

SDG 2030

**INSIGHTS FROM INDIA
FOR A SUSTAINABLE FUTURE**



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SDG 2030: INSIGHTS FROM INDIA FOR A SUSTAINABLE FUTURE

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Gaveshana R& D Cell

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INTRODUCTION

In 2015, 193 member countries of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development, marking a historic global commitment to dignity, peace, and prosperity for both humanity and the planet. This landmark agenda outlines 17 Sustainable Development Goals (SDGs) with specific targets to be achieved by the year 2030. The agenda encompasses a wide range of action areas, including poverty eradication, sanitation, education, health, and economic development, while simultaneously addressing social equity and environmental sustainability. This edited volume is a modest attempt to offer meaningful insights toward building a sustainable future.

It gives me immense pleasure to present this edited book titled *SDG 2030: Insights from India for a Sustainable Future*. This volume is the outcome of a concerted academic effort to compile scholarly contributions that aim to enrich discourse and inspire action toward a sustainable and inclusive future.

The book consists of 14 chapters, each offering diverse perspectives and practical insights on sustainable development.

The first chapter, *How Informal India Hinders the Path to Meeting SDG 2030: An Exploratory Overview for Research*, emphasizes the critical role of social sector investment in development and encourages researchers to explore emerging and underexplored areas related to sustainability.

The second chapter elaborates on the transformative potential of Farmer Producer Organizations (FPOs) in reshaping the

agricultural landscape of rural India and emphasizes their role in promoting rural transformation and collective empowerment.

Chapter 3 analyses how digital technologies are transforming microfinance delivery and enhancing women's access to credit, while also exploring regional variations in adoption behaviour, financial management practices, and social norms that shape empowerment trajectories in Kerala and Tamil Nadu.

Chapter 4 illustrates how SDG 4 (Quality Education) can be achieved through the introduction of progressive educational policies such as the Four-Year Undergraduate Programme (FYUGP). This article offers a theoretical and critical examination of the key features and emerging concerns of the FYUGP in Arts and Science colleges in Kerala.

The fifth chapter explains the transition of women from economic dependence to financial independence through microfinance initiatives. The study proposes policy recommendations aimed at enhancing microfinance initiatives to secure wider and long-lasting benefits for women.

Chapter 6 examines the influence of green brand image, brand credibility, green packaging, eco- innovation, and consumer environmental awareness on green purchasing behaviour among working women professionals in Tamil Nadu. This study further analyses the confidence of women professionals in relation to their propensity to purchase green products.

In Chapter 7, the authors explore Chimamanda Ngozi Adichie's illuminating work *We Should All Be Feminists* as an influential text that resonates with the principles of SDG 5 (Gender Equality) and women's empowerment. The chapter

highlights how Adichie's text raises awareness of persistent gender inequalities and encourages a rethinking of social attitudes in ways that align with the broader goals of SDG 5.

Chapter 8 discusses various government-led initiatives such as the Atal Innovation Mission, Skill India Mission, and Startup India, and their alignment with NEP 2020 objectives to foster innovation, enhance skills, and promote youth employment in line with SDG 4 (Quality Education).

In Chapter 9, the authors examine the impact of government policies on agricultural sustainability, drawing evidence from rural households in Kannur District, Kerala, with a focus on SDG 1 (No Poverty) and SDG 2 (Zero Hunger).

Chapter 10 evaluates the effectiveness of government initiatives such as the Jal Jeevan Mission, Jal Shakti Abhiyan, and Atal Bhujal Yojana, with particular emphasis on Jal Jeevan Mission activities in rural Palakkad, in alignment with SDG 6 (Clean Water and Sanitation).

Chapter 11 analyses the socio-economic and sustainable development impacts of Self-Help Group (SHG) participation on rural women in Kerala, corresponding to SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth).

In Chapter 12, the authors highlight the role of Big Data Analytics in Public Health from the perspective of SDG 3 (Good Health and Well-being). This chapter also critically evaluates the ethical and regulatory guidelines associated with Big Data Analytics (BDA) in public health applications.

Chapter 13 examines how literary works not only offer aesthetic value but also provide critical commentary on real-world challenges related to sustainable development. The author reads the renowned novel, *The Hungry Tide* by Amitav Ghosh, in line with SDG 6 (Clean Water and Sanitation).

The final chapter explores the influence of microfinance on women's empowerment, with a special focus on Kudumbashree, Kerala's flagship programme for women's empowerment and poverty alleviation. The chapter also identifies the challenges faced by beneficiaries in achieving independence, self-confidence, and entrepreneurship, thereby underscoring the importance of SDG 5 (Gender Equality).

I would like to wholeheartedly acknowledge the contributors to this edited volume for their valuable scholarly contributions. I extend my sincere gratitude to the Management of Navajyothi College for their constant support and encouragement. I also congratulate the entire Gaveshana (R&D) Team for their dedicated efforts in bringing out this publication in a time-bound manner.

Dr. K K Somasekharan M.A., M.Phil., PhD.

CHAPTER NINE

Impact of Government Policies on Agricultural Sustainability: Insights from Rural Households in Kannur District

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1. Introduction

Earlier, Farmers were considered as the nation's real heroes, but these days they are shunned and fighting to survive. The rising number of farmer suicides nationwide does not bode well for India's future. The figures unequivocally demonstrate the loss and decline of agricultural areas and production sectors. With India's overall economic expansion, the agricultural sector's share of the nation's GDP is gradually diminishing. The prices of agricultural inputs increase at an alarming rate while there is a decreasing trend as far as the outputs are concerned due to high rates of manures, lack of agricultural marketing, lack of capital, small land holdings, inadequate irrigation facilities, lack of machinery, credit delays, etc.. India's agriculture industry is experiencing a period of slump.

Given that agriculture is an essential industry that supports food security, rural development, and the economy as a whole, the government's involvement in ensuring the welfare of farmers is significant. All around the world, governments have a variety of duties and programs designed to assist farmers. The government provides certain facilities to ensure the welfare of farmers, such as developing agricultural policies and regulations, giving farmers financial support through grants, loans, insurance programs, and

subsidies; investing in agricultural research and development (R&D); establishing and maintaining rural infrastructure; and supporting agricultural education and training.

The foundation of India's Economy is agriculture, which sustains a sizable section of the populace and guarantees food security. Nevertheless, the industry has several obstacles to overcome, such as growing input costs, climate change, poor infrastructure, and landholding fragmentation. These problems have exacerbated farmers' hardships, resulting in a troubling nationwide trend of farmer anguish and suicides. The Indian government has responded by enacting a number of laws meant to support rural households and improve agricultural sustainability. Financial aid, increased production, and a more effective agricultural market are the goals of programs like the National Agricultural Market (e-NAM), the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), and the Rashtriya Krishi Vikas Yojana (RKVY).

The impact of these government initiatives on rural households of Kannur District, Kerala State is the main subject of this study. The study intends to comprehend how these programs affect farmer income, agricultural production, and general livelihoods by analyzing their efficacy. This study aims to illustrate the connection between government assistance and farmers' ability to meet their agricultural demands using both quantitative and qualitative data. In the end, this study emphasizes how crucial it is to continuously assess and modify policies in order to make sure they adequately handle the changing issues facing the agriculture industry and support rural communities' long-term survival.

2. Objectives of the Study

1. To evaluate the satisfaction level of agricultural schemes offered by the government
2. To examine how agricultural productivity, income, and farmers' overall livelihoods are impacted by government policies.
3. To identify whether the present day farming needs are satisfied

3. The Methodology of Research

The purpose of the study is to determine the efficacy and efficiency of different government policies and auxiliary measures. Both primary and secondary data are gathered for the investigation. Books, journals, newspapers, websites, and other sources are used to gather secondary data.

Primary data is gathered from 100 households through surveys and questionnaires. Create and disseminate surveys or questionnaires via Google Form to rural families in Kannur District, utilizing social media platforms such as Facebook and WhatsApp. The primary goal of the survey is to gather information about farming requirements, government policies and supporting measures, and how these policies affect households.

Interviews: Perform interviews with representatives of farmer organizations, farmers, agricultural specialists, and government authorities. These interviews aid in raising awareness of the efficacy of supportive measures as well as the actual application of government policies. Recorded the interviews and prepared a list of relevant questions beforehand to ensure reliable data analysis.

To have a firsthand look at farming methods, a field visit was made to the chosen rural areas of Kannur District. This field visit helps to examine infrastructure, agricultural operations, and the effects of governmental regulations.

4. Analysis of Statistics

Used statistical tools to analyse the information gathered from questionnaires and surveys. The Likert scale, correlation analysis, and descriptive statistics make up the analysis.

4.1 Policy Analysis

Apply a framework for policy analysis to examine pertinent government policies, programs, and auxiliary measures. Evaluate these policies' goals, layout, execution, and results. Compare these with the survey's results.

5. Review of Literature

5.1 Role of Agriculture in Rural Livelihoods

Agriculture remains a critical source of employment and income for rural households in India. Studies indicate that sustainable agricultural practices are essential for ensuring food security and improving livelihoods (Kumar & Singh, 2020). The reliance on agriculture necessitates effective government policies to support farmers and promote sustainable practices (Chakraborty, 2019).

5.2 Government Policies and Sustainable Agriculture

Government initiatives play a pivotal role in promoting sustainable agriculture. Programs like the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) and the National Mission for

Sustainable Agriculture (NMSA) aim to enhance productivity while ensuring environmental sustainability (Gupta et al., 2021). These policies provide financial support, technical guidance, and infrastructure development to farmers (Rahman, 2020).

5.3 Challenges of Unsustainable Practices

The Green Revolution increased agricultural productivity but also led to environmental degradation, water scarcity, and dependency on chemical fertilizers (Singh, 2018). Research highlights the drawbacks of subsidies that encourage excessive use of resources, resulting in soil health decline and water table depletion (Sharma & Verma, 2020).

5.4 Sustainable Agricultural Practices

Sustainable practices such as crop diversification, organic farming, and integrated pest management are critical for maintaining ecological balance (Sharma et al., 2019). Studies show that these practices not only enhance soil fertility but also improve farmers' profit margins, promoting long-term sustainability (Nair et al., 2022).

5.4.1 The Kerala Model of Sustainable Agriculture

Kerala has emerged as a leader in sustainable agriculture by focusing on organic farming and biodiversity (Ramesh, 2021). The state's policies aim to convert a significant portion of agricultural land to organic, integrating traditional knowledge with modern practices (Thomas & Joseph, 2020). This model emphasizes environmental health and community welfare (Kumar, 2021).

5.5 Integration of Traditional and Modern Practices

Literature emphasizes the importance of blending traditional agricultural practices with modern technologies to enhance sustainability (Rao et al., 2018). This integration can lead to improved resilience against climate change and better resource management (Verma et al., 2020).

5.6 Infrastructure and Institutional Support

Rural infrastructure, including irrigation systems, markets, and extension services, is vital for sustainable agriculture. Studies have shown that enhancing these facilities can significantly improve farmers' access to resources and markets, thereby supporting sustainable practices (Choudhury, 2021).

5.7 Socio-Economic Considerations

Effective policies must address socio-economic disparities within rural communities. Sustainable agriculture should aim for economic viability, social equity, and environmental health, ensuring that all farmers benefit from government initiatives (Patel & Yadav, 2020).

6. Policy Recommendations

The literature suggests that government policies should focus on:

1. Promoting agro ecological practices by providing incentives for sustainable farming.
2. Ensuring transparency in land transactions to protect farmers' interests.
3. Prioritizing water conservation and efficient irrigation technologies (Singh & Sharma, 2021).

7. Remarkable Schemes

7.1 PRADHAN MANTRI KISAN SAMMAN NIDHI (PM-KISAN)

Small and marginal farmers are eligible to receive direct income support of Rs. 6,000 annually in three equal instalments under the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) initiative. Rashtriya Krishi Vikas Yojana (RKVY): This program gives states money to support the development of agriculture and related industries. The program boosts agricultural output, fortifies infrastructure, and encourages creative ventures.

7.2 PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

This crop insurance program protects farmers against crop loss or damage arising out of unforeseen events like attack from pests, illnesses, and natural disasters etc.

7.3 SOIL HEALTH CARD PROGRAM

Farmers are given soil health cards which contain information regarding the nutritional condition of their soil.

7.4 NATIONAL AGRICULTURAL MARKET (E- NAM)

Farmers can obtain better pricing for their production by using the National Agriculture Market (e-NAM), an online marketplace that facilitates the purchasing and selling of agricultural commodities in order to establish a single national market for output.

7.5 PARAMPARAGAT KRISHI VIKAS YOJANA (PKVY)

This program encourages organic farming methods and offers funding for organic input adoption, certification, and capacity building. It seeks to improve biodiversity, soil health, and environmental sustainability.

7.6 YOJANA PRADHAN MANTRI KISAN SAMPADA

This comprehensive program integrates a number of pre-existing initiatives to provide a comprehensive plan for the expansion of the food processing sector. The program's goals are to assist agro-processing clusters, reduce post-harvest losses, and increase value addition.

7.7 PRADHAN MANTRI KRISHI SINCHAI YOJANA - PMKSY

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) is a Government of India project established in 2015 to improve irrigation systems in the country. The project attempts to achieve the "har khet ko paani" (water to every field) goal, therefore enhancing agricultural output and maintaining water conservation.

8. Analysis and Results

Table 1: Satisfaction Level of Government Policies

1	Government Schemes	Strongly satisfied (%)	Satisfied (%)	Dissatisfied (%)	Neutral (%)
2	National Agricultural Market -e NAM	33	27	30	10
3	National Mission For Sustainable Agriculture- NMSA	25	30	23	22
4	Pradhan Mantri Kirishi Sinchai Yojana-PMKSY	40	22	24	14
5	Pradhan Mantri Kisan Samman Nidhi(PM-KISAN)	40	30	17	13
6	Pradhan Mantri Fasal Bima Yojana- PMFBY	35	30	25	10
7	Paramparagat Krishi Vikas Yojana (PKVY)	32	28	25	15

Table 2: Satisfaction Level of Government Policies and Programs Addressing the Marketing and Price-Related Challenges in Farming

Schemes & Supporting Measures	Very Satisfied	Satisfied	Dissatisfied	Neutral
Price Support Scheme (PSS)	40	25	20	5
National Agricultural Market-e NAM	33	27	30	10

Table 3: Government Policies Addressing the Current Farming Requirements

1	Government Schemes	Beneficiaries	Meeting Current Requirements
2	National Agricultural Market -e NAM	60	58
3	National Mission For Sustainable Agriculture-NMSA	55	50
4	Pradhan Mantri Kirishi Sinchai Yojana - PMKSY	62	59

5	Pradhan Mantri Kisan Samman Nidhi (PM- KISAN)	70	68
6	Pradhan Mantri Fasal Bima Yojana -PMFBY	65	56
7	Paramparagat Krishi Vikas Yojana (PKVY	60	55

9. Correlation Coefficient

$$\text{Correlation coefficient} = 42.33 / (9.63 * 10.43) = 0.437$$

The correlation coefficient between "Beneficiaries" and "Meeting Current Requirements" is approximately 0.437, indicating a moderate positive correlation between the two variables.

10. National Agricultural Market -E NAM

e-NAM platform has made significant progress in expanding agricultural trade throughout India as of June 30, 2025. Here are the main points of interest:

- **Integration:** To enable more seamless transactions, 1,389 mandis from 23 states and 4 Union Territories have been incorporated into the e-NAM platform.
- **User Registration:** The site has a strong and growing user base, with over 18.3 million farmers and 253,000 traders enrolled.

- **Trade Volume:** A total of 309.9 million units and 89.6 million metric tons of different items, including as bamboo, betel

leaves, coconut, lemon, and sweet corn, have been traded on the platform. As of December 2023, the total value of this deal is almost ₹3.19 lakh crore

Table 4: PRADHAN MANTRI KIRISHI SINCHAI YOJANA – (PMKSY)

Area Covered (2022-2023)	Area (lakh ha)
Micro Irrigation	
Drip	5.32
Sprinkler	5.70
Total Micro Irrigation	11.2
Other interventions	
Potential Created for Protective Irrigation	0.05

Table 5: Pradhan Mantri Kirishi Sinchai Yojana – (PMKSY)

Year	2022-23	2023-24	2024-25	2025-26
Benefited Farmers	423436	408517	570725	53313

11. Findings

11.1 Degrees of Satisfaction with Government Programs

PM-KISAN and PMKSY: Both programs had a high satisfaction rate of 40%, suggesting that farmers think they are very helpful.

PKVY and NMSA had low levels of strong satisfaction rates (25% and 32%, respectively), indicating that they require enhancements to increase their efficacy.

11.2 Dealing with Issues Associated with Price and Marketing

Price Support Scheme (PSS): 40% of respondents said they were extremely satisfied, underscoring how crucial efficient price support is to farmer profitability. • e-NAM Platform: Due to its success in expanding farmers' access to markets, this program also garnered a high level of satisfaction.

11.3 Fulfilling Present-Day Farming Needs

PM-KISAN: Its substantial impact is demonstrated by the 70% of beneficiaries who stated that their present farming needs are being satisfied.

PMKSY and PMFBY: Both performed satisfactorily, with 62% and 65% of recipients, respectively, believing their needs were met.

12. Correlation Analysis

A somewhat favourable association between the number of beneficiaries and their contentment with present agricultural requirements is suggested by the correlation coefficient of 0.437, which shows that higher satisfaction is a direct result of larger benefits.

12.1 Perspectives on the e-NAM Platform

Trade conditions have improved as a result of the merger of 1,389 mandis across many states. With 253,000 traders and more than 18.3 million farmers enrolled, the site has greatly increased its reach. Its success in increasing agricultural commerce was demonstrated by the fact that the total trade value approached ₹3.19 lakh crore.

12.2 PMKSY Irrigation Techniques

11.2 lakh hectares were covered by micro-irrigation projects, demonstrating a dedication to increasing water use efficiency. The emphasis on protective irrigation is crucial for sustainable agriculture, even though the number of farmers who have benefited has fluctuated over time.

13. Suggestions

1. Enhance Schemes that have received Low Satisfaction ratings

Enhance PKVY and NMSA: To improve their efficacy and farmer participation, conduct assessments to pinpoint particular areas of unhappiness and provide focused improvements.

2. Make Price Support Systems Stronger

Increase Knowledge of PSS: Expand the Price Support Scheme (PSS). Education and outreach are needed to ensure that more farmers are aware of and make use of it, which will increase their profitability.

3. Encourage the Use of e-NAM

Expand Training and Support: To optimize market access and trade opportunities, conduct training sessions for farmers on the e-NAM platform.

4. Track and Assess the Impact of the Program

Frequent Feedback Systems: To regularly evaluate the effects of government programs and modify them in response to current demands, establish regular feedback loops with beneficiaries.

5. Pay Attention to Irrigation Efficiency Invest in Infrastructure

To guarantee sustainable water use and higher crop yields, increase funding for protective irrigation techniques and micro-irrigation systems.

6. Use Data to Support Decision-Making connection Insights

To find and duplicate effective tactics in other programs, leverage the positive connection between recipients and satisfaction.

7. Encourage Involvement in the Community

Farmer cooperatives should be encouraged. Encourage the establishment of Farmer Producer Organizations (FPOs) to improve access to resources and collective bargaining strength. 8. Adapt Programs to Local Requirements Customize Programs: Modify government programs to take into account the particular difficulties and farming methods of various Kannur District regions. By putting these recommendations into practice, Kannur

District farmers may be more satisfied and government agriculture policies may be more effective overall.

14. Conclusion

These policies, coupled with evidence from rural households in Kannur District, demonstrate the positive impact of government interventions in supporting Indian farmers and meeting their farming requirements. However, continuous evaluation, feedback from farmers, and periodic policy revisions are necessary to ensure the effectiveness and sustainability of these measures.

The analysis of agricultural policies and their effects on rural households in Kannur District underscores the importance of efficient interventions to meet the increasing demand for safe and nutritious food sustainably. A correlation coefficient of approximately 0.437 indicates a moderate positive relationship between the number of beneficiaries and the ability to meet farming requirements, suggesting that as the number of beneficiaries increases, rural households are better equipped to fulfil their agricultural needs. Key factors influencing productivity include the National Agricultural Market (e-NAM), which has integrated 1,389 mandis across 23 states and 4 Union Territories, facilitating smoother transactions and promoting increased trade volumes. Additionally, the onboarding of 3,510 Farmer Producer Organizations enhances collective farming efforts. Micro irrigation initiatives have also improved water efficiency, while the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme has disbursed over ₹3.46 lakh crore to over 94 million farmers, ensuring financial stability. However, continuous evaluation and qualitative insights from farmers are essential for adapting these policies effectively. Overall, the evidence highlights the significant role of government interventions in supporting farmers, but a multifaceted approach incorporating both

quantitative and qualitative data will lead to better outcomes for rural households in the future.

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SDG 2030: INSIGHTS FROM INDIA FOR A SUSTAINABLE FUTURE

As the world races toward the United Nations' 2030 deadline, India stands at a critical crossroads in the journey toward dignity, peace, and prosperity. SDG 2030: Insights from India for a Sustainable Future provides a powerful examination of the nation's pursuit of the 17 Sustainable Development Goals. Bridging the gap between academic research and practical action, this book is an essential guide for anyone looking to understand or contribute to an inclusive and sustainable tomorrow.

Dr. K. K. Somasekharan, the Principal of Navajyothi College, Cherupuzha, brings over 30 years of distinguished academic and administrative experience to this volume. Throughout his prolific career, he has served numerous prestigious higher education institutions across Kerala, contributing significantly to the state's academic landscape.

A scholar at heart, Dr. Somasekharan holds a PhD in Economics. His extensive research background is reflected in his numerous publications across reputed journals and books, focusing on socio-economic development. This volume, SDG 2030: Insights from India for a Sustainable Future, represents his continued commitment to fostering academic discourse and inspiring collective action toward a more inclusive and sustainable world.



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