



# **Role of Women in Agriculture with Special Reference to WSHGs**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Women's Self-Help Groups have significantly transformed the agricultural landscape and emerged as an influential platform for empowering women by providing them with financial independence, skill development, and improved access to agricultural inputs. Through collective action, women engaged in diverse activities, including sustainable farming, organic production, dairy farming, and agri-based entrepreneurship. The present study focuses on Sarlanji, a rural village in Lanjigarh Tehsil in the Kalahandi District of Odisha state using the data were collected by means of focused group discussions, and descriptive approaches were employed for interpretation. The results demonstrated a substantial transformation within the women's community particularly in involvement in agricultural practices, increased in finance, education, capacity building, empowerment, and entrepreneurship, decision-making, and support males in income generation, reduced in distressed male migration and increased in child education. This underscores the

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central role of women in rural agricultural transformation and the achievement of five sustainable development goals: eradicating hunger, promoting gender equality and women's empowerment, fostering inclusive and sustainable economic growth, and ensuring sustainable consumption and production.

**Keywords:** *Self-help group; micro finance; company; women empowerment; agriculture; sustainable development, Kalahandi.*

## 1. INTRODUCTION

India is still an agricultural country; according to the Economic Survey of India, (2024), 42.3 percent of the population has a share of 18.2 percent in the country's GDP at current prices. Additionally, the proportion of women among total agricultural workers, which had been increasing, declined from about 30% in 2001 to about 37% in 2011. Whereas, the female workforce in Odisha's agriculture was 43.8% in 2018-19, rising to 57.2% in 2019-20 (Economic Survey of Odisha, 2022-23). The role of women in different farm activities varies; females are generally engaged in helping males to carry out simple farm operations.

Agriculture has long been the backbone of rural economies, and women play an indispensable role in this sector, contributing significantly to crop production, livestock rearing, and food security. However, despite their substantial participation, women often face systemic challenges, including limited land ownership, restricted access to credit and resources, and inadequate representation in decision-making processes.

Microfinance, a tiny source of income for the poor to come out of the poverty line, and a means to arrange funds for the poor and women entrepreneurs to start their business and to push it further. Since banks' outreach to small borrowers below Rs. 25,000 has continuously declined to a great extent, the microfinance institutions have emerged as a key financial service provider to the poor and women entrepreneurs who have been unable to achieve their goals. In India, nonprofit organizations (NPOs) have taken the initiative to facilitate the availability of money to the micro-entrepreneurs. NPOs facilitate the formation of Self-Help Groups (SHGs) and link them with formal banks, and this accounts for 70% of microfinance in India, supported by the National Bank for Agriculture and Rural Development (NABARD, 2016).

To bridge this gap and empower women economically and socially, the concept of

WSHGs has been introduced throughout India, including Odisha. SHGs are informal groups of women who unite to pool savings, access credit, and engage in income-generating activities. Over the years, WSHGs have evolved into a grassroots tool for social mobilization, financial inclusion, and rural entrepreneurship. Empowering women enables them to make informed choices and intelligent decisions on issues that affect their lives. It allows women to recognize their constitutional and legal rights, as well as the opportunities available to improve their circumstances. Specifically, empowerment helps women develop as workers, citizens, and individuals. It acts as a powerful tool for them to achieve upward social and economic mobility and enhance their status in society.

Over the years, the Women Self-Help Groups (WSHGs) have significantly transformed the agricultural landscape. WSHGs have emerged as a powerful platform for empowering women by providing them with financial independence, skill development, and improved access to agricultural inputs. Through collective action, women are now involved in diversified activities, including sustainable farming, organic production, dairy farming, and agri-based entrepreneurship. The spatial distribution of WSHGs across Kalahandi highlights their impact on different agro-climatic zones, influencing productivity and rural livelihoods. These groups have contributed to an increase in the adoption of modern agricultural techniques, better credit accessibility through microfinance initiatives, and improved market linkages. Furthermore, the role of WSHGs in promoting gender-inclusive agricultural policies and fostering resilience among rural women cannot be overlooked. Kalahandi, once infamous for hunger and poverty, has seen significant development over the years, but its agricultural sector remains heavily dependent on small and marginal farmers, a majority of whom are women. In Kalahandi, WSHGs have played a transformative role in empowering rural women. By facilitating credit, skill training, and market access, these groups have enabled women to move from

subsistence farming to micro-enterprise development, thereby strengthening the agricultural value chain. Spatially, these groups are spread across blocks and villages, each reflecting a unique pattern of participation, economic activity, and success.

## 2. LITERATURE REVIEW

A self-help group (SHG) is a small, unofficial organization of people who get together willingly to achieve common objectives. They are usually from similar socioeconomic groups. SHG members consistently save money, combine it, and use it to cover expenses, launch lucrative businesses, and become entrepreneurs. Many scholars have explained the concept. Mishra, (2014) explained the concept of Self-Help Group, which has its roots in rural Odisha and has been mooted among rural and semi-urban women to improve their living conditions. The impact on livelihood improvement and the lifestyles of poor women has empowered them at various levels, not only as individuals but also as members of the family, community, and society as a whole (Mallick & Nanda, 2024). SHGs have enhanced the status of women as participating decision-makers and beneficiaries in the democratic, economic, social, and cultural spheres of life and sensitized the women members to take an active part in the socioeconomic progress of rural areas (Sahoo, 2021). Mishra, (2015) examines the production and exchange relations in rice production systems in rain-fed agriculture. The drought has a large-scale impact on rural women and small landholders (Swain, 2016). Meher, (2019) analyzed the nature and sources of consumption baskets of the rural women and their coping mechanisms in the face of frequent droughts and seasonality. Access to land not a major constraint to women farmers, for them land insecurity is lack of control and rights over land and environmental threats (Balasha et al, 2024). In a study (Yasmin & Srinivas, 2020) designed to assess the impact of the MGNREGA scheme on the livelihood of the people, the significant impact of the MGNREGA scheme in terms of ensuring food security and purchasing power was noted by Meher, (2019). Mishra et al. (2024) explained that the widespread condition of gender disparity may be attributed to a lack of gainful employment and fixed wages with a regular source of livelihood. Hajam et al., (2024) identified fund availability, fund utilization, socio-economic development, poverty levels, low wage rates, migration, physical setting, and lack of official staff as the factors affecting the performance of

centrally sponsored schemes. Srikanth et al., (2022) examine the major factors influencing the non-performing loans (NPLs) of the Self-Help Group-Bank Linkage Program (SHG-BLP) in India at both macro- and micro-levels. Women need capacity building and training for operational simplicity, better accessibilities, wider outreaches, emphasis on women's empowerment, and availability of a wide range of credit and non-credit services (Mishra, 2014). Sahoo et al., (2017) have tried to investigate the status of the financial inclusion of tribal people in tribal concentrated districts, Panda et al., (2013). The concept of "differentiated citizenship" is useful to understand the situation of tribal communities in Odisha, with a focus on women. Pradhan & Munda, (2018) focused on sustainable development, which largely depended on MSMEs rather than on big industrial hubs. Climate change is a major problem faced by various sectors today, particularly agriculture. Farmers in Indonesia, threatened by climate change, must be able to make sound decisions if they are to survive (Antriandarti et al., 2024). Women's participation in agriculture (WEA) has been shown to reduce economic disparity in southern and western Africa while increasing it in central and eastern Africa, according to Akpa et al. (2024). Women farmers continue to play a leading role in the mainland's agriculture sector despite several barriers, such as poor customary tenure, inadequate resource allocation, limited or no access to agricultural extension services, and unfavourable policy and implementation that frequently restrict their productivity, however, their potential is still far from being realized (Adebayo & Worth, 2024). According to Quisumbing et al., (2023), women's empowerment in agriculture and innovations is emerging. González-Hidalgo & Cabana Iglesia, (2025) highlight the five roles of women as follows: women as impacted by wildfires, women as holders of particular knowledge and perceptions, women as firefighters, women as caregivers, and women as setters of fire. Women's empowerment in agriculture and a reduction in the gender gap in empowerment significantly increase production efficiency as expected (Anik & Rahman, 2020). The level of cosmopolitaness, leadership, membership, mobility etc. found to be satisfactory to some extent (Senapati & Mukhopadhyay, 2024). SHGs have emerged as a powerful tool to alleviate poverty and women's empowerment in the rural economy (Mishra, 2014). Gender equality and women's empowerment influence diet, nutrition,

& food, along with life satisfaction, and children's education (Myers et al, 2023). The output of product marketing remains a great challenge for all the producer companies (Pustovoitova 2018). The motivations and obstacles facing women entering the fields of agriculture and horticulture in Russia have an impact on the Women's Agricultural Education (Teharlev Ben-Shachar & Novick, 2024); the agricultural training has a great impact on Jewish women pursuing agricultural work in proximity to the land. Women's participation in SHGs has enhanced self-confidence, self-efficacy, and self-esteem, enabling them to move freely for work and other activities (Basak & Chowdhury, 2024). There is evidence that SHGs empower women economically and may potentially change the dynamics around agricultural decision-making and control of resources within the household (Raghunathan, 2019). Women played a chief role in contributing to the efforts for existence and attaining their position in the rural economy and the widespread national struggles (Morkus-Makhoul, 2024).

## 2.1 Objective

The study aims to identify the role of women in agriculture, empowerment, and sustainability with reference to Women Self Help Groups in Kalahandi district of Odisha.

## 2.2 Data & Methodology

The data used for this study are from primary and secondary sources. The primary source data includes the agricultural activities of different WSHGs functioning in the villages, including their management and conflict resolution. These data are collected from the ten WSHGs, one SHG group and one company formed by these group through Focused Group Discussions (FGDs) with the members of the group. The claim of their activities was cross-checked with the field visit. The secondary sources data includes the climatic conditions and soil conditions, which are collected from the District Statistical Abstract of Kalahandi District. Descriptive methods were used as this method supports trends, patterns, and relationships analysis of the functioning, management, and activities different of the WSHGs working at the study village.

## 2.3 Study Area

Sarlanji is a rural village in Lanjigarh Tehsil in the Kalahandi District of Odisha State, India, located at latitude: 19.9080° North and longitude: 83.1440° East. It is 6 km North of the District headquarters, Bhawanipatna, and 332 km from the State capital, Bhubaneswar. The village is agriculturally based and mostly dominated by the tribal population.

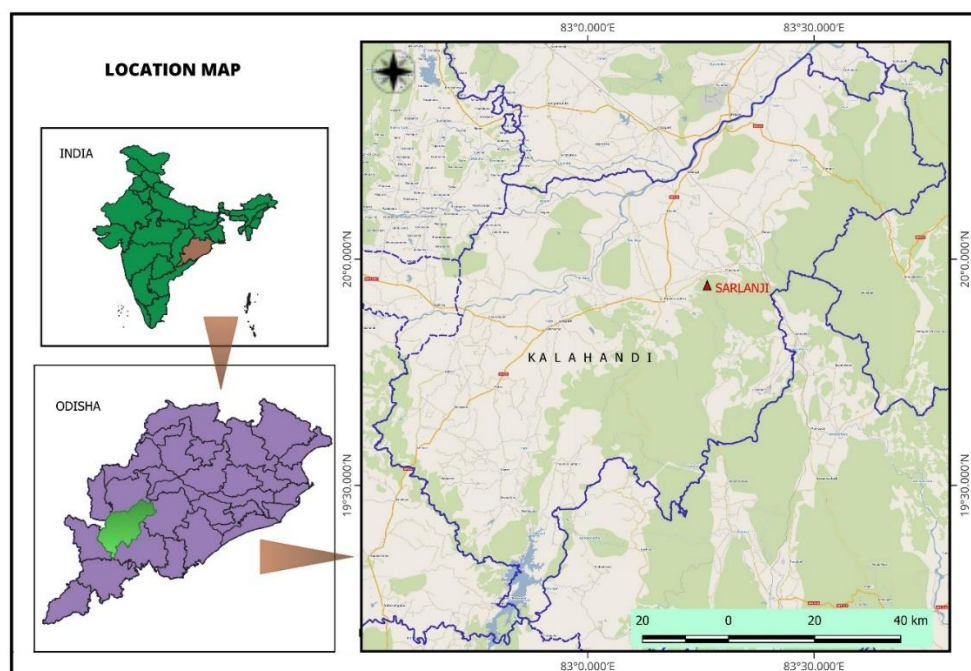


Fig. 1. Study area map

The terrain is mostly undulating, with gentle slopes and patches of forested hills, and a tropical climate with distinct summer, monsoon, and winter seasons. average annual rainfall: ~1100–1300 mm. The temperature ranges from 10°C in winter to 42°C in summer. The climate supports rain-fed agriculture, with a heavy reliance on the monsoon season. The village is surrounded by mixed dry deciduous forest and cultivable plains, suitable for seasonal crops.

The predominantly red and lateritic soils, moderately fertile. The water sources are seasonal streams, wells, and some bore wells. Surrounded by scattered forest patches offers minor forest produce and firewood. Minor fauna, local birds, and traditional crop varieties like paddy, millet, and pulses.

The population of Sarlanji village is mostly comprised of Scheduled Tribes and Scheduled Castes. Primary Livelihood, mostly focused on agriculture, is the mainstay, with women participating extensively in farm and non-farm activities. The main crops are Paddy (Kharif), pulses, millets, and some vegetables (Rabi). Women Self-Help Groups (WSHGs) are actively engaged in agriculture, kitchen gardening, goat rearing, and collective farming. Education and health facilities exist, but access remains limited, particularly for women. Seasonal male migration leads to increased feminization of agriculture.

### 3. RESULTS

#### 3.1 Structure of WSHGs

The flowchart in the image represents the hierarchical structure of a Self-Help Group (SHG) organization from Sarlanji Village. It outlines the chain of command from the CEO of the company down to the individual SHGs, including the names of presidents and secretaries responsible for each unit. Below is a detailed explanation of the structure.

This flowchart illustrates the administrative framework of Self-Help Groups (SHGs) functioning under central leadership in Sarlanji Village. The organizational structure promotes grassroots empowerment, decentralization, and community-led development. It fosters leadership among women, as evident from the positions held across the chart.

1. CEO of the Company: She is at the top of the organizational structure. Her responsibilities

likely include overseeing the entire SHG network, ensuring operational efficiency, implementing policies, and coordinating with stakeholders. As the CEO, she guides strategic direction and mentors SHG leaders.

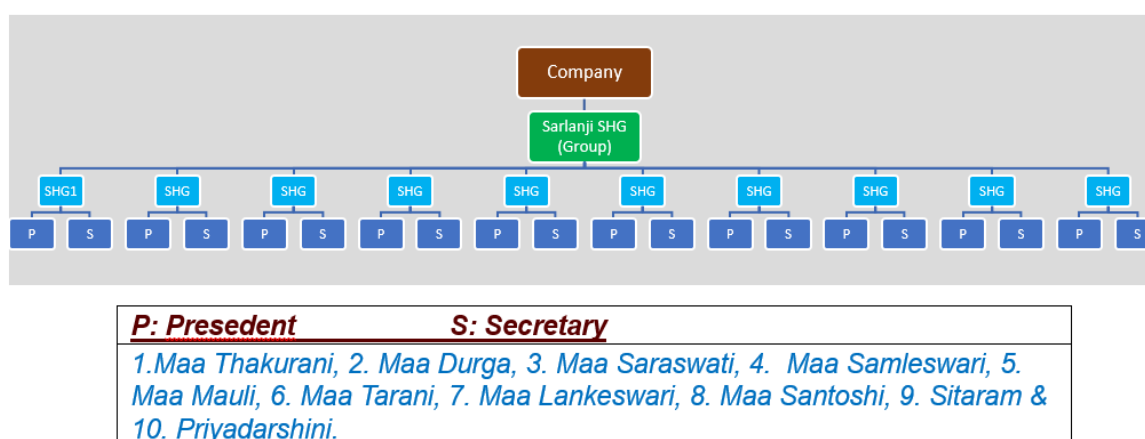
The CEO ensures financial stability with financial oversight and strategic leadership of the SHG company. They oversee budgets, manage funding sources, approve expenses, and ensure that all financial practices are transparent according to regulations. They may also coordinate with banks, donors, or government schemes for financial support. The role and responsibility as CEO are Operations Management, Team and Member Empowerment, Compliance and Governance, Monitoring and Evaluation, Innovation and Development.

#### 3.2 SHG Group of Sarlanji Village

The SHG network is centralized under the group umbrella of Sarlanji Village. This group functions as the main node connecting the CEO to the ground-level SHGs. It indicates a structured and collective organization of multiple SHGs that work towards common economic, social, and developmental goals.

The Detailed Structure of Individual SHGs: the President and Secretary play key leadership roles to ensure the smooth functioning of the group. The role and responsibilities of the President is to Leads the group (Presides over meetings and guides discussions), Represents the group (Acts as the spokesperson when dealing with banks, NGOs, or government departments), Ensures discipline (Maintains order and ensures rules are followed), Encourages participation (Motivates members to attend meetings and contribute actively) and Approves decisions (Helps finalize group decisions, especially related to savings, loans, or new activities).

Secretary of the SHG is and responsibility is to Maintains records (Keeps track of minutes of meetings, attendance, savings, loans, and other group documents), Communicates (Informs members about meetings or decisions and communicates with external organizations), Collects money (Helps collect savings or loan repayments from members and maintains records), Coordinates activities (Works with the president to organize training, events, or group activities), and Supports members (support resolve issues and supports group members as needed).



**Fig. 2. Management structure**

Both roles are usually chosen from within the group, and members often rotate responsibilities after a certain period to ensure everyone gains leadership experience. Under the Sarlanji SHG Group, multiple SHGs operate, each with its President and Secretary. Here's a breakdown of each SHG and its leadership:

### 3.3 Management of WSHGs

Each group generally consists of 10 to 20 members who meet regularly to save money, discuss issues affecting their lives, and support one another. These savings are pooled together to create a fund from which members can borrow for personal and entrepreneurial needs at a minimum interest rate. This practice not only fosters financial discipline but also builds confidence & independence among members.

WSHGs operate democratically, electing leaders like a president, secretary, and treasurer to manage group affairs. Meetings are conducted weekly to review savings, loan disturbances, & discuss development activities. Proper record-keeping and transparency are essential aspects of group functioning.

One of the most powerful aspects of WSHGs is their role in empowering women. Through training, exposure visits, & interaction with institutions such as banks & government agencies, members gain knowledge, improve their livelihoods, & contribute to the well-being of their families & communities. If any dispute arises, the same will be solve through Internal Discussion (The first step is to hold a group meeting where the issue can be discussed openly and respectfully. Members should be

encouraged to express their concerns calmly), Follow Group Rules (Refer to the SHG's bylaws or rules, which usually include guidelines on how to handle disputes. This helps ensure fairness and consistency), Training in Conflict Resolution (Members can undergo basic training in communication and conflict resolution to avoid future issues) and Record Keeping (Any decisions or resolutions should be documented in the group's records for transparency).

Every year, there was an Annual General Meeting (AGM). In this AGM Meeting, there will be a discussion about the income-expenditure and profit & loss.

### 3.4 Activities of WSHGs

Field preparation is a crucial first step in the farming cycle to ensure healthy crop growth & optimal yields. It typically includes the following steps,

1. Clearing The Land: Removing weeds, old crop residues, stones, & debris. Sometimes cutting or burning shrubs in fallow fields.
2. Levelling: It Smooths the surface for uniform irrigation & planting. It helps reduce water runoff & soil erosion.
3. Adding Soil Amendments: Applying lime, manure, compost or fertilizers based on soil test results.
4. Irrigation Setup: Preparing furrows, drip lines, or sprinkler systems depending on crop & water availability.
5. Techniques: They used for their agriculture activity Tractor, Rotavator & some traditional & modern techniques.

**Table 1. This table shows the seasonal crop patterns, yields, & production**

Season	Crops grown	Area (in acres)	Production (in tons)	Total Cost of Production (in Rs.)
Kharif (June-Oct/ Nov)-irrigated	Coriander leaves, Onion, cucumber,	0.60	1.4	30,000.00
	Lady's finger	0.30	0.70	90,000.00
	Garlic	0.20	0.60	32,000.00
	Tomato	0.30	0.80	38,000.00
	Amaranthus leaves	0.10	0.35	13,000.00
	<b>Total</b>	<b>1.50</b>	<b>2.45</b>	<b>2,03,000.00</b>
Kharif (un-Irrigated)	Bitter Gourd, Chilli	0.70	5.80	6,000.00
	Brinjal	0.50	1.50	26,000.00
	Cucumber	0.30	2.00	2,50,000.00
	Bottle Gourd	0.50	5.00	75,000.00
	<b>Total</b>	<b>2.00</b>	<b>14.30</b>	<b>4,11,000.00</b>
Rabi (Nov-March)-Irrigated	Spinach leaves, fenugreek leaves, Bitter gourd, brinjal, lady's finger, cabbage, Moong, Hyacinth Bean	0.10	8.50	1,15,000.00
	Yellowgram	0.40	0.25	1,30,000.00
	Pigen Peas	0.30	0.80	90,000.00
	Blackgram	0.30	0.75	1,50,000.00
	<b>Total</b>	<b>2.00</b>	<b>10.30</b>	<b>4,85,000.00</b>
Zaid (April-June)	Sun flower	0.30	1.50	2,40,000.00
	Watermelon	0.20	7.00	1,75,000.00
	Cucumber	0.20	6.00	5,00,000.00
	Onion, yard-long bean, beans, radish, radish leaves & pumpkins.	0.80	10.00	1,10,000.00
	<b>Total</b>	<b>1.50</b>	<b>24.50</b>	<b>1,25,000.00</b>
Annual Crop (like Sugarcane)	-	-	-	-
	<b>Total</b>	<b>00.00</b>	<b>00.00</b>	<b>00.00</b>
<b>Grand Total</b>				<b>12,24,000.00</b>

**Table 2. Represents the various types of fish cultivated by SHG**

S. No	Fish Name	Area (Acre.)	No. of ponds	Total Production (Kg.)	Total Cost of Production (in Rs.)
1.	Rohu	7.5	2	5000	11,40,000.00
2.	Catla	3	1	560	67,200.00
3.	Tilapia	4	1	750	90,000.00
4.	Mural Fish/Snakehead Fish	8	1	850	1,02,000.00
5.	Prawn	5	2	243	53,400.00
6.	Small Fish (Patrajhuri)	7	1	360	54,000.00
<b>Total</b>					<b>15,06,600.00</b>

### 3.5 Agricultural Activity

They do their agriculture in all three seasons, i.e., January-June, July-September, and October-December. During January-June, mainly vegetables like lady finger, cucumber, brinjal,

yard long bean, bitter gourd, pumpkin, onion leaves, amaranthus leaves, sunflower, watermelon, hyacinth bean, etc. are grown. During July-September, mainly vegetables like brinjal, tomato, radish, corn, coriander leaves, bitter guard, etc. are grown. And, lastly, during



October-December, vegetables that are grown are beans, cabbage, yard long bean, tomato, leafy greens, radish, coriander leaves, spinach leaves, and fenugreek leaves. Each group cultivates on an average of 1.5 to 2 acres of land. Women mainly do agricultural activity for two hours in the morning and three hours in the evening, total they work a total is five hours a day. Each group follows traditional methods as well as a few scientific methods for their agricultural activities and makes a profit of Rs. 10/- per 1kg from each crop produced. Surplus produce, if any, or the unsold products are consumed by the member, which helps them to manage food and nutrition at the household level. They were able to gather funds from Mati Putra Women's Farmer Producer Company in 2018. SHG approach to Nab Kishan Fund, NABARD & DAPTA NGO in case they require a higher amount.

The SHGs use the members' land, and sometimes they take a lease from other farmers for cultivation. They prefer the lowland for this purpose. The agricultural activities are mainly done in Kharif, Rabi, and Zaid seasons. The farming practices are mainly traditional and limited to mechanization. The main sources of water are dams, farm ponds, wells, and borewells etc. They use traditional methods for their land like Dhan & Bund Farming. Soil nutrient management, like Farmyard manure (cow dung, compost), limited chemical fertilizers are used due to cost, crop rotation (paddy-pulses) to maintain fertility. Most of the village males are migrating as labor to different parts of the country, leaving women to manage the farms. Nearly one-fourth of the fieldwork (sowing, weeding, harvesting) is done by the females, and for the rest, they depend on males. The pest & weed control are done with traditional methods like (Neem-based pesticides), Manual weeding (women's labor-intensive role). However, they are facing increased pest attacks due to climate variability. Institutional Support like Government Schemes: KALIA Scheme (financial aid to small farmers), MGNREGA (watershed development, farm pond digging). Odisha Millet Mission (promotes nutri-cereals). SHGs & Cooperatives: Women's SHGs engage in seed banks, organic farming. Farmer Producer Organizations (FPOs) for collective marketing. However, many challenges are faced by the WSHGs which including frequent droughts & erratic rainfall, low productivity due to poor irrigation, degraded soils, difficulties in accessing the market, dependence on middlemen, and poor road connectivity.

Maa Lankeswari WSHG, with 12 members, is cultivating fish, and the average size of the fishpond is 7-8 acres. The WSHG first introduces fry into the water in July and August, followed by the sale of adults in April, the average profit received from the sale of fish is approximately Rs. 50 per kg. The details of fish cultivation are mentioned in Table 2.

### 3.6 Marketing

Earlier, vegetables and fish were sold in the company's authorized store in the Bhawanipatna town. After 3 years, as the rent of the store was increased by the owner, unable to bear the rent, the store was closed. Nowadays, produce is sold in the same market to the retailer, or in many cases, the middleman comes to the villages to procure the produce. Apart from that, yellow gram, moong, Pigeon Peas, black gram, etc, are processed and the same are also sold at the market.

## 4. DISCUSSION

The case study of Sarlanji village provides a micro-level perspective on the vital role of women in agriculture and the influence of Women Self-Help Groups (WSHGs) in transforming rural livelihoods. The women of Sarlanji are not passive participants but active contributors to agricultural production from land preparation to sowing, weeding, harvesting, and post-harvest processing, their involvement is both intensive and indispensable.

WSHGs have emerged as powerful instruments of rural development and women's empowerment. WSHGs enhance financial independence and improve women's participation in agricultural decision-making, access to modern technology, training, government schemes, and market linkages. Through capacity-building initiatives and microfinance, WSHGs enable women to take leadership roles in agriculture and related enterprises, which helps to transform traditional gender roles. Women play a vital role in agriculture, contributing significantly to food production, livestock management, and natural resource conservation. They are involved in every stage of agricultural activity from sowing and weeding to harvesting and post-harvest processing. However, their contributions often go unrecognized due to gender biases and socio-economic barriers. From a spatial perspective, mapping the effectiveness of WSHGs across



hamlets within Sarlanji reveals that clusters with active group functioning tend to exhibit higher levels of agricultural innovation and participation. This underscores the importance of scaling successful group models across the village through replication, peer learning, and extension services.

Despite limited access to land ownership and formal financial systems, women in Sarlanji have demonstrated remarkable resilience. A large proportion of agricultural work in the village is sustained by female labour, especially in small and marginal farm households. This labour, however, often remains invisible in official records and undervalued in economic terms. The creation and growth of WSHGs in the village have begun to shift this dynamic by empowering women with organizational support, access to credit, and platforms for skill development.

The spatial distribution of WSHGs in Sarlanji, though limited in number, has shown promising signs of impacting women's roles in agriculture. Groups such as the Maa Durga WSHG and Savitri Mahila Samiti have enabled women to undertake joint farming ventures, share inputs, and collectively market their produce. The WSHGs have also become instrumental in availing government schemes, facilitating training programs in organic farming, and promoting income-generating activities such as poultry, goat rearing, and vegetable cultivation.

Financial services provided by SHG, consistent functioning and usefulness of training have a positive and significant association with economic and socio-cultural empowerment of SHG women (Ghosh et al., 2023), it is also ascertained that Women involved in WSHGs have reported increased decision-making power in the home and farming-related activities. Participation in group meetings and exposure to training sessions have enhanced their knowledge about sustainable agriculture, irrigation techniques, and crop diversification. The resulting socio-economic benefits include better food and nutritional security, improved household incomes, and increased school attendance among children. The entrepreneurial qualities of SHG women improve the likelihood to accomplish and withstand the micro-enterprise successfully and productivity (Ghosh, 2015). Women have emerged as a transformative grassroots movement, empowering rural women economically and socially. These groups foster collective action, improve access to credit and

technology, and enhance skill development. The social status of the SHG group is women empowerment, unity among them, economic empowerment, food habits/ dressing change, mobile & internet use. The study of the girl child was a great problem; they restrict girls after the Matriculation or Intermediate level. Nowadays, families support their girls with their education, which results in an increase in enrollment in higher education and reduced child marriages. Family members are very cooperative nowadays. Female farmers enter the agricultural sector to improve their families' economic conditions and ease their husbands' burden (Antriyandarti et al., 2024). The distress seasonal migration is a survival strategy of the people, it does not add in the current income or in the standard of living of the migrants (Meher, 2019). However, our study shows there is little reduction in migration but reduction in the distressed male migration.

However, challenges persist; the geographical isolation of Sarlanji, poor transport connectivity, and poor irrigation facilities pose hurdles to agricultural advancement. Additionally, WSHGs face barriers such as inadequate market linkage, irregular savings habits, and a lack of digital literacy. For these groups to realize their full potential, there needs to be targeted support from government and non-government stakeholders. During the summer water shortage problem, climate change, pollution, illegal, unreported, & unregulated fishing, aquatic disease & parasites, high production cost, weak regulations & management, conflict over resources. In some instances, due to a personal enemy, miscreants in different ways are affecting fish production, which needs to be addressed.

## 5. CONCLUSION

In conclusion, women in Kalahandi are not merely agricultural labourers but agents of change. Through their resilience and collective strength within WSHGs, able to transform the agrarian landscape. Recognizing, supporting, and scaling this transformation is essential for achieving inclusive and sustainable rural development in the region. With consistent policy backing and community engagement, the women of Kalahandi can lead a new era of agricultural innovation and rural empowerment. The case study of Sarlanji village affirms that women are at the heart of rural farm transformation and are addressing five sustainable development goals, which include: Goal 2. End hunger, achieve food security and improve nutrition, and promote

sustainable agriculture. Goal 5. Achieve gender equality and empower all women and girls, Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, Goal 12. Ensure sustainable consumption and production patterns.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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