National Journal of Multidisciplinary Research and Development
www.newresearchjournal.com
E-ISSN: 2455-9040
Received: 25-02-2025, Accepted: 26-03-2025, Published: 12-04-2025
Volume 10, Issue 2, 2025, Page No. 90-94

A study on the impact of NABARD on agricultural development in Bihar

Neha kumari[1], Dr. Neyaz Ahmad[2]
[1] Research Scholar, Faculty of Commerce, University Department of Commerce, B.R.A. Bihar University, Muzaffarpur, Bihar, India
[2] Department of Commerce, R.D.S. College Muzaffarpur, Bihar, India
DOI: https://doi.org/10.66856/njmrd.2025.10.2.11099

Abstract
Agriculture remains a central component of Bihar's economy, rural employment, and food security. However, the sector continues to face challenges such as fragmented landholdings, inadequate irrigation, limited access to institutional credit, weak post-harvest infrastructure, low levels of mechanization, and vulnerability to floods and droughts. The National Bank for Agriculture and Rural Development (NABARD) has played an important role in addressing these constraints through rural credit planning, infrastructure financing, support for farmer organizations, promotion of self-help groups, watershed development, financial inclusion, and institutional capacity building. This study examines the contribution of NABARD to agricultural development in Bihar, evaluates its major interventions, and identifies the continuing constraints affecting their effectiveness. The study is based primarily on secondary information from NABARD publications, government reports, and academic literature. The findings indicate that NABARD has strengthened rural financial systems, improved access to agricultural infrastructure, encouraged collective farming institutions, and supported diversification into allied activities. The study recommends stronger coordination among institutions, expanded value-chain finance, greater investment in irrigation and storage, improved digital services, and more targeted support for small and marginal farmers.

Keywords: NABARD, agricultural development, Bihar, rural credit, farmer producer organizations, financial inclusion, rural infrastructure

Introduction
Agriculture has historically been the foundation of Bihar's rural economy. A large proportion of the population depends directly or indirectly on farming, livestock, fisheries, agricultural labour, and related rural activities. Bihar possesses fertile alluvial soil, abundant groundwater in several regions, and favourable conditions for the cultivation of rice, wheat, maize, pulses, oilseeds, vegetables, fruits, and various horticultural crops. Despite these advantages, agricultural productivity and farm incomes remain below their potential in many parts of the state.

The major limitations include small and fragmented holdings, inadequate irrigation, insufficient access to affordable credit, limited mechanization, poor storage and transportation facilities, weak market linkages, and recurring floods. These problems are particularly serious for small and marginal farmers, who constitute the majority of cultivators in the state. Institutional support is therefore necessary to transform agricultural potential into sustainable rural development.

The National Bank for Agriculture and Rural Development (NABARD) was established in 1982 as the apex institution for agricultural and rural development finance in India. Its responsibilities extend beyond direct credit provision. NABARD coordinates rural credit institutions, supports rural infrastructure, promotes financial inclusion, strengthens cooperative and regional rural banks, and finances development programmes for farmers and rural communities.

In Bihar, NABARD's interventions have included the financing of irrigation and rural connectivity, support for self-help groups and joint liability groups, promotion of farmer producer organizations, development of watershed and tribal areas, assistance to cooperative banks and regional rural banks, and encouragement of agricultural diversification. This study evaluates the contribution of these interventions to agricultural development in Bihar.

NABARD's Major Areas of Intervention in Bihar
The National Bank for Agriculture and Rural Development (NABARD) supports agricultural development in Bihar through rural finance, infrastructure development, institution building, and livelihood promotion. Its role is primarily to refinance lending institutions, finance eligible infrastructure, and facilitate development programmes—not to provide routine crop loans directly to individual farmers.

1. Agricultural Credit and Refinance
NABARD supports agricultural lending by providing refinance to eligible banks and rural financial institutions. This helps strengthen their capacity to finance:

- Seasonal crop production and input purchases.
- Irrigation equipment and farm machinery.
- Dairy, poultry, fisheries, and horticulture.
- Agricultural processing and other long-term investments.

NABARD also prepares Potential Linked Credit Plans (PLPs), which assess district-level credit potential and identify infrastructure and institutional gaps. In Bihar, this planning function is important for aligning bank finance with local agricultural opportunities.

2. Rural Infrastructure Development
Through the Rural Infrastructure Development Fund (RIDF), NABARD provides financial assistance to state governments for eligible rural infrastructure projects.

Relevant intervention areas include irrigation, rural roads, bridges, drainage, and flood-protection infrastructure. These investments can reduce transportation costs, improve access to markets, and make agricultural production less vulnerable to water-related constraints.

3. Self-Help Groups and Joint Liability Groups

NABARD promotes group-based approaches to financial inclusion through:

- **Self-Help Groups (SHGs):** These encourage savings, access to bank credit, financial literacy, and livelihood activities, particularly among rural women.
- **Joint Liability Groups (JLGs):** These facilitate lending through mutual guarantees and are particularly relevant to small cultivators, tenant farmers, and sharecroppers who may lack conventional collateral.

These mechanisms can broaden access to formal finance. However, their effectiveness depends on suitable loan products, repayment capacity, training, and market opportunities. NABARD's contribution should also be distinguished from that of state livelihood programmes and other implementing institutions.

4. Farmer Producer Organizations

NABARD supports the development and capacity building of Farmer Producer Organizations (FPOs). These organizations enable small farmers to undertake activities collectively, including:

- Bulk purchase of agricultural inputs.
- Aggregation and marketing of produce.
- Grading, packaging, and primary processing.
- Development of business plans and market linkages.
- Access to institutional finance.

FPOs are especially relevant to Bihar's smallholder agriculture because collective operations can improve bargaining power and reduce transaction costs. Bihar-focused policy analysis highlights the importance of strengthening the FPO ecosystem.

5. Watershed Development and Natural Resource Management

NABARD's development approach includes watershed-based interventions such as soil conservation, rainwater harvesting, groundwater recharge, and community management of natural resources. For Bihar, these approaches are particularly relevant in water-stressed and erosion-prone areas.

6. Agricultural Diversification and Rural Livelihoods

NABARD facilitates investment and development support for activities beyond conventional crop cultivation, including dairy, fisheries, poultry, goat rearing, horticulture, and rural enterprises.

Such activities can provide supplementary income and employment between cropping seasons. Their success depends on more than credit: veterinary services, quality inputs, technical skills, processing facilities, and reliable markets are also necessary.

7. Financial Inclusion and Institutional Strengthening

NABARD supports financial literacy and the capacity of rural financial institutions, including cooperative banks and regional rural banks. Institutional strengthening can involve training, improved banking practices, technology adoption, and better credit planning. For Bihar, stronger rural institutions can improve the accessibility and quality of financial services, particularly for underserved households.

Overall Significance

NABARD's interventions address interconnected constraints: credit finances investment; infrastructure improves production and connectivity; farmer organizations strengthen market participation; and institutional support improves service delivery. However, these are intervention channels—not, by themselves, proof of impact.

Impact of NABARD on Agricultural Development in Bihar:

NABARD influences agricultural development in Bihar through agricultural finance, rural infrastructure, farmer institutions, financial inclusion, and livelihood support. Its contribution is largely indirect and enabling: it strengthens the institutions and infrastructure through which farmers obtain credit, undertake investment, and access markets.

- **Improvement in Access to Institutional Credit:**

NABARD's refinancing and credit-planning functions have helped strengthen the institutional credit system in rural Bihar. By supporting cooperative banks, regional rural banks, and other financial institutions, NABARD has contributed to the expansion of formal credit availability. The availability of institutional finance can reduce farmers' dependence on moneylenders and make it possible to invest in productive assets. It also promotes financial discipline and creates a formal record of borrowing, which may improve access to future credit.

- **Strengthening of Women's Economic Participation:**

Self-help groups supported by NABARD have contributed to greater participation of rural women in savings, credit, small enterprises, and community decision-making. Women-led groups frequently invest in livestock, petty trade, food processing, tailoring, and other livelihood activities.

- **Promotion of Collective Marketing:**

FPOs and other producer institutions can help farmers overcome the disadvantages associated with small-scale production. By aggregating output and purchasing inputs collectively, they can reduce costs and improve access to markets. Collective marketing is particularly valuable for perishable products such as vegetables, fruits, milk, fish, and flowers. It can improve grading, packaging, transportation, and price negotiation. In the long term, farmer organizations may contribute to the development of local agro-processing industries.

- **Employment and Livelihood Diversification:**

NABARD-supported programmes have encouraged the development of non-crop activities such as dairy, poultry, fisheries, goat rearing, and small rural enterprises. These activities can create employment throughout the year and reduce the risks associated with crop failure.

Diversification is especially significant for marginal farmers and landless households. Livestock and small enterprises often require less land than crop cultivation and can be

operated by women and family members. They also provide opportunities for rural youth to engage in local businesses instead of migrating in search of employment.

- **Improvement in Climate Resilience:**

Infrastructure development, watershed management, water conservation, diversification, and crop-related investment can improve resilience to climate variability. In flood-prone areas, better drainage and connectivity can reduce disruption. In drought-prone areas, water harvesting and soil conservation can protect agricultural production. NABARD's role in climate-resilient agriculture is becoming increasingly important because farmers face more frequent risks from irregular rainfall, extreme heat, floods, droughts, pests, and market volatility. However, adaptation programmes must be locally designed because the climate risks of northern, central, and southern Bihar are not identical.

Major Challenges Limiting NABARD's Impact on Agricultural Development in Bihar

NABARD's contribution depends not only on the availability of finance but also on effective implementation, capable institutions, and farmers' access to infrastructure and markets. The following challenges provide a framework for analysing the limitations of its interventions in Bihar.

- **Limited Access to Institutional Credit**

Small and marginal farmers may face difficulties obtaining formal loans because of inadequate documentation, limited collateral, and complicated application procedures. Tenant farmers and sharecroppers can face additional barriers when they lack recognized cultivation or tenancy records. Consequently, increased refinance availability does not necessarily translate into credit access for the most disadvantaged farmers.

- **Small and Fragmented Landholdings**

Small, scattered plots can make individual investment in machinery, irrigation, storage, and modern production technologies financially difficult. They can also increase the cost of providing credit and technical services. Collective arrangements, such as farmer organizations and machinery-hiring services, can address some of these difficulties, but require effective management and sustained participation.

- **Floods, Droughts, and Climate Risks**

Agricultural investments are exposed to flooding, water scarcity, irregular rainfall, and other weather-related shocks. These risks can damage productive assets, reduce yields, and weaken farmers' repayment capacity. A major challenge is designing locally appropriate interventions rather than applying the same financing and infrastructure model across different agro-climatic conditions.

- **Inadequate Infrastructure and Maintenance**

Credit cannot generate its full benefits without reliable irrigation, electricity, roads, storage, and marketing facilities. Delays in completing infrastructure projects can postpone agricultural benefits. Maintenance is equally important: an irrigation facility or rural road that deteriorates after construction may deliver substantially fewer benefits than anticipated.

- **Weak Market Linkages and Price Uncertainty**

Higher production does not automatically lead to higher income. Farmers may struggle to obtain remunerative prices when access to buyers, storage, processing, transport, and price information is limited. For perishable products, delays in marketing can cause losses and distress sales. NABARD-supported investments therefore need complementary market arrangements.

- **Institutional and Managerial Weaknesses**

The effectiveness of interventions depends on participating banks, cooperatives, producer organizations, and implementing agencies. Inadequate staffing, weak governance, poor record-keeping, and limited technical capacity can reduce programme quality. Farmer Producer Organizations face an additional challenge: becoming commercially viable businesses rather than remaining dependent on grants and external assistance.

- **Limited Awareness and Financial Literacy**

Farmers may not fully understand loan eligibility, repayment obligations, insurance conditions, or available development support. Complex procedures and unfamiliar digital systems can further discourage participation. Awareness campaigns must therefore be accompanied by practical assistance with applications, documentation, and responsible borrowing.

- **Repayment Difficulties and Investment Risk**

Crop losses, low prices, and irregular income can make repayment difficult. When repayment schedules do not match agricultural cash flows, otherwise viable borrowers may experience financial stress. Poor recovery can also make lending institutions more cautious, restricting future credit access. The challenge is to balance financial discipline with realistic repayment arrangements and effective risk protection.

- **Coordination and Implementation Gaps**

NABARD-supported programmes often require cooperation among government departments, banks, local institutions, technical agencies, and farmer groups. Delays or gaps at one stage can undermine the entire intervention. For example, financing a dairy enterprise without timely access to veterinary services and milk marketing arrangements can limit its viability.

The central challenge is to convert financial and institutional support into sustained, inclusive improvements in farmers' livelihoods. Addressing credit barriers alone is insufficient; successful interventions also require functioning infrastructure, capable institutions, technical support, reliable markets, and credible monitoring.

Objectives of the Study

The main objectives are:

- To examine the role of NABARD in the agricultural and rural development of Bihar.
- To analyse NABARD's contribution to agricultural credit and financial inclusion.
- To assess the impact of NABARD-supported infrastructure and development programmes.
- To examine the role of NABARD in promoting farmer organizations and agricultural diversification.

- To identify the major constraints limiting the effectiveness of NABARD interventions.

Research Methodology:

The study adopts a descriptive and analytical research design to examine NABARD's contribution to agricultural development in Bihar. It is based on secondary data from NABARD reports, Bihar Economic Surveys, Reserve Bank of India publications, government agricultural statistics, and relevant academic literature. The information is analysed using descriptive statistics, trend analysis, comparative analysis, and thematic review, subject to data availability. The analysis focuses on agricultural credit, rural infrastructure, financial inclusion, farmer organizations, productivity, and livelihood diversification. The study is limited by the availability of consistent district-level data and the difficulty of separating NABARD's contribution from that of other development programmes.

Sources of Data

The study is based on secondary data obtained from:

- NABARD annual reports and state-focused publications.
- Potential Linked Credit Plans prepared by NABARD.
- Reports of the Government of Bihar.
- Publications of the Ministry of Agriculture and Farmers Welfare.
- Reports of the Reserve Bank of India.
- Economic surveys and agricultural statistics.
- Academic books, journal articles, and research studys.

Findings of the Study:

The study produces the following major findings:

- NABARD has contributed significantly to the development of rural credit institutions in Bihar.
- NABARD-supported infrastructure has improved the conditions necessary for agricultural growth, particularly irrigation, connectivity, drainage, flood protection, and storage.
- Self-help groups have expanded access to savings and credit while strengthening women's participation in rural economic activity.
- FPOs have created opportunities for collective input purchase, aggregation, processing, and marketing, although their institutional capacity remains uneven.
- Support for dairy, fisheries, poultry, horticulture, and other allied activities has encouraged livelihood diversification.
- The benefits of NABARD interventions are greater when credit is combined with infrastructure, training, technology, and market access.
- The overall impact is constrained by regional disparities, poor awareness, limited access of tenant farmers, weak implementation, and climate-related risks.
- NABARD's role is most effective when it operates as a facilitator and coordinator within a broader network of state agencies, banks, cooperatives, civil society organizations, and farmer institutions.

Recommendations

- Expand access to affordable institutional credit for small and marginal farmers, tenant farmers, and sharecroppers.
- Strengthen investment in irrigation, drainage, flood protection, and water conservation.
- Improve rural storage, cold-chain facilities, transportation, and agricultural processing infrastructure.
- Strengthen Farmer Producer Organizations through professional management, working capital, and market linkages.
- Promote financial literacy and awareness of NABARD-supported programmes.
- Enhance women's access to credit, training, and livelihood opportunities through Self-Help Groups.
- Encourage agricultural diversification into dairy, fisheries, poultry, horticulture, and agro-processing.
- Integrate agricultural finance with extension services, technical training, insurance, and market support.
- Improve coordination among NABARD, banks, government departments, and local institutions.
- Strengthen monitoring and evaluation to assess changes in productivity, farm income, employment, and beneficiary inclusion.

Conclusion

NABARD has made an important contribution to agricultural and rural development in Bihar. Its role extends beyond the provision of finance to include rural infrastructure development, institutional strengthening, financial inclusion, promotion of self-help groups, support for farmer producer organizations, watershed management, and livelihood diversification.

The evidence indicates that NABARD interventions have improved the foundations of agricultural development by increasing access to institutional credit, supporting irrigation and connectivity, strengthening rural organizations, encouraging allied activities, and promoting collective action among farmers. These contributions are particularly important in Bihar, where the agricultural sector is dominated by small and marginal farmers and is exposed to substantial climate and market risks.

However, the full potential of NABARD's interventions has not yet been realized. Access to credit remains unequal, the institutional capacity of cooperatives and FPOs is inconsistent, post-harvest and market infrastructure is inadequate, and many farmers remain vulnerable to floods, droughts, price fluctuations, and indebtedness. The future effectiveness of NABARD will depend on whether its interventions can become more inclusive, locally responsive, market-oriented, and climate resilient.

Limitations

- The study relies on secondary data and does not include primary field surveys or interviews.
- Consistent district-level and programme-specific data may not be available.
- Differences in reporting periods and indicators may limit comparisons across sources.
- NABARD's contribution cannot be fully separated from other government programmes, bank lending, and private investment.
- Financial allocations and loan disbursements do not necessarily reflect improvements in farmers' livelihoods.
- State-level findings may conceal differences across districts and farmer categories.

Scope for Further Research

- Conduct primary surveys to assess farmers' experiences with NABARD-supported programmes in Bihar.
- Compare agricultural outcomes across districts with different levels of NABARD support.
- Examine the long-term effects of supported interventions on farm income, productivity, and employment.
- Investigate credit access among tenant farmers, sharecroppers, and other underserved groups.
- Evaluate the financial sustainability and market performance of NABARD-supported Farmer Producer Organizations.
- Assess the contribution of Self-Help Groups to women's income, financial independence, and decision-making.

References

1. Shivaswamy GP, Raghavendra KJ, Anuja AR, Singh K, Rajesh T, Kumar HVH. Impact of institutional credit on agricultural productivity in India: A time series analysis. The Indian Journal of Agricultural Sciences, 2020. https://doi.org/10.56093/ijas.v90i2.99033
2. Kumari P, Soni PK. Gender dynamics and control over agricultural microcredit: Evidence from self-help group in Bihar, India. Asia-Pacific Journal of Rural Development, 2025. https://doi.org/10.1177/10185291251343348
3. Boddu K, Ram B. Assessment of farmers perception on socio-economic status after NABARD refinance—An empirical study with reference to select districts of Andhra Pradesh. Edelweiss Applied Science and Technology, 2025. https://doi.org/10.55214/25768484.v9i7.8594
4. Singla N, Medhi P. Performance and economic impacts of Farmer Producer Organizations (FPOs) in India: A review. Journal of Agricultural Development and Policy, 2024. https://doi.org/10.63066/23220457.34.2.014
5. Srivastava S, Sharma J, Gupta SK. An analysis of poverty alleviation efforts in rural India: Impact of micro-finance with self-help group-bank linkage scheme. Financial and Credit Activity: Problems of Theory and Practice, 2024. https://doi.org/10.55643/fcaptp.6.59.2024.4554
6. Anand G, Kalaiselvi P, Sebastian SP, Kumar MS, Amuthaselvi G, Porkodi G, *et al*. Role of farmer producer organizations in promoting women empowerment in agriculture. International Journal of Agriculture Extension and Social Development, 2025. https://doi.org/10.33545/26180723.2025.v8.i1g.1568
7. Asher S, Novosad P. Rural roads and local economic development. American Economic Review, 2020. https://doi.org/10.1257/aer.20180268
8. Kambali U, Niyaz. Role and trend of agricultural finance institutions in the inclusive growth of farmers in rural India. International Journal of Case Studies in Business, IT and Education, 2021. https://doi.org/10.47992/ijcsbe.2581.6942.0144
9. Government of Bihar. Economic Survey of Bihar. Finance Department, Government of Bihar.
10. Ministry of Agriculture and Farmers Welfare, Government of India. Agricultural Statistics at a Glance.
11. NABARD. Annual Report. National Bank for Agriculture and Rural Development.