	901	66.0	22.5
Dehradun	9540	7782	845	81.6	8.9
Haridwar	10000	9967	5311	99.7	53.1
Nainital	7560	5129	775	67.8	10.3
Pauri Garhwal	10080	6236	1456	61.9	14.4
Pithoragarh	7000	6464	3209	92.3	45.8
Rudra Prayag	3500	2109	276	60.3	7.9
Tehri Garhwal	9550	8038	2074	84.2	21.7
Udam Singh Nagar	11840	7366	4506	62.2	38.1
Uttar Kashi	8000	6007	1886	75.1	23.6
Total State in 2024-25	100570	72837	25079	72.4	24.9
Total State in 2023-24	52368	52368	52368	100.0	100.0
All India 2024-25	8173564	6052006	3263297	74.0	39.9
All India 2023-24	6749603	4396386	3972025	65.1	58.8

Source: Department of Agriculture, Government of India

In terms of progress made during FY 2023-24, the *adoption of micro-irrigation systems* has increased significantly, with around 32257 hectares of agricultural land now covered by drip or sprinkler irrigation (PIB, 6 February 2024). This has had a particularly positive impact in areas facing water scarcity, where traditional irrigation methods are no longer feasible due to declining water tables or erratic rainfall. In addition, the construction of rainwater harvesting structures has been promoted in both rural and urban areas, with over 500 new water storage tanks built in water-stressed regions. The government's efforts have also resulted in an increase in the adoption of soil health management practices, with more than 50,000 farmers receiving soil health cards during the fiscal year 2023-24, leading to improved nutrient management across the State. However, several barriers have been encountered in the adoption of these water and soil management technologies. One of the primary challenges is the high cost of micro-irrigation systems, which remains prohibitive for small and marginal farmers despite subsidies. The initial investment required for equipment such as drip irrigation kits, coupled with the maintenance costs, discourages many farmers from adopting these technologies on a large scale. Additionally, the limited awareness about the long-term benefits of water and soil conservation practices among farmers, particularly in remote areas, continues to be a significant barrier.

Another challenge is the lack of adequate infrastructure for rainwater harvesting and soil conservation in hilly regions, where constructing such systems is technically more complex and costly. In many areas, poor access to these regions hinders the timely implementation of projects, leading to delays in the adoption of water management technologies. Furthermore, climate variability has emerged as a growing concern, with erratic rainfall patterns and increased instances of extreme weather events, such as landslides and flash floods, disrupting soil conservation efforts and damaging existing infrastructure.

To overcome these challenges, the government is planning to introduce *additional financial support for small farmers to facilitate the adoption of micro-irrigation and soil management technologies*. Efforts will also be made to strengthen extension services by increasing farmer awareness through training programmes, demonstration projects, and farmer field schools, particularly in remote and hilly regions. Moreover, there is a need to invest in climate-resilient infrastructure, with a focus on designing water and soil management systems that can withstand extreme weather events.

Uttarakhand has made considerable progress in promoting water and soil management technologies, but challenges related to cost, awareness, infrastructure, and climate

variability remain. Moving forward, addressing these barriers through targeted policies, capacity-building initiatives, and resilient infrastructure development will be essential to ensure the sustainability of the State's agriculture.

3.5 Agricultural Policies and Support

Uttarakhand's agricultural sector has long been shaped by the unique agro-climatic conditions of the State, with particular emphasis on supporting farmers in the hill districts where traditional practices have been dominant. In

recent years, agricultural policies have aimed to modernize the sector, encouraging crop diversification, promoting high-value crops, and enhancing access to credit. The 2023-24 fiscal year saw significant efforts to expand agricultural extension services and align government support with the evolving needs of farmers.

The table detailing the programme-wise budget allocation and outlay for various agricultural schemes up to January 31, 2024, provides insights into the financial management of both central and State sector programme for the fiscal year 2023-24. Under the central sector programmes,

Table-3.5.1: Programme wise Budget Allocation and Outlay in ₹ Lakhs during 2023-24 (Upto 31 January 2024)

Sl	Name of the Programme	Budgetary Provision	Approved Allocation	Outlay till 31 January 2024
Central Sector Programmes				
1.	Rashtriya Krishi Vikas Yojana (RKVY)	9907.06	1001.11	1001.11
2.	National Food Security Mission	2420	901.39	901.39
3.	Rainfed Area Development	1000	250	250
4.	Per Drop More Crop	6112	1111.11	1111.11
5.	Soil Health Card	800	0	0
6.	Soil Health Management	151	137.78	137.78
7.	Paramparagat Krishi Vikash Yojana	6667	852.23	853.23
8.	National Mission for Natural Farming	522.24	0	0
9.	RKVY Namaami Gange	1123.86	1123.81	1123.81
10.	RKVY Krishi Vaniki	0.06	0	0
11.	Sub Mission on Agriculture Mechanisation	7580	612.23	612.23
12.	Submission on Seed and Planting Material	1015.16	421.93	421.93
13.	National E governance Plan -Agriculture	200	0	0
14.	Submission on Agriculture Extension	1778	704.44	704.44
15.	Fasal Bima Yojana	400.01	0	0
16.	National Mission for Edible Oilseed	2.01	0	0
17.	Integrated Scheme for Agriculture Census, Economics and Statistics	100	54.72	38.29
18.	Samakit Jalaagam	24.89	24.89	24.89
19.	Special Assistance	2500	2500	2500
20.	Total Central Sector	42424.31	9765.64	9749.18
21.	Total State Sector Schemes	28286.59	22241.44	17430.73

Source: Pragati Prativedan 2023-24

several notable schemes, such as the Rashtriya Krishi Vikas Yojana (RKVY), had a budgetary provision of ₹ 9,907.06 lakhs, with an approved allocation of ₹ 1,001.11 lakhs, and the entire amount was utilized by January 31, 2024. The National Food Security Mission followed a similar pattern, with a budget of ₹ 2,420 lakhs and an approved allocation of ₹ 901.39 lakhs, which was fully expended by the same date. Programmes such as Rainfed Area Development and Per Drop More Crop had budgetary provisions of ₹1,000 lakhs and ₹ 6,112 lakhs respectively,

and both schemes used their full approved allocations of ₹ 250 lakhs and ₹ 1,111.11 lakhs.

However, some programmes saw zero outlay despite budgetary provisions. For instance, the Soil Health Card and National Mission for Natural Farming had no approved allocations or expenditures. Similarly, National E-governance Plan - Agriculture and Fasal Bima Yojana had budgetary provisions of ₹ 200 lakhs and ₹ 400.01 lakhs, respectively, but no outlay by January 31, 2024. On the

other hand, RKVY Namaami Gange and Paramparagat Krishi Vikash Yojana performed well, with full or near-full expenditure of their approved allocations.

The Sub-Mission on Agriculture Mechanisation received an approved allocation of ₹612.23 lakhs out of a budgetary provision of ₹ 7,580 lakhs, with full utilization of the allocated funds.

Meanwhile, the Submission on Seed and Planting Material saw ₹421.93 lakhs allocated and fully utilized, although it had a larger budgetary provision of ₹1,015.16 lakhs.

In all, the central sector schemes had a combined budgetary provision of ₹ 42,424.31 lakhs, with ₹ 9,765.64 lakhs approved, and ₹ 9,749.18 lakhs spent by the end of January 2024. On the State sector side, the total budgetary provision was ₹ 28,286.59 lakhs, with ₹ 22,241.44 lakhs allocated and ₹ 17,430.73 lakhs spent. This indicates a significant utilization of funds, though with some programmes lagging behind in disbursement or allocation, such as those related to soil health and crop insurance.

One of the primary goals has been to redouble agriculture extension work across the State, with a specific focus on promoting the cultivation of high-value crops, encouraging crop diversification, implementing inter-cropping practices, and increasing the cultivation of off-season vegetables and fruits. These efforts have been guided by both national-level initiatives and State-specific programmes. The Horticulture Mission for North East and Himalayan States (HMNEH) and the Mission for Integrated Development of Horticulture (MIDH) have provided a framework for *expanding horticultural activities in the State*.

Extension services have been actively promoting high-value crops like apples, plums, kiwi, and aromatic plants in regions such as Almora, Chamoli, and Pithoragarh, while crop diversification has been encouraged through programmes that advocate for the cultivation of pulses, oilseeds, and medicinal plants alongside traditional crops.

Inter-cropping practices, where multiple crops are grown together to maximize land use efficiency, have been promoted particularly in low-altitude regions where soil fertility and water availability support such practices. For example, legumes and cereals have been promoted as inter-crops to enhance soil fertility and improve farm incomes.

There has been a *strong push to promote off-season vegetables* like cauliflower, spinach, and tomatoes in the mid-altitude zones, where farmers can leverage the cooler climate to grow crops that fetch premium prices in off-season markets. However, several barriers have impeded

progress. These include the limited reach of extension services in remote areas, where a lack of infrastructure and technical expertise has slowed the adoption of new practices. Furthermore, inadequate cold storage and transportation facilities have limited the market potential for high-value and off-season crops, as farmers struggle to maintain the freshness and quality of their produce during transport to distant markets.

Measures to streamline farmers' access to credit has been another critical area of focus in agricultural policy. Uttarakhand has recognized that access to timely and adequate credit is essential for farmers to invest in modern farming practices and technologies. The Pradhan Mantri Kisan Credit Card (PM-KCC) scheme has been instrumental in this regard, offering farmers access to short-term credit for inputs such as seeds, fertilizers, and pesticides. In FY 2023-24, efforts were made to expand the coverage of the KCC scheme, particularly in the hill regions where farmers' participation had traditionally been low. Banks have been encouraged to extend loans with favourable terms to small and marginal farmers, and self-help groups (SHGs) have been promoted to enhance collective credit access. However, despite these efforts, barriers remain. Farmers in remote and mountainous regions continue to face challenges in accessing credit due to the lack of banking infrastructure, limited financial literacy, and the rigorous documentation requirements imposed by financial institutions. Furthermore, the high rate of loan defaults, exacerbated by erratic weather conditions and poor yields, has deterred many farmers from taking out formal loans.

Realignment to Support Agribusinesses Value Addition Initiatives and Organic Farming

Another crucial policy focus has been on the realignment of government support to agriculture in line with the changing aspirations of farmers. As traditional agriculture has become less viable due to changing climate conditions and market demands, there has been a growing recognition that government support needs to be more responsive to farmers' evolving needs. In FY 2023-24, policies aimed at promoting agribusinesses, value-addition initiatives, and organic farming have been prioritized to reflect the aspirations of younger farmers, many of whom seek to move beyond subsistence farming into higher-value activities.

Support to Market Linkages

Government support has also increasingly focused on market linkages, with programmes encouraging contract farming, public-private partnerships (PPPs), and the creation of Farmer Producer Organizations (FPOs) to

enable small and marginal farmers to access better prices. However, despite these policy shifts, the slow pace of implementation has been a significant barrier. Additionally, many farmers remain unaware of the full range of support available to them, and the infrastructure required to support these newer activities is still underdeveloped.

The *expansion of Farmer Producer Organizations (FPOs)* is central to strengthening the agricultural sector in

Uttarakhand. FPOs play a crucial role in aggregating smallholder farmers, enabling them to access better resources, negotiate better prices, and market their produce more effectively. During FY 2023-24, the government has focused on promoting the establishment and growth of FPOs through various policies and programmes. Table-3.5.2 provides information on the number of FPOs through the e-NAM Portal during 2023.

Table-3.5.2: Registrations in e-NAM Portal during 2023

Items	Nos
Number of Farmers	90893
Number of merchants	5797
Number of FPOs	228
Number of Service Providers	90
Number of Lot examined	230175
Business Transacted (in Rs Crore)	50.01
Number of E-Payments	22900
Transactions (in Rs. Crore)	130.75

Source: Pragati Prativedan 2023-24

The National Agricultural Cooperative Marketing Federation of India (NAFED) and the Agricultural and Processed Food Products Export Development Authority (APEDA) have been pivotal in providing financial support, technical assistance, and training to newly established FPOs. The government's FPO Promotion Policy has aimed to facilitate the formation of new FPOs and strengthen existing ones, particularly in high-agricultural potential districts like Nainital, Almora, and Pithoragarh.

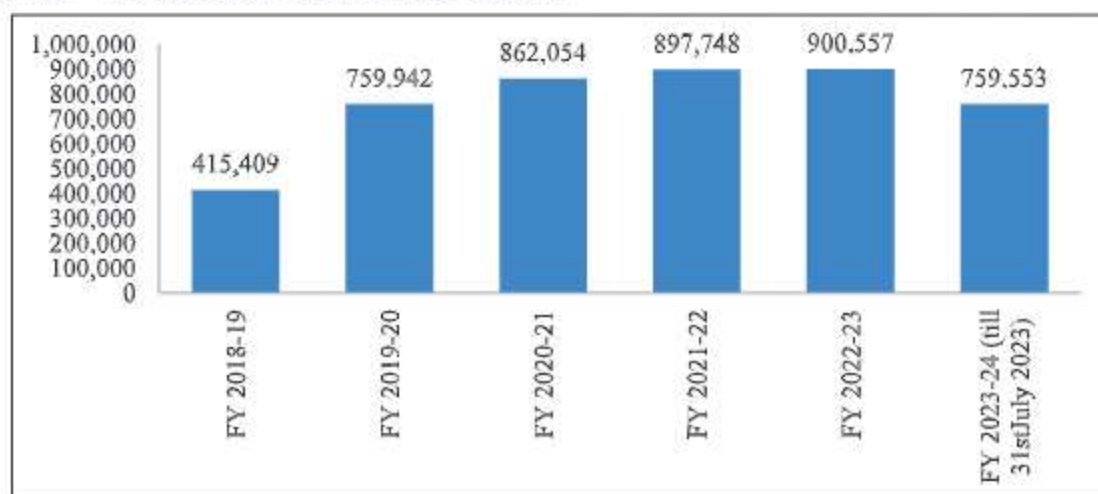
Progress has been marked by the establishment of several new FPOs, which have been instrumental in improving farmers' access to quality inputs, credit, and market linkages. These organizations have received support for capacity building, infrastructure development, and operational expenses. However, several barriers remain. Many FPOs face challenges such as limited financial resources, inadequate processing and marketing infrastructure, and administrative inefficiencies. Bureaucratic delays in accessing government support and the lack of technical expertise among some FPO members have also impeded their effectiveness. Additionally, the varying levels of engagement and participation among members can affect the sustainability and operational efficiency of these organizations.

Enhancement of Crop Insurance and Farmer Credit Coverage

The enhancement of crop insurance and farmer credit coverage has been a key focus area for the State

government. Schemes like the Pradhan Mantri Fasal Bima Yojana (PMFBY) and Weather-Based Crop Insurance Scheme (WBCIS) are designed to provide financial protection against losses due to adverse weather conditions and other risks. As on June 2023, around 15.25 lakh number of farmers were insured in Uttarakhand under PMFBY and RWBCIS (PIB 08 August 2023). The government has taken several measures in FY 2023-24 to increase the reach and effectiveness of these insurance schemes. Figure 3.5.1 provides year wise beneficiaries under PM KISSAN since 2018-19.

Efforts have included a review and simplification of the claim methodology to expedite the settlement process and reduce the time required for claim approval. The introduction of digital platforms and mobile applications has aimed to streamline the enrolment and claim processes, making them more accessible to farmers. Additionally, policies have been revised to increase coverage limits and enhance the scope of protection offered by insurance schemes. Despite these improvements, challenges persist. Issues with delayed claim settlements, complex claim procedures, and high premium costs continue to hinder the effectiveness of insurance schemes. Farmers, particularly those in remote and hilly regions, often encounter difficulties in accessing and utilizing insurance products due to low financial literacy, digital divide, and limited awareness of available schemes. Additionally, the insurance coverage often does not adequately address all types of risks, leaving gaps in protection.

Figure-3.5.1: Year wise Beneficiaries under PM KISSAN

Source: PIB 08 August 2023

The sector-wise credit potential for Uttarakhand, as detailed in NABARD's 2023 State Focus Paper, indicates a positive trend in credit allocation from 2022-23 to 2023-24, particularly in the agriculture sector. Table 3.5.3 shows that the agricultural credit potential grew from ₹12,974.08 crore in 2022-23 to ₹13,570.99 crore in 2023-24. A key contributor to this growth was the increase in credit for crop production, maintenance, and marketing, which rose from ₹7,570.01 crore to ₹7,733.15 crore, showing consistent support for agricultural operations.

Agriculture term loans, which encompass various sub-sectors, also saw a significant boost from ₹3,286.66 crore in 2022-23 to ₹3,602.51 crore in 2023-24. Animal

husbandry, especially in dairy and poultry, demonstrated a sharp increase in potential, reflecting rising investments in these areas. For example, dairy credit increased from ₹1,168.73 crore to ₹1,413.46 crore, and poultry credit grew substantially from ₹204.15 crore to ₹296.29 crore.

Agricultural infrastructure also improved, with an increase from ₹502.03 crore to ₹549.45 crore, emphasizing the growing focus on rural godowns, market yards, and land development. Overall, the total priority sector credit potential for the State increased from ₹28,528.28 crore in 2022-23 to ₹30,301.42 crore in 2023-24, showing strong growth in the credit landscape across key agricultural and other priority sectors.

Table-3.5.3: Sector-wise Credit Potential of 2022-23 and 2023-24 for Uttarakhand (₹ Crore)

Sl. No	Items	2022-23	2023-24
1	Farm Credit		
1.1	Crop Production, Maintenance and Marketing	7570.01	7733.15
1.2	Agriculture Term Loan	3286.66	3602.51
1.2.1	Water Resources	101.92	87.79
1.2.2	Farm Mechanisation	517.92	533.44
1.2.3	Plantation & Horticulture including Sericulture	406.52	335.14
1.2.4	Forestry & Wasteland Development	26.48	34.53
1.2.5	Animal Husbandry- Dairy	1168.73	1413.46
1.2.6	Animal Husbandry- Poultry	204.15	296.29
1.2.7	Animal Husbandry- SGP	199.93	232.38
1.2.8	Fisheries	41.15	44.15
1.2.9	Integrated Farming System	33.64	40.26
1.2.10	Others - ATL	586.19	585.06
1.3	Agriculture Infrastructure	502.03	549.45
1.3.1	Rural Godown/ Market Yard	319.84	364.5
1.3.2	Land Development, Soil Conservation and Watershed Development	51.13	63.3

Sl. No	Items	2022-23	2023-24
1.3.3	Other - Agri. Infrastructure	131.06	121.65
1.4	Ancillary Activities	1615.38	1685.89
1.4.1	Agro & Food Processing	1462.73	1485.24
1.4.2	Other - Ancillary	152.65	200.64
Total	Total Agriculture Loan	12974.08	13570.99
2	Micro, Small and Medium Enterprises (MSME)	11399.19	12480.47
3	Export Credit	69.94	88.79
4	Education Loan	704.47	877.53
5	Housing Loan	2676.14	2498.27
6	Social Infrastructure Involving Bank Credit	51.35	392.72
7	Renewable Energy	263.16	65.13
8	Others - Informal Credit Delivery System	389.94	327.52
	Total Other Priority Sector	4155.01	4249.96
	Total Priority Sector	28528.28	30301.42

Source: NABARD State Focus Paper 2023-Uttarakhand

Increasing the enrolment of farmers in crop insurance schemes is crucial critical for providing comprehensive risk management solutions. The government has implemented various strategies to boost enrolment rates, including awareness campaigns, simplified registration processes, and incentives for timely enrolment.

During FY 2023-24, significant efforts have been made to improve the accessibility of crop insurance through technology-driven solutions such as online portals and mobile apps. These tools are designed to facilitate easier registration and claim submissions. Awareness programmes have targeted rural and remote areas, emphasizing the benefits of crop insurance and the availability of government schemes.

However, barriers to increased enrolment remain substantial. Many farmers face challenges with digital literacy, making it difficult for them to navigate online platforms and complete the registration process. The high premium costs and complexities of insurance products further discourage participation. Additionally, the geographical remoteness of many areas in Uttarakhand exacerbates these issues, making it harder to reach and enrol farmers effectively.

Uttarakhand has made notable progress in expanding Farmer Producer Organizations, increasing crop insurance and farmer credit coverage, and boosting farmer enrolment in insurance schemes. However, persistent challenges such as financial constraints, administrative inefficiencies, technological barriers, and limited awareness continue to affect the effectiveness of these initiatives. Addressing these issues through targeted support, enhanced infrastructure, and improved stakeholder engagement will

be crucial for achieving better outcomes for farmers and ensuring the long-term sustainability of the agricultural sector in Uttarakhand.

As per Sashakt Uttarakhand documents, government of Uttarakhand has introduced several policy-driven initiatives to transform the agricultural and allied sectors. These policies emphasize sustainable farming practices, crop diversification, advanced technologies, and value-added processing to improve productivity and farmer livelihoods. However, many are still in various stages of approval and implementation, highlighting the need for expedited progress (QPR, July-Sept 2024).

One significant policy initiative is the *Millets Cultivation Policy*, which focuses on promoting water-efficient and climate-resilient crops like finger millet and barnyard millet. Drafted in February 2024, this policy has undergone extensive reviews by an internal committee and the UNDP. It is now awaiting cabinet approval, underscoring its potential to address soil and water conservation challenges while supporting food security.

The *Mahak Revolution Policy* is another key initiative, aiming to expand aromatic crop cultivation and related infrastructure, such as nurseries. This policy was drafted in early 2024 and has completed multiple review stages. With cabinet approval pending, it represents an important step toward diversifying farmer incomes and leveraging the State's agro-climatic advantages for high-value crops.

The *Scheme for Upgradation of Post-Harvest Apple Logistics (SUPHAL)* seeks to reduce post-harvest losses by establishing modern Controlled Atmosphere (CA) stores. While the policy was approved by the Finance Department

in March 2024, final clearance from the cabinet remains pending. Similarly, the *Programme for Accelerated Development of Hi-Tech and Advanced Nurseries (PRADHAN)*, designed to establish hi-tech nurseries for apples and other horticultural crops, is still under departmental review despite being drafted in October 2023.

The *Uttarakhand Programme for Advanced Development of Apple Cultivation (UTPADAC)* focuses on promoting high-density apple orchards through amendments to cost benchmarks and subsidy mechanisms. It has already garnered significant interest, with 454 farmer applications covering 224 acres. However, the policy requires final approvals for full-scale implementation. The Kiwi Cultivation Policy, targeting kiwi as a high-value crop, is also awaiting approval after revisions based on stakeholder consultations.

Other policy initiatives include the *Bee Products Policy*, which aims to support apiculture, and the *Food Processing Policy*, designed to expand agro-processing infrastructure. Both policies are in advanced drafting stages, with final reviews pending. Foundational policies like the *Farm Fencing Policy*, *Krishi Samriddhikaran Policy*, and *Floriculture Policy* are in preliminary stages, highlighting areas for future development.

These policy initiatives reflect the government's strategic approach to addressing agricultural challenges and

harnessing Uttarakhand's unique agro-climatic potential. However, delays in approvals and procedural reviews remain significant obstacles. Accelerating these processes will be crucial for translating policy objectives into tangible outcomes that benefit farmers and rural communities across the State.

3.5 Allied Sectors and Agricultural Diversification

Horticulture Sector:

The horticulture sector in Uttarakhand plays a vital role in the State's agricultural economy, contributing significantly to income, employment, and overall economic development. This report provides a detailed overview of the horticulture sector's performance, focusing on production increases, establishment of Centres of Excellence (CoEs), availability of quality planting material, establishment of Hi-Tech nurseries, post-harvest yields, cold chain infrastructure, expansion of net sown areas, and convergence of horticulture and agriculture over the past five financial years, including plans and progress made during FY 2023-24. Table-3.6.1 gives a district wise area under horticulture in the State during 2023. Table 3.6.2 shows the production of different crops under horticulture. Table 3.6.3 shows the year wise area and production of different horticultural crops in since 2016-17.

Table 3.8.3 shows the area and production trends under horticulture in Uttarakhand from 2016 to 2023, focusing on

Table-3.6.1: District wise Area under Horticultural Production in Uttarakhand in 2023 (in Hectare)

	Fruits	Vegetables	Potato	Spices	Flowers	Total
Nainital	9684.86	5386.35	1440.57	2343.86	52.67	18908.31
US Nagar	7985.28	9094.2	2443.69	1435.95	148.46	21107.58
Almora	8020.29	3508.4	758.83	1868.75	19.53	14175.8
Bageshwar	2459.9	1264.44	735.5	447.53	7.76	4915.13
Pithoragarh	5888.77	3134.98	1096	661.48	15.76	10796.99
Champawat	4118.33	2374.94	899.1	1220.74	7.03	8620.14
Total Kumaon	38157.43	24763.31	7373.69	7978.31	251.21	78523.95
Dehradun	8528.9	5323.04	580.57	2501.9	94.32	17028.73
Pauri	9047.49	3422.15	634.76	1670.83	32.63	14807.86
Tehri	5108.89	5776.01	1828.91	2012.66	66.83	14793.3
Chamoli	3390	1925.7	693.79	572.55	21.35	6603.39
Rudraprayag	2266.69	1278.81	717.5	659.27	13.74	4936.01
Uttarkashi	8644.3	10770.16	3990.1	1611.04	3.33	25018.93
Haridwar	6548.88	5009.1	1263.7	1024.3	185.99	14031.97
Total Garhwal	43535.15	33504.97	9709.33	10052.55	418.19	97220.19
Total State	81692.58	58268.28	17083.02	18030.86	669.4	175744.1

Source: Department of Horticulture

Table-3.6.2: District wise variations in Productivity of Horticultural crops in Uttarakhand in 2023 (in Tonne per Ha)

	Fruits	Vegetables	Potato	Spices	Vegetables	Flowers
Nainital	9.0	7.6	11.3	5.3	5.8	3.7
US Nagar	7.9	12.9	20.8	8.4	9.5	4.5
Almora	3.5	4.9	5.8	3.5	3.4	2.7
Bageshwar	3.1	5.1	6.2	6.2	6.9	0.7
Pithoragarh	2.7	8.7	8.2	6.4	5.5	0.6
Champawat	1.9	6.6	9.6	5.3	5.8	0.9
Dehradun	3.8	8.7	17.2	5.8	7.6	1.6
Pauri	2.4	6.6	5.5	4.9	4.0	1.8
Tehri	4.2	9.2	9.2	7.6	7.1	5.0
Chamoli	2.1	6.2	6.5	2.7	1.6	0.8
Rudraprayag	1.2	1.4	1.5	0.8	0.5	0.6
Uttarkashi	4.5	5.3	7.7	2.4	2.3	1.1
Haridwar	5.3	16.8	18.7	8.3	6.1	4.5
Total State	4.5	8.6	10.8	5.4	5.0	3.5

Source: Department of Horticulture

fruits, vegetables, potatoes, spices, and flowers. For most crops, there was steady growth in both area and production from 2016-17 to 2020-21, followed by a sharp decline in 2023-24. For fruits, the area decreased drastically from 181.1 thousand hectares in 2020-21 to 81.7 thousand hectares in 2023-24, with production falling from 648.9 thousand Metric Tons (MT) to 369.4 thousand MT. Similarly, vegetable area reduced from 73.0 thousand hectares to 58.3 thousand hectares, and production dropped from 656.6 thousand MT to 501.8 thousand MT. Potato cultivation also saw a significant decline, with the area falling from 26.9 to 17.1 thousand hectares, and production nearly halving from 367.3 thousand MT to 183.9 thousand MT. In contrast, spices showed consistent growth in both area and production, reaching 18.0 thousand hectares and

96.8 thousand MT by 2023-24. Flower cultivation, though small, also saw a decline in area from 1.6 thousand hectares to 0.7 thousand hectares. Overall, the total area under horticulture increased from 282.7 thousand hectares in 2016-17 to 296.8 thousand hectares in 2020-21, but dropped significantly to 175.7 thousand hectares in 2023-24, indicating a general contraction in horticultural activity. The decline in major crops suggests the need for improved farm management practices, such as water management and crop diversification, while the continued growth of spices highlights their resilience. This trend points to potential external factors such as environmental challenges, policy shifts, or economic conditions affecting farm productivity in Uttarakhand.

Table-3.6.3: Year wise Area and Production under Horticulture in Uttarakhand) 2016-2023

Crops	Area/ Production	2016-17	2018-19	2020-21	2023-24
Fruits	Area in '000 Ha	177.3	180.5	181.1	81.7
	Production in '000 MT	662.8	664.7	648.9	369.4
Vegetables	Area in '000 Ha	65.2	70.8	73.0	58.3
	Production in '000 MT	584.9	630.1	656.6	501.8
Potato	Area in '000 Ha	26.0	26.4	26.9	17.1
	Production in '000 MT	360.4	363.8	367.3	183.9
Spices	Area in '000 Ha	12.7	14.1	14.3	18.0
	Production in '000 MT	87.6	93.6	96.0	96.8
Flower	Area in '000 Ha	1.4	1.6	1.6	0.7
Total Area under Horticulture Production (Area in '000 Ha)		282.7	293.4	296.8	175.7

Source: Department of Horticulture, Government of Uttarakhand

The Uttarakhand Programme for Advanced Development of Apple Cultivation (UTPADAC) under Apple Mission 2030 is a visionary plan aimed at transforming apple cultivation in the State. Even with a huge potential in apple production, Uttarakhand lags behind its peers in the production and productivity (Table-3.6.4). The programme's key goal is to increase apple production by nearly 10 times and improve farmer incomes by 10-15

times over an eight-year period. To achieve this, the State government has introduced multiple initiatives targeting all stages of the apple value chain, including cultivation, post-harvest management, and marketing. The programme aims to set up 5,000 hectares of high-density apple orchards by 2030, significantly improving Uttarakhand's apple productivity and its position as a key player in India's apple industry.

Table-3.6.4: Apple Production and Productivity in Uttarakhand and Other Producing States

State / UT	Production in '000 MT	Area in '000 Ha	Productivity (MT/Ha)
Jammu & Kashmir	1,719	167	10.2
Himachal Pradesh	644	115	5.6
Uttarakhand	65	26	2.5
All India	2,437	313	7.8

Source: UTPADAC

Uttarakhand's current apple productivity stands at 2.5 metric tons per hectare (MT/Ha), lagging behind major apple-producing regions like Jammu & Kashmir (10.2 MT/Ha) and Himachal Pradesh (5.6 MT/Ha). The global average productivity is even higher at 19 MT/Ha. Given this disparity, the Apple Mission 2030 aims to close this gap by promoting high-density apple cultivation. With the adoption of high-density rootstocks like the Malling series, Uttarakhand's apple productivity is expected to reach up to 60 MT/Ha, helping farmers not only increase yields but also improve the quality of their produce.

The mission also emphasizes the economic upliftment of farmers, aiming to double or even triple their income through better-quality apples and higher yields. The project is also designed to provide farmers with financial stability and reduce migration from rural areas by creating better livelihood opportunities in the apple-growing regions of Uttarakhand.

One of the primary components of the Apple Mission is the promotion of high-density apple orchards. Traditional orchards in Uttarakhand accommodate around 250 apple plants per hectare, whereas high-density orchards can accommodate over 2,000 plants per hectare. This increase in plant density not only boosts productivity but also shortens the time for commercial bearing of fruits. In traditional plantations, trees take seven years to start bearing fruit, while high-density trees can start producing within three years.

Overall, the Apple Mission 2030 aims to position Uttarakhand as a leading apple producer, with a strong focus on high-density planting, modern infrastructure, and farmer welfare. By adopting advanced cultivation techniques and enhancing the post-harvest value chain, the

programme seeks to unlock the full potential of the State's apple sector, benefiting both farmers and the broader economy.

The horticulture sector in Uttarakhand has made significant progress over the past five years, with notable improvements in production, infrastructure, and farmer support. Continued efforts to expand cold chain infrastructure, improve post-harvest management, and address challenges related to quality planting material will be crucial for sustaining this growth. Targeted interventions and ongoing support will ensure the sector's long-term success and contribute to the State's overall economic development.

Animal Husbandry Sector:

The animal husbandry and dairy sector in Uttarakhand is a key component of the State's rural economy, significantly contributing to livelihoods, food security, and overall economic development. This report provides a comprehensive analysis of the sector's current status, ongoing initiatives, progress, and challenges, focusing on livestock, poultry, goat/sheep farming, dairy production, honey production, and fisheries.

Animal Husbandry shows a steady increase in allocations over the years, starting from ₹190.7 crore in 2017-18 and rising to ₹303.8 crore in 2022-23. The 2023-24 budget estimate further increases to ₹390.1 crore, though the revised estimate slightly adjusts this to ₹374.0 crore. For 2024-25, the allocation reaches a significant ₹481.8 crore, indicating an ongoing priority to support this sector, likely reflecting the importance of livestock in rural livelihoods.

Dairy Development sees a progressive increase in funding from ₹41.6 crore in 2017-18 to ₹93.5 crore in 2022-23. The budget estimate for 2023-24 further boosts this allocation to ₹134.6 crore, though the revised figure drops to ₹108.0 crore. In 2024-25, the allocation slightly decreases to ₹102.9 crore, suggesting a tempered but sustained commitment to dairy as a component of the agricultural economy.

Fisheries initially received modest funding, with ₹16.0 crore in 2017-18. There is a general upward trend, peaking at ₹57.9 crore in the 2023-24 budget estimate. However, the revised estimate reduces this to ₹51.0 crore, with a sharp increase planned for 2024-25 at ₹108.2 crore. This substantial rise may indicate new initiatives or expanded focus on fisheries for economic diversification and rural employment.

Forestry and Wildlife consistently receive the highest allocations, reflecting Uttarakhand's ecological priorities and forest conservation efforts. Starting from ₹554.6 crore in 2017-18, funding increases to ₹1131.6 crore in 2021-22, highlighting the State's commitment to environmental protection. However, there is a decline in 2022-23 to ₹775.7 crore, with fluctuating estimates for 2023-24, where the initial budget was ₹1032.7 crore, revised to ₹1066.6 crore. The allocation for 2024-25 is set at ₹970.4 crore, maintaining a high level of investment, though slightly reduced from the previous year, perhaps due to budget adjustments or the completion of specific conservation projects.

Overall, the budget allocations reflect Uttarakhand's focus on strengthening the Animal Husbandry and Fisheries sectors to enhance rural livelihoods and diversify agricultural income sources, alongside a sustained emphasis on forestry and wildlife conservation in line with the State's environmental priorities.

Uttarakhand has undertaken several initiatives to improve the animal husbandry sector by supporting livestock, poultry, goat and sheep farming, dairy, honey production, and fisheries. The State government has aligned its policies with national programmes like the National Livestock Mission (NLM), National Dairy Plan (NDP), and the Integrated Beekeeping Development Scheme (IBDS). For the year 2023-24, these programmes aim to provide increased subsidies for purchasing high-quality breeding stock, expand veterinary services, and offer technical support for fisheries development. Key progress includes establishing veterinary clinics, enhancing feed supply chains, and offering training programmes for farmers. The honey sector has seen the development of new processing facilities, while the fisheries sector has benefited from modern hatcheries that aim to boost fish production. However, challenges such as limited infrastructure in remote areas, inadequate veterinary services, and financial constraints continue to hinder growth in these sectors.

Improving cattle genetics remains a priority in Uttarakhand, with policies under the National Dairy Plan and Integrated Livestock Development Programme targeting the introduction of high-breed cattle and upgrading local breeds. The "Bovine Breeding Act, 2018" focuses on regulating and promoting controlled breeding practices in bovines to ensure the improvement of genetic quality and the productivity of livestock. The Act establishes guidelines for breeding programmes, including the registration and licensing of breeders, the use of certified breeding bulls, and artificial insemination practices. It aims to prevent genetic disorders, encourage sustainable breeding methods, and enforce quality standards in bovine breeding to enhance the agricultural sector's efficiency and economic impact. The Act also addresses the roles of regulatory bodies and penalties for violations to maintain high standards in the breeding industry.

Table-3.6.5: Budgetary Provisions (Revenue Accounts) for Different Heads related to Animal Husbandry sector and Forests (in ₹ Crores)

Items of Expenditure	Animal Husbandry	Dairy Development	Fisheries	Forestry and Wildlife
Actuals (2017-18)	190.7	41.6	16.0	554.6
Actuals (2018-19)	252.9	43.4	17.0	617.7
Actuals (2019-20)	238.6	52.2	19.2	634.9
Actuals (2020-21)	262.5	53.8	24.5	791.0
Actuals (2021-22)	240.5	73.5	30.5	1131.6
Actuals (2022-23)	303.8	93.5	21.4	775.7
RE (2023-24)	374.0	108.0	51.0	1066.6
BE (2024-25)	481.8	102.9	108.2	970.4

Source: Annual Financial Statements, Uttarakhand State Budget, Various Years

The "Outcome Budget 2024-25" for Uttarakhand's Animal Husbandry Department allocates resources across various key segments. For veterinary services, an outlay of ₹94.3 crore is dedicated to mobile veterinary units, enhancing healthcare access for livestock in rural areas. The "National Livestock Mission," focusing on disease management and livestock development, has an allocation of ₹114.9 crore. Fodder development initiatives receive ₹10 crore to ensure consistent feed availability, supporting livestock health and productivity. Additionally, ₹481.8 crore is allocated to animal husbandry overall, reflecting a significant focus on improving rural incomes and supporting the economic sustainability of the livestock sector. Specific targets include enhancing daily milk productivity for different breeds: indigenous cows are expected to reach 2.648 liters per day, crossbred cows 8 litres, and buffaloes 5.1 litres. In the meat sector, productivity goals for goats and sheep are set at 17 kg and 16 kg per animal per year, respectively. Egg production is also targeted to rise to 234 eggs per bird annually. Additionally, artificial insemination coverage is projected to increase to 75.5% for cattle and buffaloes.

As per the Sashakt Uttarakhand report, animal husbandry has emerged as a key focus area for the government of Uttarakhand, with several initiatives aimed at promoting livestock-based farming, improving dairy production, and increasing the overall efficiency of the sector. These efforts are designed to diversify agricultural income, create employment opportunities, and enhance food security in rural areas.

One significant project is the *Integrated Dairy Project in Simali*, which focuses on the production of organic milk and Badri cow ghee, alongside dairy-based homestays, cheese manufacturing, and breeder multiplication farms. The project has seen the issuance of a Request for Proposal (RFP) in September 2024, with further steps including the issuance of the Letter of Approval (LoA) expected soon. This initiative reflects a broader strategy to boost the dairy sector through value-added products and sustainable practices.

In addition, the government is focused on establishing animal feed manufacturing units to ensure the availability of quality feed for livestock. *A proposal for an animal feed unit in Rudrapur has been submitted, and approval is pending.* This is a crucial step toward improving livestock productivity, as quality feed is essential for healthy animal growth and optimal dairy production.

The report also mentions the *Animal Waste to Wealth Management project in Rudrapur*, which aims to convert agricultural and animal waste into valuable products like biogas and organic fertilizers. The proposal for this project was submitted in September 2024 and is awaiting approval.

This initiative supports sustainable farming practices by reducing waste and providing eco-friendly alternatives to conventional fertilizers.

The Establishment of Tilapia, Pangasius & Murrell Fish Hatcheries in Paniyala and Satpuli is another important initiative. Data collection for these projects is ongoing, and RFP preparation will begin once inputs are received. The development of these hatcheries will help meet the growing demand for fish and improve aquaculture in the region.

While these animal husbandry initiatives show significant promise, challenges remain, particularly in securing timely approvals and overcoming infrastructure hurdles. However, the government's emphasis on improving dairy production, enhancing feed availability, and promoting waste management through these projects is a clear indication of the sector's growing importance in Uttarakhand's agricultural transformation. If fully implemented, these efforts will contribute to the diversification of rural economies and improve the livelihoods of farmers engaged in animal husbandry.

3.7 Agricultural Marketing and Supply Chains

Uttarakhand's agricultural sector has long struggled with challenges related to marketing and supply chain inefficiencies. The State government has embarked on several initiatives to address these issues, focusing on branding and marketing support for agri-products, streamlining supply chains, augmenting warehousing capacities, and improving market access for farm produce. The following section provides an overview of these efforts, as well as the progress made and barriers encountered during FY 2023-24.

Branding and Marketing Support to Agri-Products:

The branding and marketing of Uttarakhand's agricultural products have been central to efforts aimed at enhancing their market presence. The State government has implemented several policies and initiatives to promote the unique and high-value crops produced in Uttarakhand, such as organic fruits, medicinal plants, and high-altitude vegetables.

The Geographical Indication (GI) tags for products like Rajma (Kidney beans) (similar to that from the Kinnaur region in Himachal Pradesh), Basmati rice, and organic apples and plums have been a significant step in creating a distinct market identity for these products. In December 2023, a total 18 items of which 14 were agricultural commodities received GI tag certification. The list of these 18 items are provided in Table-3.6.1. The 2023-24 plans

Table-3.7.1: List of 18 Items From Uttarakhand With GI Tag Certification in 2023

SI	Items	Type
1	Uttarakhand Berinag Tea	Agricultural
2	Uttarakhand Bichhu Buti (Nettle) Fabrics	Handicraft
3	Uttarakhand Mandua	Agricultural
4	Uttarakhand Jhangora	Agricultural
5	Uttarakhand Gahat	Agricultural
6	Uttarakhand Lal Chawal (Red Rice)	Agricultural
7	Uttarakhand Kala Bhat	Agricultural
8	Uttarakhand Malta Fruit	Agricultural
9	Uttarakhand Chaulai (Ramdana)	Agricultural
10	Almora Lakhori Mirchi	Agricultural
11	Uttarakhand Buransh	Food Stuff
12	Uttarakhand Pahari Toor Dal	Agricultural
13	Nainital Mombatti (Candle)	Manufactured
14	Rangwali Pichhoda of Kumaon	Handicraft
15	Ramnagar Nainital Litchi	Agricultural
16	Ramgarh Nainital Aadu (Peach)	Agricultural
17	Chamoli Wooden Ramman Mask	Handicraft
18	Uttarakhand Likhai (Wood Carving)	Handicraft

Source: APEDA

include continued support for GI tagging and expansion of organic certification programmes to ensure that more local products can benefit from premium pricing and broader market access. The Agricultural and Processed Food Products Export Development Authority (APEDA) has been instrumental in promoting exports of Uttarakhand's organic produce.

Despite these efforts, there are several challenges. Limited marketing infrastructure has hindered the effectiveness of these branding initiatives, with inadequate facilities for showcasing products at trade fairs and exhibitions. Additionally, many farmers lack the technical knowledge and resources required to implement effective marketing strategies. The market research necessary to align product offerings with consumer preferences has been insufficient, resulting in underperformance in national and international markets.

Streamlining Agriculture Supply Chains:

Efforts to streamline agriculture supply chains in Uttarakhand have focused on improving the distribution of high-quality planting materials, augmenting warehousing capacities, and enhancing cold storage facilities. These measures aim to reduce post-harvest losses and improve the efficiency of the supply chain from farm to market.

For FY 2023-24, the government has prioritized the distribution of high-yielding planting materials for crops such as vegetables, cereals, and horticultural products. Programmes under the National Mission on Sustainable Agriculture (NMSA) and the Mission for Integrated Development of Horticulture (MIDH) have been instrumental in this regard. In addition, significant investments have been made in modern warehousing facilities and cold storage units to handle perishable goods more effectively. Efforts to build cold storage in key agricultural regions such as Nainital, Almora, and Dehradun have aimed to preserve the quality of produce and reduce wastage.

However, progress has been hampered by several barriers. The number of cold storage units remains inadequate in many remote areas, particularly in the hill districts where road connectivity is poor. The high costs associated with establishing and maintaining cold storage infrastructure have also been a limiting factor. Furthermore, despite improvements in the distribution of high-yielding planting materials, ensuring timely availability during peak planting seasons remains a challenge. Logistical constraints and limited access to transportation further exacerbate these issues.

Table-3.7.2: District-wise Principal Markets, Sub-markets & Important Crops in Uttarakhand

SI	District	Principal Market	Sub-Market	Important crops
1	Nainital	Haldwani	Mukhani, Lamachod, Lalkuan, Bhowali, Kaladungi	Potato, Tomato, Cabbage, Pear, Mango, Plum, Apricot, Peach, Onion, Apple
		Ramnagar	Shankarpur, Peerumadara	Wood, Rice, Wheat, Paddy, Mango, Potato, Soybean, Peerumadara Onion, Litchi, Gram
2	Udhamsingh Nagar	Rudrapur	Bhurarani, Bhamraula, Bagwala, Bhainsiya	Wood, Wheat, Paddy, Green Pea, Bottle gourd, Mango, Cabbage, Soybean, Radish
		Kashipur	Kashipur	Paddy, Rice, Barley, Wheat, Greenpea, Banana, Wood, Tomato
		Jasipur	Jasipur	Paddy, Rice, Wheat, Wood, Bottle, Gourd, Green Pea, Potato, Wood, Radish, Cauliflower
		Sitarganj	Bhudiya, Nanakmatta	Paddy, Wheat
		Khatima		Paddy, Wheat
		Kichha		Wheat, Mango, Banana, Paddy
		Gadarpur	Chandayan	Paddy, Rice, Wheat, Pea, Potato, Soyabean, Onion
		Bazpur	Sultanpur Patti, Kilakheda	Paddy, Rice, Barley, Mustard, Potato, Pea, Wheat
3	Champawat	Tanakpur	Banbasa, Champawat, Lohaghat	Potato, Wheat, Potato, Wood, Pear, Mango, Lisa, Ginger
4	Dehradun	Dehradun	Doiwala, Mussorrie	Potato, Mango, Pea, Apple, Ginger, Tomato, Wheat, Litchi, Cabbage, French bean
		Vikasnagar		Paddy, Maize, Wheat, Potato, Green pea, Ginger, Celocia, Wood, Mango
		Chakrata	Sahiya	Pumpkin, Potato, Ginger, Green chillies, Field pea, Celocia
		Rishikesh		Wood, Paddy, Potato, Tomato, Rice, Cauliflower, Banana, Resin, Onion, Wheat
5	Haridwar	Mangalore	Jhabreda, Narsan	Wheat, Mango
		Lakshar	Landora, Rayasi, Govardhanpur, Bheekampur	Oat, Rice, Wheat, Paddy, Onion, Wood, Potato, Barley
		Haridwar Union	Bahadarabad	
		Roorkee		Banana, Apple, Wood, Tomato, Chilly, Gram, Potato, Mosambi, Wheat
		Bhagwanpur		
6	Pauri	Kotdwar	Dugadda	Wheat, Gram, Grape, Rice, Mango, Gur, Potato, Banana, Apple, Arhar
7	Chamoli	Karnprayag		Wheat, Gram, Grape, Rice, Mango, Gur, Potato, Banana, Apple, Arhar
8	Uttarkashi	Uttarkashi		Not yet Functional
9	Tehri Garhwal	Tehri Garwal		Not yet Functional
10	Almora	Almora		Not yet Functional
11	Pithoragarh	Pithoragarh		Not yet Functional

Improving Access of Farm Produce to Markets:

Improving market access for farm produce has been a critical focus of the government's agricultural policy. Initiatives aimed at enhancing market linkages, expanding market infrastructure, and increasing farmer participation in digital platforms have been implemented to facilitate better access to markets.

The Table 3.7.2 on district-wise principal markets, sub-markets, and important crops in Uttarakhand highlights the agricultural diversity and marketing infrastructure across various districts. In Nainital, the principal markets are Haldwani and Ramnagar, with sub-markets in locations like Mukhani, Lamachod, Lalkuan, and Bhowali, where major crops include potato, tomato, cabbage, pear, mango, plum, and apricot. Ramnagar sub-markets focus on wood, rice, wheat, paddy, mango, and potato, showcasing the district's wide range of crops from vegetables to fruits and grains.

Udhamsingh Nagar has several principal markets, such as Rudrapur and Kashipur, with multiple sub-markets. This district produces paddy, wheat, wood, and various vegetables like radish and cauliflower. The presence of wood markets in places like Bhurani and Kashipur highlights its significance in timber trade alongside agricultural produce. The sub-market in Kichha specializes in wheat, mango, and banana, showing a variety of cash crops and fruits in the region.

In Champawat, Tanakpur and its sub-markets like Banbasa and Lohaghat handle the production of potatoes, wood, wheat, and ginger. The district's varied terrain enables the cultivation of crops such as pears and mangoes, alongside traditional staples like wheat and rice.

Dehradun has an extensive market network, with the Dehradun principal market and sub-markets in Doiwala and Mussoorie dealing with a wide array of crops, from potato, mango, and pea to ginger and apple. The district also grows French beans and cabbage, reflecting a balanced focus on fruits, vegetables, and cereals. Vikasnagar and Chakrata sub-markets are active in producing paddy, maize, and pumpkin, while Rishikesh markets focus on wood, paddy, and cauliflower.

In Haridwar, the Mangalore and Lakshar markets are prominent, with sub-markets handling crops such as wheat, mango, rice, oat, and barley. Roorkee and Bhagwanpur markets have a focus on banana, apple, wood, and various vegetables such as potato and chilly. The variety of produce in Haridwar illustrates a rich agricultural portfolio that includes cereals, fruits, and vegetables.

Other districts like Pauri, Chamoli, and Kotdwar show substantial production of wheat, gram, grapes, and rice, while districts like Uttarkashi, Tehri Garhwal, Almora, and Pithoragarh have principal markets that are not yet functional, reflecting possible infrastructure limitations or underdeveloped market systems in those areas.

This table offers an insightful look into the agricultural landscape of Uttarakhand, showing the diversity in crop production, from staple cereals to fruits and commercial vegetables, while also revealing the importance of timber and wood products in certain districts. It highlights both developed and underdeveloped markets, offering a glimpse into regional disparities in market infrastructure.

As per the 5th QPR 2024 monitoring report, the government of Uttarakhand has undertaken various initiatives aimed at improving the marketing of agricultural produce, enhancing farmers' access to markets, and promoting value-added products. These marketing-focused initiatives are critical to ensuring fair prices for farmers and addressing the challenges posed by middlemen in traditional agricultural marketing channels.

A key marketing initiative is the establishment of the Aroma Park in Kashipur, which is intended to promote the cultivation and marketing of aromatic crops. The park has made significant progress, with 35 plots allotted to investors and initial construction activities underway. The government is also working on finalizing the Aroma Park Policy to provide clarity on the applicable frameworks, which will facilitate further investor participation and the scaling up of aromatic plant cultivation and processing.

Another significant project under the marketing theme is the Millets Food Park at Sitarganj. This initiative aims to create a dedicated space for millet processing and marketing, which is expected to increase the production, processing, and sale of millet-based products. The government has been actively engaging with investors for this project, with outreach efforts ongoing to attract key players in the millet processing industry.

In the realm of horticulture, the government has focused on improving post-harvest logistics for apple growers under the SUPHAL Policy. This policy seeks to upgrade apple storage facilities and logistics infrastructure, including the development of Controlled Atmosphere (CA) stores, which will enhance the shelf life and marketability of apples. Although the policy has been approved by the Finance Department, it is still awaiting final cabinet approval.

The development of Farmer Producer Organizations (FPOs) has also been emphasized to improve farmers'

bargaining power and market access. Through FPOs, farmers can collectively market their produce, thus reducing their reliance on intermediaries and securing better prices. The government's efforts to support these organizations aim to strengthen rural economies and promote collective farming models.

Additionally, the Kiwi Cultivation Policy and the Food Processing Policy include provisions for creating marketing channels for new and value-added agricultural products. The Kiwi cultivation policy, in particular, targets the development of a robust market for kiwi, a high-value fruit that can significantly improve farmers' incomes. The Food Processing Policy aims to foster the development of agro-processing units that add value to agricultural produce and facilitate its marketing both within and outside the State.

Uttarakhand has made notable progress in improving agricultural marketing and supply chains through various initiatives aimed at branding, streamlining supply chains, and enhancing market access. However, persistent barriers such as infrastructure limitations, logistical constraints, and stakeholder coordination issues continue to impact the effectiveness of these efforts. Addressing these challenges through targeted investments and enhanced collaboration will be crucial for realizing the full potential of the State's agricultural sector and ensuring better outcomes for farmers.

Conclusion:

Uttarakhand's agricultural sector is at a critical juncture, shaped by the interplay of traditional practices and the need for modernization. Government policies and programmes have made significant strides toward addressing the distinct challenges posed by the region's geography and socio-economic conditions. Investments in infrastructure, such as irrigation, mechanization, and post-harvest storage, have helped alleviate some of the constraints on productivity and have set a foundation for sustainable agricultural practices.

However, challenges persist. The unique topographical and climatic conditions of Uttarakhand mean that agriculture in the region is highly sensitive to climate change and

environmental pressures. Issues such as limited arable land, soil erosion, and erratic rainfall patterns necessitate ongoing support for climate-resilient farming practices. Moreover, infrastructural bottlenecks, especially in higher altitudes, hinder the potential for agricultural productivity and restrict access to critical resources for many farmers. These barriers underscore the importance of strategic investments in rural infrastructure, including roads, storage facilities, and market access points, to ensure that the benefits of modernization reach even the most remote communities.

In response to these challenges, Uttarakhand's focus on sustainability through organic farming, crop diversification, and the promotion of high-value crops has laid a strong foundation for a resilient agricultural system. By prioritizing environmentally sustainable practices and encouraging farmers to adopt organic methods, the State is positioning itself as a leader in green agriculture. This approach not only aligns with global trends toward chemical-free farming but also provides a sustainable income stream for rural households, contributing to food security and economic stability.

Looking forward, Uttarakhand must continue to embrace technological innovation, facilitate easier access to financial resources, and promote farmer collectives through FPOs to ensure an inclusive agricultural growth model. The emphasis on cluster farming, precision agriculture, and digital marketing platforms is a step in the right direction, enabling farmers to improve productivity, reduce input costs, and access better markets. However, these initiatives must be supported by a strong policy framework that addresses the socio-economic barriers to adoption, particularly in marginalized rural areas.

In conclusion, while agriculture in Uttarakhand has evolved in response to economic and environmental pressures, the sector remains vital to the State's identity and rural welfare. By continuing to build a diversified, resilient agricultural economy through strategic investments and policies, Uttarakhand can ensure a prosperous and sustainable future for its agricultural sector, which remains central to the livelihoods and culture of its people.