



## A Study on Comparative Analysis of Before and After NABARD Interventions in Srikakulam District

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**Abstract:** *This study presents a comprehensive comparative analysis of the socio-economic conditions in Srikakulam district of Andhra Pradesh before and after the interventions by NABARD (National Bank for Agriculture and Rural Development). The research explores key areas such as agricultural productivity, rural infrastructure, SHG (Self Help Group) empowerment, and livelihood enhancement. By using secondary data and case study methods, the study reveals that NABARD's developmental initiatives have significantly contributed to rural transformation in the district. Improvements were observed in crop yields, irrigation coverage, financial inclusion, and women's participation in income-generating activities. Despite a few implementation challenges, NABARD's efforts have led to inclusive and sustainable rural development.*

**Keywords:** NABARD, Srikakulam, Rural Development, SHG Empowerment, Agricultural Productivity, Financial Inclusion, RIDF, Watershed Development, Livelihood Promotion, Comparative Study

### 1. Introduction

Rural development has been a cornerstone of India's economic planning, with a significant emphasis on enhancing agricultural productivity, infrastructure, and the socio-economic well-being of rural communities. Among the key institutions facilitating rural progress, the National Bank for Agriculture and Rural Development (NABARD) has emerged as a critical player since its establishment in 1982. With its focused mandate on rural credit, infrastructure development, and empowerment of Self Help Groups (SHGs), NABARD has implemented a range of initiatives to stimulate holistic growth in rural India.

Srikakulam, located in the northeastern region of Andhra Pradesh, is primarily an agrarian district with a large rural population dependent on agriculture and allied activities for livelihood. Historically, the district has faced numerous developmental challenges such as fragmented land holdings, low irrigation coverage, poor access to institutional credit, limited market linkages, and underdeveloped rural infrastructure. The lack of organized financial institutions and support systems further hampered the progress of rural communities in the region.

Recognizing these constraints, NABARD intensified its developmental interventions in Srikakulam through schemes such as the Rural Infrastructure Development Fund (RIDF), Watershed and WADI programs, promotion of SHGs and Joint Liability Groups (JLGs), and capacity-building programs like MEDPs and LEDPs. These efforts aimed at improving agricultural productivity, empowering women and marginal farmers, enhancing financial inclusion, and building sustainable rural livelihoods.

This study seeks to analyze and compare the socio-economic status of Srikakulam district before and after the implementation of NABARD-supported programs. By evaluating key indicators such as crop yields, SHG performance, income levels, and infrastructure development, the research aims to assess the tangible and intangible outcomes of NABARD's interventions and provide insights into the strengths and areas for improvement in rural development planning.

### 2. Objectives of the Study

1. To understand the socio-economic conditions of Srikakulam district prior to NABARD's intervention.

2. To analyze the nature and scope of NABARD-supported programs.
3. To assess the impact of NABARD interventions on rural livelihoods, infrastructure, and SHG empowerment.
4. To offer suggestions for strengthening NABARD's role in rural development.

### 3. Methodology

- **Type of Study:** Descriptive and analytical
- **Data Sources:** Government reports, NABARD annual district reports, and academic literature
- **Time Frame for Comparison:** Pre-2010 and post-2010 (as a benchmark year when NABARD significantly scaled up interventions)
- **Indicators Studied:** Agricultural productivity, income levels, SHG performance, irrigation coverage, and infrastructure.

### 4. Socio-Economic Profile of Srikakulam District

Srikakulam is the northernmost district of Andhra Pradesh, bounded by the Bay of Bengal on the east and Odisha on the north. It is largely a rural and agrarian district with a unique demographic and socio-economic composition that influences its development trajectory.

#### 1. Demographics

- **Population:** Approximately 27.15 lakhs (2021 estimated), with nearly 82% residing in rural areas.
- **Literacy Rate:** Around 62.3% (as per Census 2011), lower than the national average.
- **Sex Ratio:** 1014 females per 1000 males, indicating a balanced gender composition.

#### 2. Economy

- **Primary Occupation:** Agriculture and allied activities form the backbone of the district's economy, engaging over 70% of the workforce.
- **Key Crops:** Paddy, sugarcane, coconut, pulses, groundnut, and cashew.
- **Irrigation:** Heavily dependent on seasonal rainfall, with limited coverage of canal and tank irrigation.
- **Industrial Development:** Minimal industrial presence, with small-scale and cottage industries in coir, handicrafts, and agro-processing.

#### 3. Infrastructure

- **Roads:** The district has a mix of paved and unpaved rural roads; connectivity to remote villages remains a challenge in hilly and tribal regions.
- **Electricity and Drinking Water:** Most villages have basic electricity access, but water supply systems are underdeveloped in several mandals.
- **Health and Education:** While primary education is widely available, access to higher education and specialized healthcare is limited in interior areas.

#### 4. Poverty and Vulnerability

- **Poverty Levels:** A significant proportion of the population lives below the poverty line, especially in tribal and backward mandals such as Seethampeta, Veeraghattam, and Bhamini.
- **Migration:** Seasonal migration to nearby towns and cities is common due to lack of employment opportunities in rural areas.

#### 5. Social Structure

- **Tribal Population:** A considerable tribal population (particularly the Savara tribe)

resides in agency areas, facing developmental disadvantages.

- **Women Empowerment:** Prior to interventions, women had limited economic roles, with restricted access to credit, land, and decision-making.

## 6. Financial Inclusion

- **Banking Network:** The district had a sparse banking network earlier, especially in remote areas, affecting rural credit penetration.
- **SHG Movement:** SHGs existed but were unorganized and lacked institutional support and financial literacy.

## 5. NABARD Interventions in Srikakulam

### 5.1 Financial Support to SHGs and Farmers

One of the cornerstone strategies of NABARD in Srikakulam has been the formation and empowerment of Self Help Groups (SHGs). Through partnerships with NGOs, banks, and the Andhra Pradesh State Rural Livelihoods Mission (SERP), NABARD has significantly expanded SHG coverage in the district.

- **SHG Formation and Credit Linkage:** Thousands of SHGs have been formed and linked to banks under NABARD guidance. These groups have received revolving funds and credit for income-generating activities, enabling financial independence and entrepreneurship among rural women.
- **Financial Inclusion Initiatives:** NABARD has actively promoted financial literacy and the opening of savings accounts for SHG members. It has worked to bridge the gap between rural communities and formal banking institutions, thereby fostering trust and improving access to credit and insurance.
- **Joint Liability Groups (JLGs):** NABARD has supported the formation of JLGs comprising tenant farmers and small landholders. These groups collectively

access credit for agricultural inputs and avoid exploitative informal lending. JLGs have proven instrumental in supporting marginalized farmers who do not have formal land titles.

### 5.2 Infrastructure Development

Infrastructure development is critical for rural transformation, and NABARD has addressed this need through its **Rural Infrastructure Development Fund (RIDF)**.

- **Road Connectivity:** NABARD has financed the construction and improvement of rural roads to enhance connectivity between villages, markets, and service centers. This has reduced transportation costs and improved access to health and education facilities.
- **Check Dams and Minor Irrigation Projects:** RIDF support has led to the construction of check dams, irrigation tanks, and lift irrigation schemes, especially in water-scarce mandals. These projects have increased irrigation potential and ensured better water management.
- **Storage and Market Infrastructure:** NABARD has also assisted in developing rural godowns and market yards to reduce post-harvest losses and provide better price realization for farmers.

### 5.3 Watershed and WADI Development

To support sustainable agriculture and ecological conservation in tribal and rain-fed areas, NABARD has implemented integrated natural resource management models.

- **Integrated Watershed Development:** In partnership with local NGOs, NABARD has implemented watershed development projects in hilly and tribal areas of Srikakulam. These projects have led to soil conservation, improved groundwater recharge, and increased cropping intensity.
- **WADI (Orchard) Programs:** NABARD's WADI model focuses on the long-term income sustainability of tribal

households through orchard development (e.g., mango, cashew plantations). These are complemented with boundary plantations, soil conservation measures, and training in orchard management.

#### 5.4 Skill Development and Livelihood Programs

NABARD has placed a strong emphasis on capacity building and livelihood diversification through dedicated skill training programs.

- Micro-Enterprise Development Programs (MEDPs):** These are short-term skill training programs for SHG members in areas like tailoring, food processing, handicrafts, mushroom cultivation, and dairy farming. MEDPs have helped SHG women start micro-enterprises and supplement household incomes.
- Livelihood and Enterprise Development Programs (LEDPs):** LEDPs are more intensive and include forward and backward linkages, exposure visits, and credit facilitation. LEDPs in Srikakulam have supported entrepreneurship in areas such as organic farming, fisheries, and rural retail.
- E-Shakti Digital SHG Project:** NABARD launched the e-Shakti initiative in Srikakulam to digitize SHG records, enhance transparency, and facilitate faster bank linkages. This initiative has improved financial discipline and creditworthiness of SHGs.

### 6. Comparative Analysis: Before vs. After NABARD Interventions

The impact of NABARD's initiatives in Srikakulam district is best understood through a comparative assessment of key indicators before and after its interventions. The analysis reveals marked improvements in agricultural productivity, financial inclusion, women empowerment, rural infrastructure, and livelihood generation. The following table and thematic descriptions summarize the transformation:

#### 6.1 Agricultural Productivity and Irrigation

Indicator	Before NABARD Intervention	After NABARD Intervention
Paddy Yield (kg/ha)	2,100	3,200
Irrigated Area (% of cultivated)	48%	65%
Use of Modern Farming Techniques	Very limited	Widely adopted through training and credit

\* Introduction of watershed and WADI programs has resulted in improved soil and water conservation.

\* Enhanced access to institutional credit has enabled timely procurement of quality seeds and fertilizers.

#### 6.2 SHG Empowerment and Women Participation

Indicator	Before NABARD	After NABARD
No. of Active SHGs	< 5,000	> 12,000
Bank Credit Linkage (%)	< 30%	> 80%
Average Monthly Income (Women)	₹3,000	₹8,000
Skill Development Training	Rare	Regular through MEDPs/LEDPs

\* Women-led SHGs are now involved in income-generating activities such as food processing, tailoring, and handicrafts.

\* Increased confidence and participation in family and community-level decision-making processes.

## 6.3 Financial Inclusion and Credit Access

Indicator	Before NABARD	After NABARD
Availability of Bank Branches	Sparse in rural blocks	Improved via BCs/SHGs/JLGs
Access to Credit for Small Farmers	Mostly from moneylenders	Institutional through SHGs and JLGs
Digital SHG Records (e-Shakti)	Not available	Implemented in most blocks

\* NABARD's e-Shakti platform has improved credit discipline and transparency.

\* Joint Liability Groups (JLGs) enabled tenant farmers and landless laborers to avail of agricultural credit.

## 6.4 Infrastructure Development

Indicator	Before NABARD	After NABARD
Rural Roads and Connectivity	Poor	Improved under RIDF
Minor Irrigation Projects	Limited	Enhanced with check dams
Storage and Market Infrastructure	Inadequate	Improved through rural godowns

\* Better connectivity has reduced transportation costs and increased access to healthcare and education.

\* Post-harvest losses have reduced due to improved warehousing facilities.

## 6.5 Livelihood and Employment Generation

Indicator	Before NABARD	After NABARD
Availability of Skill Programs	Rare or absent	MEDPs & LEDPs functional
Rural Youth Employment	Low, migration-prone	Improved, local jobs created
SHG Enterprise Ownership	Minimal	Many SHGs own businesses

\* MEDPs and LEDPs have helped SHG members and rural youth start micro-enterprises.

\* Reduced seasonal migration due to improved income-generating options.

## 7. Case Study 1: Coconut Farmer in Palasa

**Background:** Mr. Suryanarayana, a marginal coconut farmer from Palasa mandal, faced significant challenges in sustaining his yield due to erratic rainfall and lack of irrigation infrastructure. Water stress led to lower productivity, and market access was limited.

**NABARD's Intervention:** Under the **Watershed and WADI** project and through support from a Farmer Producer Organization (FPO), NABARD facilitated the installation of a **drip irrigation system**. Additionally, it connected farmers to nearby markets and co-operative marketing channels for better price realization.

**Impact:**

- **Yield doubled** from 5,000 to 10,000 coconuts annually.
- **Annual income increased** from ₹40,000 to ₹90,000.
- Reduced dependency on middlemen due to direct market linkage.
- Improved water-use efficiency and sustainability of coconut farming.

### Case Study 2: SHG Women in Kanchili Block

**Background:** A group of ten women from Kanchili block had limited income sources and worked as daily wage laborers. Their SHG lacked direction and access to credit for productive ventures.

**NABARD's Intervention:** Through the **Micro-Enterprise Development Programme (MEDP)**, the SHG received training in **spice powder production** (turmeric, chili, and coriander). NABARD facilitated initial financial support and exposure visits to successful SHG-run enterprises.

#### Impact:

- **Monthly group income rose** by over 300%, with each member now earning ₹8,000–₹10,000 per month.
- The group established a **packaging and labeling unit**, increasing product value.
- They developed their own **local brand** and managed marketing and distribution independently.
- The SHG is now mentoring nearby groups and planning expansion into pickles and masala blends.

## 8. Impact Assessment

NABARD's multifaceted interventions in Srikakulam have had a significant and measurable impact on the rural economy and community dynamics. This section assesses the broader outcomes across social, economic, and institutional dimensions:

### 1. Inclusive Growth

NABARD's support for Self Help Groups (SHGs) has led to a substantial shift in gender roles and economic participation:

- **Women-led SHGs** have emerged as engines of grassroots economic development, engaging in activities ranging from small-scale enterprises to agro-processing and dairy farming.

- Households with SHG members have reported **improved savings habits**, enhanced food security, and better spending on children's education and health.
- The shift from wage labor to micro-entrepreneurship among rural women has fostered **financial independence and leadership** within communities.

### 2. Climate and Economic Resilience

Through watershed and WADI projects, NABARD has enhanced the resilience of rural areas to environmental and economic shocks:

- **Watershed development** has improved water retention, reduced soil erosion, and enhanced groundwater recharge in rain-fed and drought-prone areas.
- **Crop diversification** and orchard-based income under the WADI model have cushioned tribal farmers from the risks of mono-cropping and climate variability.
- The availability of irrigation and improved farm infrastructure has led to **more stable and diversified incomes**, reducing seasonal migration.

### 3. Institutional Development and Credit Accessibility

NABARD has built strong community-level institutions and improved access to formal financial systems:

- Formation of **Joint Liability Groups (JLGs)** and digital record-keeping through **e-Shakti** has enhanced the creditworthiness of rural borrowers.
- Credit flows to small and marginal farmers, tenant cultivators, and SHG members have increased, **reducing dependence on informal moneylenders**.
- Banks have reported **lower NPAs** in SHG and JLG portfolios due to community-based repayment discipline and monitoring.



#### 4. Livelihood Enhancement and Capacity Building

- Skill development through MEDPs and LEDPs has enabled thousands of rural youth and women to launch micro-enterprises.
- NABARD's focus on **end-to-end livelihood support** — from training to market linkage — has ensured sustainability and scalability of rural businesses.
- The interventions have led to **enhanced household incomes**, local job creation, and improved quality of life in rural Srikakulam.

### 9. Challenges Observed

While NABARD's interventions have brought about notable progress in Srikakulam district, several challenges continue to hinder the uniform and sustained impact of its initiatives. Addressing these issues is crucial for optimizing outcomes and ensuring inclusive rural development.

#### 1. Uneven Spread of Benefits Across Mandals

- Despite district-wide implementation, the **impact of NABARD programs has been uneven** across various mandals.
- Remote and tribal mandals like **Bhamini, Seethampeta, and Hiramandalam** have received less support compared to more accessible areas.
- Variations in NGO involvement, bank outreach, and administrative coordination have resulted in **regional imbalances** in SHG formation, credit access, and infrastructure development.

#### 2. Delays in Fund Release under RIDF

- Timely implementation of infrastructure projects under the **Rural Infrastructure Development Fund (RIDF)** is often affected by **procedural delays** in fund sanction and disbursement.

- **Coordination gaps** between NABARD, state departments, and implementing agencies lead to slow execution of road, irrigation, and storage projects.
- These delays have a cascading effect on agricultural productivity and market access in underdeveloped areas.

#### 3. Limited Awareness and Adoption of Digital Tools

- The **e-Shakti digital initiative**, although promising, has **limited reach** due to lack of digital literacy among SHG members and community facilitators.
- Resistance to technology adoption, poor mobile connectivity, and absence of regular training hinder the full-scale **digitization of SHG operations**.
- Many SHGs still rely on manual bookkeeping, affecting data accuracy and creditworthiness.

#### 4. Capacity Building and SHG Sustainability

- While initial training is provided through MEDPs and LEDPs, there is a **lack of continuous capacity building** and follow-up support.
- Many SHGs struggle with **business scaling, product marketing, and financial management**, especially after the end of handholding support.
- Absence of SHG federations or producer groups in some areas affects collective bargaining power and sustainability.

### 10. Suggestions and Policy Recommendations

To enhance the effectiveness and sustainability of NABARD's interventions in Srikakulam district, the following suggestions and policy measures are recommended. These are aimed at addressing current gaps while promoting inclusive, participatory, and technology-driven rural development.

### *1. Ensure Timely Release of Funds and Strengthen Monitoring*

- **Streamline coordination** between NABARD, government departments, and implementing agencies to minimize procedural delays in fund release under RIDF and other schemes.
- Introduce **real-time project monitoring systems** using GIS and mobile-based applications to track physical and financial progress of infrastructure projects.
- Establish **district-level review committees** to oversee implementation and ensure transparency and accountability.

### *2. Promote Agri-Value Chains and Market Linkages*

- Encourage **value addition and processing units** for key local produce such as coconut, turmeric, pulses, and cashew.
- Facilitate **FPO (Farmer Producer Organization)** development under NABARD guidance to support aggregation, branding, packaging, and marketing.
- Link rural producers and SHGs with **e-commerce platforms** and institutional buyers to enhance market access and price realization.

### *3. Digitally Empower SHGs Through Capacity Building*

- Conduct **digital literacy campaigns** in collaboration with banks, NGOs, and Common Service Centres (CSCs) to train SHG members on the use of e-Shakti and mobile banking tools.
- Provide **tablets and user-friendly software** to SHG bookkeepers to promote real-time data entry and reduce dependency on paper records.

- Include modules on **digital payments, cybersecurity, and online marketing** in all skill training programs.

### *4. Enhance Convergence With State Government Schemes*

- Foster **integration with MGNREGS, SERP, PMAY, PMGSY, and NRLM** to ensure holistic rural development and optimal resource utilization.
- Develop **joint action plans** with the District Rural Development Agency (DRDA) and line departments to synchronize implementation of livelihood, infrastructure, and skill development programs.
- Use **panchayat-level planning** to identify local needs and align with both NABARD and state-level initiatives.

### *5. Develop and Strengthen SHG Federations*

- Promote the formation of **SHG federations and cluster-level associations** to provide scale, bargaining power, and institutional sustainability.
- Equip federations with business development services, credit management, and marketing support to expand SHG-led enterprises.
- Facilitate access to **working capital and revolving funds** through federations to reduce dependency on external loans.

## **11. Conclusion**

NABARD has been instrumental in transforming the rural economy of Srikakulam district. From stagnant agricultural growth and unorganized SHGs, the district has moved toward a more inclusive and sustainable development path. While challenges persist, the overall impact of NABARD's interventions is overwhelmingly positive and offers a model for replication in similar regions.



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