

# Agricultural and Rural Transformations in Telangana: Government Support from 2014 to 2024

Received: 13-05-2025

Accept: 18-05-2025

BY

**Dr. Chilukuri Venkat Reddy**

*Assistant Professor of Economics, Government Degree College Badangpet, Rangareddy District, Osmania University, Telangana State, India.*

## Abstract

This report analyzes the comprehensive transformation of Telangana's agricultural and rural sectors following the state's formation in 2014. It explores key policy interventions by the state government over a decade, including flagship schemes like Rythu Bandhu, Rythu Bharosa, Mission Kakatiya, and the Kaleshwaram Lift Irrigation Project. The study highlights significant improvements in agricultural productivity, irrigation coverage, rural infrastructure, and poverty reduction. Innovations in digital agriculture and targeted welfare programs contributed to inclusive growth and modernization. However, challenges such as increasing fiscal debt, overdependence on paddy cultivation, and implementation inefficiencies raise concerns about long-term sustainability. The report concludes with recommendations focused on diversification, efficient resource use, market integration, and digital governance to ensure equitable and sustainable rural development in Telangana.

**Keywords:** Rythu Bandhu / Rythu Bharosa, Mission Kakatiya, Kaleshwaram Lift Irrigation Project (KLIP), Fiscal Sustainability, Crop Diversification

## 1. INTRODUCTION

### 1.1 Background: Telangana's Formation and Pre-2014 Agricultural Context

Telangana, India's 29th state, was formed on June 2, 2014, following a long struggle for statehood. Before its formation, as part of undivided Andhra Pradesh, Telangana's economy was heavily agrarian, with around 60% of the population engaged in agriculture. The region had adopted Green Revolution techniques, with rice as the primary crop, alongside horticulture and aquaculture.

Despite this base, Telangana faced serious challenges. Irrigation benefits were unevenly distributed, favoring coastal regions and leaving Telangana reliant on erratic rainfall. The region saw high levels of agrarian distress, ranking among the top five states for farmer suicides before 2014. Farmers struggled with debt, water scarcity, low productivity, and poor infrastructure—frequent power cuts, bad roads, and inadequate sanitation. Nine of its ten districts were listed under the Backward Regions Grant Fund, with some labeled among the "Most Hungry" in national reports.

### 1.2 Purpose and Scope of the Report

This report analyzes the transformation of Telangana's agriculture and rural sectors from 2014 to 2024. It evaluates state-led initiatives in farmer welfare, irrigation, allied sectors, and rural development. The report examines their impact on productivity, livelihoods, and rural well-being, while also discussing implementation challenges, unintended outcomes, and sustainability concerns, offering insights into Telangana's development model.

## 2. LITERATURE REVIEW: The Agricultural and Rural Landscape Before 2014

### 2.1 Historical Overview of Agriculture in Undivided Andhra Pradesh/Telangana

Before Telangana's formation in 2014, agriculture was central to the region's economy. As part of undivided Andhra Pradesh, it cultivated a range of crops—rice, cotton, sugarcane, pulses, and maize—boosted by Green Revolution technologies since the 1970s. Despite the presence of major rivers like the Godavari and Krishna, irrigation development primarily benefited coastal Andhra, leaving Telangana reliant on rain-fed agriculture.

Emerging sectors like horticulture and aquaculture showed promise but were underdeveloped. Traditional tank irrigation systems declined due to neglect and encroachment, further weakening water access. This historic underinvestment in irrigation and uneven policy focus created long-term agricultural disparities that Telangana inherited post-bifurcation.

### 2.2 Key Challenges and Deficits in Agriculture and Rural Areas Pre-2014

**Farmer Indebtedness:** Telangana witnessed high rates of farmer suicides before 2014, driven by widespread indebtedness. Nearly half of rural families were in debt, mostly through high-interest informal sources. Small and marginal farmers, earning as little as ₹3842/month, lacked access to effective crop insurance and institutional credit.

**Irrigation Gaps:** Despite irrigation coverage of 50.32% in 2013–14, most farmers depended on borewells or rain, leading to groundwater depletion. Tank irrigation had

deteriorated, and frequent droughts caused regular crop failures.

**Land Fragmentation and Cropping Issues:** Declining landholding sizes and monocropping practices reduced resilience and profitability. Tenant farmers, often excluded from subsidies and formal credit, faced greater income risks.

**Rural Infrastructure Deficit:** Power supply was erratic, with rural areas facing 12-hour daily outages. Sanitation coverage was poor (only 27% had toilets), and education infrastructure lagged behind. These deficiencies limited agricultural productivity and constrained rural development. In sum, Telangana's rural sector pre-2014 was trapped in a cycle of vulnerability—driven by poor irrigation, credit gaps, infrastructure deficits, and institutional neglect—necessitating urgent state-level reforms post-formation.

### 3. TELANGANA GOVERNMENT SUPPORT AND POLICY INTERVENTIONS (2014–2024)

Following its formation in 2014, Telangana undertook a transformative agenda in agriculture and rural development, introducing a series of policy interventions, innovative schemes, and significant budget allocations.

#### 3.1 Farmer Welfare and Direct Support

- **Rythu Bandhu/Rythu Bharosa:** Launched in 2018, Rythu Bandhu provided ₹5,000 per acre per crop season as investment support. By 2025, it evolved into Rythu Bharosa, increasing support to ₹12,000/acre/year and expanding coverage to tenant farmers and landless workers. By the 11th installment, ₹72,910 crore was disbursed.
- **Rythu Bima:** Offers ₹5 lakh life insurance to farmers aged 18–59, fully funded by the state.
- **Farm Loan Waivers:** Over ₹13,753 crore waived (2020–2023), benefiting 44.44 lakh farmers.
- **Free 24x7 Power:** Provided to agriculture since 2018, along with seed subsidies, mechanization support, and proposed crop insurance.

#### 3.2 Irrigation Infrastructure

- **Mission Kakatiya:** Rejuvenated 46,000 irrigation tanks with a ₹6,532 crore outlay, improving yields by 20–30% and groundwater recharge.
- **Kaleshwaram Lift Irrigation Project (KLIP):** World's largest lift irrigation project launched in 2019 to irrigate drought-prone areas using 240 TMCft of Godavari water. Together with other major projects, it marked a shift towards assured irrigation.

#### 3.3 Allied Sectors: Livestock, Dairy, Fisheries

- **Sheep Distribution Scheme:** Initiated in 2017 with a ₹12,000 crore budget, benefitting Golla and Kurma communities. Over 1.28 crore sheep distributed.

- **Dairy Sector Revamp:** Milk production rose 38.81% (2014–2024), supported by price incentives, training, and cooperative revival (e.g., Vijaya Dairy).
- **Fisheries & Poultry:** Support through free fish seedlings and 50% subsidies for farm establishment.

#### 3.4 Rural Infrastructure and Social Development

- **Electricity & Roads:** Achieved 24x7 power by 2018 through ₹38,070 crore investment. Enhanced rural connectivity via PMGSY and state roads.
- **2BHK Housing Scheme:** Launched in 2015 to build free homes for the poor; by 2021, over 2.8 lakh houses sanctioned.
- **Sanitation & Health:** Over 31 lakh toilets built; healthcare enhanced via Ayushman Arogya Mandirs and infrastructure upgrades.
- **Social Welfare Schemes:** Aasara pensions, Kalyana Lakshmi, Haritha Haram, and the 2024–25 'Abhaya Hastam' package (₹53,916 crore) strengthened rural resilience.

#### 3.5 Digital Agriculture

- **Saagu-Baagu Project:** Launched in partnership with WEF in 2021, using AI, IoT, and blockchain. Pilot with 7,000 chilli farmers showed 21% yield rise and 9% pesticide reduction.
- **ADeX & ADMF:** India's first agri-data exchange and governance framework (2023), enabling data-driven insights for farmers and policymakers.

#### 3.6 Budgetary Commitments

The state consistently increased allocations for agriculture, irrigation, power, housing, and welfare—underscoring its strategic focus on rural transformation and inclusive development.

**Table 3: Annual Budgetary Allocations for Agriculture and Rural Development in Telangana (Selected Years, in ₹ Crores)**

Year	Agriculture & Allied Activities	Irrigation*	Rural Development (Panchayat Raj & RD)	Total State Plan Outlay (2014-15)
2014-15	9,529.68	6,500.00	1,269.38 (SCSP)	48,637.90
2016-17	6,611.00	24,132.00	N/A	N/A
2017-18	5,852.00	22,668.00	N/A	N/A
2018-19	17,252.00	24,969.00	N/A	N/A

Year	Agriculture & Allied Activities	Irrigation*	Rural Development (Panchayat Raj & RD)	Total State Plan Outlay (2014-15)
2019-20	21,680.00	6,286.00	N/A	N/A
2020-21	25,305.00	4,704.00	N/A	N/A
2021-22	26,822.00	7,979.00	N/A	N/A
2022-23	27,228.00	10,946.00	N/A	N/A
2023-24	29,164.00	11,169.00	N/A	N/A
2024-25 (BE)	19,746.00	28,024.00	40,080.00	N/A
2025-26 (BE)	24,439.00	23,373.00	31,605.00	N/A

Note: Data compiled from. Rural Development figures are specifically for Panchayat Raj & Rural Development Department for 2024-25 and 2025-26, and for SCSP in 2014-15. Irrigation figures marked with \* may include major, medium, and minor irrigation projects.

The budgetary allocations demonstrate a clear prioritization of agriculture and rural development. The allocation for agriculture and allied activities saw a significant increase, more than tripling from 2017-18 to 2018-19 and reaching ₹29,164 crore in 2023-24. Post-2014, the cumulative expenditure on the agriculture sector until January 2023 was ₹1,91,612 crore, which is twenty times more than the amount spent in the decade before 2014. This substantial financial commitment underscores the government's resolve to address the historical neglect of the sector.

Allocations for irrigation projects have also been significant, with the 2024-25 budget estimating ₹28,024 crore and the 2025-26 budget allocating ₹23,373 crore. Similarly, the Panchayat Raj and Rural Development Department received substantial allocations, with ₹40,080 crore in 2024-25 and ₹31,605 crore in 2025-26. These allocations reflect a holistic approach to rural development, covering direct farmer support, critical infrastructure, and social welfare programs.

However, the state's fiscal health has also seen a significant increase in total debt, surging from ₹72,658 crore in 2014-15 to ₹6,71,757 crore in 2023-24. This substantial rise in debt, outpacing income growth, indicates a heavy reliance

on borrowing to cover expenses and raises concerns about long-term fiscal stability and sustainability.

#### 4. RESULTS AND DISCUSSION: Transformations and Impacts

##### 4.1 Agricultural Productivity and Output Growth

Telangana witnessed a significant agricultural transformation between 2014–2024:

- **Food Grain Production** grew at an annual rate of 16.42%, reaching 202.76 lakh metric tonnes in 2023–24—the highest among major Indian states.
- **Cropped Area** expanded by 77.1%, from 1.35 crore to 2.32 crore acres.
- **Paddy Production** surged to 168 lakh metric tonnes, positioning Telangana as a major rice producer.
- **Irrigation** coverage expanded by over 156%, driven by KLIP and Mission Kakatiya.
- **Allied Sectors:** Milk production rose by 38.81%, and livestock's contribution to GSVA grew by 12.65%, benefiting over 1 million rural households.

##### 4.2 Impact on Farmer Income and Livelihoods

- **Debt Relief:** Rythu Bandhu and loan waivers helped reduce dependence on informal credit.
- **Income Growth:** While helpful in reducing debt, the scheme's effect on income growth was limited due to poor market support and pricing mechanisms.
- **Equity Issues:** Larger landowners often diverted funds for non-agricultural use, while tenant farmers were initially excluded—now addressed under Rythu Bharosa.
- **Livelihood Diversification:** Sheep distribution, dairy support, and allied sectors created alternative income streams and boosted resilience.

##### 4.3 Changes in Rural Socio-Economic Indicators

- **Poverty Reduction:** Telangana's multidimensional poverty fell from 13.18% (2015–16) to 5.88% (2019–21), aided by welfare programs and increased consumption.
- **Basic Amenities:** By 2021, access to drinking water (98.7%), electricity (99.3%), and sanitation (74.4%) improved significantly.
- **Education & Health:** School enrolment rose to 99.5% (ages 6–14), and healthcare infrastructure expanded under Ayushman Arogya Mandirs.
- **Economic Growth vs. Debt:** While per capita income rose (70% above national average in 2021–22), state debt surged from ₹72,658 crore to ₹6.71 lakh crore by 2023–24, raising fiscal concerns.

##### 4.4 Policy Successes and Implementation Challenges

**Key Successes:**

- Boost in crop production and irrigation.
- Reduced farmer indebtedness through direct support.
- Rural electrification and improved infrastructure.
- Innovations in digital agriculture (Saagu-Baagu, ADeX).
- Expanded social welfare coverage.

#### Key Challenges:

- **Fiscal Sustainability:** Rising debt threatens long-term viability.
- **Equity in Benefits:** Initial exclusion of tenant farmers and misuse by large landowners limited effectiveness.
- **Monoculture Risks:** Paddy-centric incentives have reduced crop diversity, increasing ecological and market vulnerability.
- **Corruption:** Reports of leakages (e.g., Sheep Distribution Scheme) underscore implementation weaknesses.
- **Maintenance Deficits:** Projects like Mission Kakatiya face issues in post-implementation upkeep and community engagement.
- **Market Access Gaps:** Income support isn't translating into higher profits due to weak market linkages and MSP enforcement.

#### 4.5 Unintended Consequences and Sustainability Concerns

- **Water Stress:** Expanding irrigation and paddy cultivation have strained water resources, raising long-term sustainability concerns.
- **Environmental Impact:** Intensive farming has led to potential soil degradation and chemical runoff despite sustainable farming efforts.
- **Fiscal Risks:** Rising welfare expenditure without parallel revenue generation has inflated the debt burden.
- **Vulnerability Shift:** Reduced cropping diversity and heavy dependence on state support create new risks for farmers amid market and climate uncertainties.
- **Table 1: Key Agricultural and Socio-Economic Indicators in Telangana (Pre-2014 vs. Post-2014)**

Indicator	Pre-2014 (Approx. 2011-14)	Post-2014 (Approx. 2021-24)
Population dependent on Agriculture	60% (erstwhile AP)	62.17% (Telangana, 2013-14), 45.8%

Indicator	Pre-2014 (Approx. 2011-14)	Post-2014 (Approx. 2021-24)
		(2020-21)
Agriculture Contribution to GSDP/GSVA	20.6% (2013-14, current prices)	18% (2021-22), 15.8% (2023-24, current prices)
Gross Cropped Area	62.88 Lakh Hectares (2013-14)	2.32 Crore Acres (2023-24)
Gross Irrigated Area	50.32% of Gross Area Sown (2013-14), 62.49 Lakh Acres (2014-15)	1.60 Crore Acres (2023-24)
Food Grain Production	107.49 Lakh Tonnes (2013-14)	202.76 Lakh Metric Tonnes (2023-24)
Paddy Production	N/A	168 Lakh Metric Tonnes (2023-24)
Milk Production (Thousand Tonnes)	4207 (2014-15)	5840 (2023-24)
Per Capita Income	₹1,24,104 (2014-15)	₹3,47,299 (2023-24)
Rural Poverty (Multidimensional Headcount)	13.18% (2015-16)	5.88% (2019-21)
Rural Electrification (Hours/day)	12.5 Hours (2015), <6 hours for farm	21.9 Hours (2024), 24x7 for farm
Rural Sanitation (Toilet Access)	27% (2011)	100% ODF (2019)
State Debt	₹72,658 crore (2014-15)	₹6,71,757 crore (2023-24)

- The table illustrates the substantial progress made across key indicators. While the agricultural sector's direct contribution to GSVA has seen a slight decline in percentage terms, this is often indicative of broader economic diversification as other sectors grow faster. The absolute growth in agricultural output and irrigated area is significant. The dramatic improvements in per capita income, poverty reduction, and access to basic rural amenities like electricity and sanitation highlight the tangible benefits of government interventions. However, the accompanying surge in state debt

remains a critical point of concern for long-term fiscal health.

## 5. CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary of Key Findings

From 2014 to 2024, Telangana underwent a major transformation in agriculture and rural development. Key achievements include:

- **Increased agricultural productivity**, especially in food grains and paddy, supported by large-scale irrigation (KLIP, Mission Kakatiya).
- **Farmer support schemes** like Rythu Bandhu/Bharosa and loan waivers helped reduce debt and stabilize livelihoods.
- **Rural development** saw improvements in housing, electrification, sanitation, and digital agriculture (e.g., Saagu-Baagu, ADeX).

However, challenges remain:

- **High state debt** raises fiscal concerns.
- **Over-reliance on paddy** threatens water sustainability and crop diversity.
- **Implementation gaps**, especially in benefit distribution and corruption, call for better oversight.

### 5.2 Policy Implications and Future Outlook

Telangana's approach shows how state-driven interventions can yield fast results. But sustaining progress requires:

- **Water management and crop diversification** to reduce ecological strain.
- **Stronger market linkages** to boost farm income.
- **Fiscal discipline** to avoid unsustainable debt.
- **Technology and data-driven governance** to improve transparency and efficiency.

A balanced, inclusive, and adaptive strategy is key for future resilience.

### 5.3 Key Recommendations

1. **Promote Crop Diversification**  
Encourage less water-intensive crops like millets and pulses through subsidies, MSP support, and farmer training.
2. **Strengthen Market Linkages**  
Expand e-NAM, FPOs, and post-harvest infrastructure to ensure fair prices and reduce losses.
3. **Improve Water Efficiency**  
Adopt micro-irrigation, regulate groundwater, and empower Water Users Associations for sustainable irrigation.
4. **Ensure Fiscal Sustainability**  
Develop a debt management plan, explore

alternative funding models, and align welfare with fiscal capacity.

5. **Improve Governance and Transparency**  
Digitize scheme monitoring, prevent leakages, and empower local governance for accountable delivery.
6. **Boost Non-Farm Rural Livelihoods**  
Enhance skill development for rural youth and women to reduce dependency on agriculture.
7. **Expand Digital Agriculture**  
Scale platforms like ADeX and Saagu-Baagu, ensure digital access for all farmers, and promote precision farming.

With these steps, Telangana can consolidate its progress and set a sustainable, inclusive model for rural and agricultural transformation.

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