

PROMOTING WOMEN-CENTRED APPROACHES TO RURAL DEVELOPMENT

An Assessment Of Project Designs In Jharkhand And Madhya Pradesh



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In Jharkhand And Madhya Pradesh**



**Indo-Global
Social Service Society**

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Preface

I am grateful for the opportunity to provide a few words to preface this report.

SCIAF has partnered with IGSSS to promote sustainable livelihoods and communities in India for some years now. As a development 'sector' we have learned that attempting to help individuals, families and communities to increase their production, incomes and assets will be fundamentally flawed if we do not take account of the gender relations between men and women, and the differing needs that women and men, girls and boys, have. Ignoring these differences runs the risk not only of failing to succeed in our efforts to raise incomes and improve livelihoods, but also of further entrenching inequalities between men and women; of further burdening women with additional work, roles and responsibilities without the reward of increased incomes and assets, or control over them.

Yet how best to understand these differences? And how best to influence gender relations in a positive and sensitive way, inclusive of both women and men, to promote equality and harmony? To promote mutual respect and consideration as equals?

This research arose from a chance conversation, comparing different programme methodologies and anecdotal evidence about what seemed to have the greatest and quickest impact. Working together SCIAF and IGSSS were able to recruit a consultant to take a look at these two projects and consider if the initial observations were correct. The research has suggested a more nuanced, context specific conclusion – that each methodology has its own strengths and produces differing results.

It has been a great opportunity to put partnership to work, to take reflections on practice and turn them into research and learning. And it has been an opportunity to promote SCIAF and IGSSS's shared agenda of putting women and gender at the centre of our work. I hope that others find the report useful, and we live up to the commitment to using this learning to improve practice in the future.

Mark Adams

Programme Manager Asia/SCIAF and CAFOD Joint Programme for the Syria Crisis

Executive Summary

In an attempt to improving the lives of the farming community in the tribal belts, IGSSS started two important projects – EASE and PLANT. These two were aimed at increasing the agricultural incomes and providing livelihood support to vulnerable constituencies. Project PLANT focused on reducing the drudgery of farmers with special attention to women. Through “System for Rice Intensification” (SRI), the project aimed to improve the agricultural practices and increase agricultural production keeping in mind diversified agricultural practices. This included cultivation through farmer field schools, establishing seed variety replacement programs for current and for future crops via seed banks, promoting livestock rearing, managing water through farm ponds, earthen ponds and wells. Also, development of micro and small business development such as pickle making and mushroom cultivation.

Project EASE was implemented in 10 villages of Barwah block, Khargone district in Madhya Pradesh which reached 500 farmers. It brought innovative labour saving agricultural machinery/equipment and enterprise and income generation. This project reached 1000 community farmers / family members in 20 villages at Churchu block in Hazaribagh district, Jharkhand. The evaluation of these two projects aimed at understanding the extent to which they have used different approaches giving varying outcomes for gender relations and women’s empowerment and to ascertain if there is a casual link between the approaches and the observed changes in gender relations or women’s empowerment. In the evaluation carried out in the months of August –October 2017, 107 community members were interviewed individually and in groups at the field sites in the two states. The consultant also interacted with several stakeholders in this whole process.

Both projects, through with unique implementation approaches, have immensely contributed to women’s empowerment and gender equality. Project EASE expanded women’s access to technology. It challenged the myth revolving around women that they cannot manage hands on machinery usage or have the capacities to run enterprises. This is a path breaking step which focuses on robust strategies that built confidence among women and gave assurance in the men that women can be equal achievers. If given the right opportunities and access, they can contribute to family income generation and help the family move ahead.

The project PLANT was about changing gender notions related to work. For instance, it broke the stereotype that men are the keepers of knowledge and with know how about finances and that women are worth handling only menial drudgery inducing tasks such as grass-cutting in the fields. This project demonstrated that women are in a better position to negotiate and play a decisive role in agricultural cropping, use of produce, marketing of produce, money management and taking leadership role in the community. This benefits the agriculture and economy of the village, thereby, empowering the community in the long run.

The fallout of the Project EASE was that the enterprise and the agricultural tools remained in the control of a few hands. Thus, there was a risk of widening disparity over the control of resources and knowhow and the earnings at the village level. While this cannot be said universally across the project area, it is evident in one unit of the project where there are pre-existing discomforts over the inequalities between communities. In the project PLANT, the selected families are predominantly from homogenous tribal families where traditionally women have had a larger role to play in the agriculture; however market transitions have changed the scenario a lot.

The future programming would benefit in integrating both the approaches, in a way that it can provide livelihood and enterprise support to those in need of household level security and can also introduce new technologies to those dependent on agriculture. They can learn by observation to improve their household economy and of the village as well, through a strategic multiplier effect. Involvement of Krishi Vigyan Kendra is a robust strategy as it can add immense value to agriculture by introducing new technology with local relevance.

Abbreviations and Acronyms

| | |
|-------|--|
| ARC | = Agriculture Resource Centre |
| BDO | = Block Development Officer |
| CII | = Confederation of Indian Industries |
| EASE | = Enabling Access to Social and Economic Resources |
| FFS | = Farmers' Field School |
| FGD | = Focus Group Discussion |
| GE | = Gender Equality |
| HDFC | = Housing Development Finance Corporation |
| ICDS | = Integrated Child Development Services |
| IGSSS | = Indo-Global Social Service Society |
| IDI | = In-depth Interviews |
| KII | = Key Informant Interviews |
| KVK | = Krishi Vigyan Kendra |
| LFM | = Logical Framework Matrix |
| MDM | = Mid-Day Meals |
| NGOs | = Non-government organisation |
| PLANT | = Provision of Livelihood and Nutrition security for Tribal Families |
| PRIs | = Panchayati Raj Institution |
| SCIAF | = Scottish Catholic International Aid Fund |
| SHG | = Self Help Group |
| SRI | = System of Rice Intensification |
| VDC | = Village Development Committee |
| WHH | = Women Headed Household |
| WEE | = Women's Economic Empowerment |



Background



In the recent times, agriculture in the country has seen dramatic shifts. From changing crop patterns, farm owners and laborers shifting to jobs, increasing suicides, the growing technology, the marketization of seed, only to name a few. All these changes have led to agricultural distress and rising concerns among groups working with farmers and at policy levels. The brutal truth that faces us is that rural and tribal farmers in the country operate on smaller land holdings, on an average, including two or three acres of land. Most agricultural lands are in the interior where it is difficult for information, technology and market services to reach. Often farmers are dependent on word of mouth, from peers, traditional knowledge sources and the private providers of seeds and chemicals for support.

Agriculture in Jharkhand and Madhya Pradesh

Madhya Pradesh is one of the best states in India demonstrating the highest agriculture growth of 18 per cent per annum (2013). It also stood in the top most position in India for producing pulses and oilseeds (2013) and also for record production and procurement of wheat at Minimum Support Prices (MSP) in the year 2011-12. The state's population is dependent on agriculture or agro-related activities for its livelihood. Data on landholding shows that, on an average, one farmer holds 2.5 acres of farm land and, in totality, land holding is 6637 lakhs. With changing times, agriculture no longer remains the primary economic activity of the people and it faces ever growing risks and challenges. In recent years, state policy has shifted its focus on mining and therefore agriculture is rapidly losing its clout as a first choice profession. With economy transiting towards liberalization, the government has encouraged and promoted

commercial production of cotton, soya beans and jatropha, because of which there is a high reliance on chemical farming. This downgrades the fertility of the soil. There are rising trends of debt among farmers, for which they rely on the non-formal credit sources.

Jharkhand, (carved out from Bihar in the year 2000) is an agrarian economy with 80% of its rural population dependent on it. Even though the State is rich in cultivable land resources, with adequate biomass and the forest area enhancing its potential for production of horticulture and forest produce,¹ the agriculture contribution to rate of gross state domestic product (GSDP) is only at 14.0% (FY 2015-16), with an agricultural growth rate of 9.0%.

The topography has affected the overall fertility of the land; diverse agriculture practices have also reduced land productivity. Mostly, the agriculture is rain-fed and there is high soil erosion that prevents the retention of moisture. This has led to poor utilization of the cropped area and low cropping intensity. The cultivable area is estimated around 3.8 million ha but the net sown area is 2.56 million ha and only 12% of cropped area is under irrigation. The total cultivable land in the state is 52% as compared with 55% of the country, but only 43% area of this is under net sown area compared to the national average of 76%. The state as a whole suffers from several critical gaps in agriculture and allied sectors. The low agriculture efficiency is a result of large dependence on paddy as mono crop. The alarming poverty rate is pegged at 46 %, with socially marginalised populations accounting for a much higher rate. Around 3.33 lakhs of the population is a part of the BPL (Below Poverty Line) list (2011-2012)². Malnutrition is high with 61% of the rural children under five years of age being underweight and 73% of rural children, between 6-59 months of age, being anemic. With the late onset of agricultural reforms in the State addressing critical management of soil erosion, water management, soil fertility and promotion of evidenced agriculture, the improvement in in development gains has been rather slow. The carving out of the new state may have provided the needed impetus for improving crop and pulse production, fishing, livestock and forestry, improving infrastructure and technology, improving crop financing and social security measures; however, the delayed nature of reforms may take longer to show results.

Agriculture among tribal communities

Both Jharkhand and Madhya Pradesh have higher percentage of tribal population. Tribal agriculture practices are close to nature, its subsistence based. However due to the pressure, they have given up on traditional 'backward' agriculture to adopt "modern" and "high productivity" practices. These practices have increased dependence on mono and cash crops that have increased their risks to climate change and erratic weather. As they give up their age long practices like reliance of livestock, manual labour, their dependence on help from outside has increased. During drought they have to look out for the employment. Men often migrate to cities in search of work leaving behind women and elderly.

Gender and agriculture

Whenever there is an agricultural talk in the country on the issues of farmers , there is mention of male farmers only, women farmers largely remain absent from the discourse. There is no definition of who a woman farmer is, officially, as well. This shows how gender and agriculture are related and,

¹Jharkhand: Department of Agriculture & Sugarcane Development Agriculture Scenario. <http://www.jharkhand.gov.in/documents/10179/25330/Jharkhand%20Agriculture%20Scenario>

²Report of the Expert Group to Review the Methodology of Measurement of Poverty, Government of India, Planning Commission, June 2014. Cited from <http://niti.gov.in/writereaddata/files/Jharkhand.pdf>

more often than not, in an unfavourable way. Though the current trend shows men are migrating to cities for jobs and women have started taking major responsibilities in the field. But they are still not acknowledged for their labour.

According to the Food and Agriculture Association (FAO)³, women comprise about 43 per cent of the agricultural labor force in developing countries. Women involved in agriculture, however, have lesser education, are constrained by access to knowledge and information channels and lack access to credit and financial services. These barriers among women can affect their purchase inputs, such as improved and quality seeds, appropriate fertilizers and mechanical equipment and returns on investment. FAO in one of its reports suggest that if women globally had the same access to productive resources as men, they could increase the yields on their farms by 20-30 per cent, thereby, increasing incomes and decreasing hunger. Yet, women in agriculture have limited access to agricultural technology, markets and productive resources when compared to men.

The Project

The Indo-Global Social Services Society (IGSSS) works across several states since the 1961 (over 55 years) supporting development programs for establishing a humane social order on tenets of equity liberty and justice, it supports and implements developmental programmes for vulnerable and poor

³FAO



communities and enhancing the capacities of grass root NGOs. It has operations in over 88 districts of India and works on issues such as livelihood, disaster risk reduction, urban poverty reduction, youth development and women's empowerment. IGSSS has been supporting and implementing developmental programmes for vulnerable and poor communities and enhancing the capacities of grass root NGOs and communities to implement and support quality development programmes that empower individuals and communities belonging to the poor, marginalized and vulnerable sections of society, with special focus on women and children. The two projects, EASE and PLANT, are the focus of our comparative study. The projects formulated the approaches for the two projects through a yearlong formative phase that involved a baseline study and a community consultation for the formulation of project strategy and deliverables. The two projects are described in brief as follows:

Enabling Access to Social and Economic resources (EASE)

Enabling Access to Social and Economic Resources (EASE) Project is implemented with the support of HDFC bank in 10 villages of Barwaha block at Khargone district, Madhya Pradesh, with the intention of reducing the drudgery of farmers, with special focus on women, by provisioning innovative labour saving agricultural machinery/equipment along with technical inputs for agriculture, enterprise and technology. Through the project, self-help groups were provided with know-how on technology-based innovation through Agriculture Field Schools. Each Agriculture Field School benefits around 500 marginal farmers, living in the neighbourhood villages, affiliated to the project. The project, in addition, supports 150 women farmers for enterprise development through technology assistance and income generation. Originally conceptualised for three years, the project support was withheld for awhile due to the internal reorganisation of HDFC (the donor) CSR strategy. It has resumed with full strength as on date.



Intervention Theory of Change: Project EASE (Enabling Access to Social and Economic resources) (HDFC)

| Inputs | | Outputs | | Outcomes | | Impact |
|---|--|--|--|--|--|--|
| Financial and Manpower Resources for the implementation Technology and strategy for promotion and maintenance Monitoring and Support for operationalisation | | 1. Promote equipment based agricultural practices and innovation among 500 marginal farmers | | Reducing the drudgery of farmers, especially women farmers through increasing access and use of technology | | Improved quality of life among farmers especially womenw |
| | | 1.1. Participatory rural appraisal survey | | | | |
| | | 1.2. Conceptualise and plan for farmers, especially, women's involvement in agriculture and allied enterprise through community consultations | | | | |
| | | 1.3. Shortlist technology through consultative processes (especially with KVK) | | | | |
| | | 1.4. Support and engage 500 farmers, especially women in the use of technology (75% use them) | | | | |
| | | 1.5. Monitor and track progress on women's efforts | | | | |
| | | 2. Promote enterprise and income generation among 150 farmers, especially women | | | | |
| | | 2.1. Establishment of 10 Agricultural Resource Centres (ARC), one in each village | | | | |
| | | 2.2. Promote dissemination and promotion of new agriculture techniques | | | | |
| | | 2.3. Manage, maintain and rent technology to interested farmers | | | | |
| | | 2.4. Identify and supporting 150 women in owning and managing allied enterprises such as agro processing units | | | | |
| | | 3. Stimulating sustainability through government partnerships | | | | |
| | | 3.1. Build and create effective linkages with government line departments, government extension services and agricultural credit institutions such as NABARD (National Bank for Agriculture and Rural Development) | | | | |
| | | 3.2. Strengthen women's identity as productive agricultural workers | | | | |
| | | 3.3. Enhance access to subsidized loans and benefits for women farmers (75%) through agricultural credit institutions like NABARD | | | | |

Provision of Livelihood and Nutrition security for Tribal Families (PLANT)

The project PLANT, supported by Scottish Catholic International Aid Fund (SCIAF), was a three-year livelihoods programme operational in the Churchu Block in Hazaribagh district in the state of Jharkhand. The project works with the poorest of the poor among the tribal communities (1000 in total, of which 400 are women) in 20 villages with the intention of improving household food diversity and income security.

Theory of change: Provision of Livelihood and Nutrition security for Tribal Families, Churchu Block, Hazaribagh, Jharkhand

| Inputs | | Outputs | | Outcomes | | Impact |
|---|--|--|---|--|---|--|
| Financial and Manpower Resources for the implementation | ➔ | 1) Promote full range of social entitlements for 1000 households, of which 60 households will be women headed | | Tribal Caste communities will have ownership of and manage their community development through collective efforts of the SHG | ➔ | Improved incomes through enhanced persona and community development and land produce |
| Technology and strategy for promotion and maintenance | | a) Focussed group discussions with community to explore situations and needs | | | | |
| | | b) Increase access through community awareness raising and education of households on their social security entitlements | ➔ | | | |
| Monitoring and Support for operationalisation | ➔ | c) Liaise with the respective government departments to promote institutions leadership | | | | |
| | | d) Mobilise villagers in their community's development | | | | |
| | | e) Promote community watch groups for community monitoring of government schemes | | | | |
| | | 2) Promote diverse food cultivation to improve availability of varied food groups within the community | | | | |
| | | a) Provide inputs on specific sustainable agricultural technology (non-machine) | | | | |
| | | b) Promote diversification in crop cultivation | | | | |
| | c) Strengthen common water resources and support through investments for repair and construction of community water bodies | | | | | |
| | d) Support Farmer's Field Schools in 10 villages and seed banks as hub for the demonstration of models and application of new techniques and knowhow | | | | | |

| Inputs | | Outputs | | Outcomes | | Impact |
|---|--|---|---|--|---|--|
| Financial and Manpower Resources for the implementation | ➔ | 3) Promote better eating practices | ➔ | Tribal Caste communities will have ownership of and manage their community development through collective efforts of the SHG | ➔ | Improved incomes through enhanced persona and community development and land produce |
| | | a) Educate community on better nutritious meal practices | | | | |
| | b) Promote consumption of five food groups | | | | | |
| Technology and strategy for promotion and maintenance | ➔ | 4) Increase income after joining SHGs among 400 women | | | | |
| | | a) Form and strengthen women's Self-Help Groups | | | | |
| Monitoring and Support for operationalisation | ➔ | b) Train SHGs in promoting entrepreneurship and support/ manage micro enterprise | | | | |
| | | c) Promote stakeholder consultative processes for improved project implementation | | | | |

Through the project, tribal communities are trained in cultivating diversified crops (two crops in a year at the minimum) and creating irrigation facilities to sustain year-round crops. The project additionally works towards increasing access to food and social entitlements, expanding livelihoods and income generation for women and promoting better eating practices through nutrition education.

Both EASE and PLANT have specific intentions of integrating Gender Equality (GE) and Women's Economic Empowerment (WEE) through agriculture investments beginning from conceptualization, design and analysis to evaluation. It is essential to ascertain and establish that the contribution of the approach resulted in outcomes that have causal linkages to the movement towards women's empowerment and gender equality. The comparison and the contrast in the said two intervention strategies will determine the soundness of the hypothesis, highlight the strengths and weakness of the two approaches and the context in which the models provide the best results. As the project PLANT is in its final year of project cycle, the findings and the theory of change will be made available to redesign the next three year phase in a new location at Jharkhand, beginning in 2017. The findings will also support in advocating for the extension of the Project EASE., in its next phase.



Methodology for the Assessment



Purpose of the assignment

To compare the effectiveness and efficiency on the two agricultural intervention models, EASE (knowledge-skill-technology-markets) and PLANT (knowledge-skill-markets) on changing gender norms and women's position at the household and societal level.

Design of the study

The assessment was carried out using the following steps:

Inception phase

The study team refined the existing log frame conceptualized in the beginning of the project to generate the theory of change. This is an aid to understand the intended approach and the outcomes that it purported to achieve. This theory of change was finalised with the inputs of SCIAF and IGSSS post the inception phase discussions.

Development of Methodology and Tools

The evaluation used a qualitative approach and also depended on the quantitative data available with the project. The overall framework for the gender evaluation was drawn from the tested model that is detailed out in the 'Resource Pack on Gender Transformative Evaluations' edited by Chitageri and Saha (2016)⁴. Based on the TOR (Terms of Reference) for the

⁴Chitageri and Saha (2016). Resource pack on Gender Transformative Evaluations, ISST, 2016

study and the theory of change, the tools were developed using the theoretical framework Women's Empowerment in Agriculture Index (WEAI) and the Gender Parity Index⁵ used by USAID in Bangladesh. The indicators for women's empowerment were largely drawn from the IFPRI⁶ project, an initiative that provides direction on how to translate evidence and insights gained from practice. The WEAI has used a survey design, the current evaluation will be qualitative exploration and hence the tool required reframing the probes to generate qualitative data. The framework was further fine-tuned to align it with the theory of change developed specifically for the two projects. The indicators for empowerment were developed on five major themes: (a) production – input in productive decisions and autonomy in production, (b) resources – ownership of assets and purchase, sale or transfer of assets and access to and decisions on credits and savings, (c) Income – control over use of income, (d) leadership – in groups and other public spaces and (e) time – workload and leisure.

Five villages each were selected in both the states for the study. The sites for the visits were selected by the study team. The villages were selected in such a manner that the entire range of the projects'

activities could be witnessed. Keeping in mind the diversity; small, medium and big sized villages were selected; special attention was paid to include large populace with more households, to facilitate better focussed group discussions. The villages selected were located in varying distances from the main city - close, moderately distanced and far away. In each of the villages, the required number of respondents was identified. While selecting women, it was made sure to include a married woman with her spouse, and in case of single women, it was made necessary to include those who had been widowed as well as differently abled and elderly women above the age of 60 years.

The interviewers gave a sensitive hearing to people from different communities such as ST (Scheduled Tribe)/SC (Scheduled Caste)/OBC (Other Backward Caste), from various spectrums of economic status (including land ownership status). The key informants in the village included a) Influencers/ Village heads/elders b) District Officials of the KVK (Krishi Vigyan Kendra) – The Agriculture Extension Department c) Trainers d) BDO (Block Development Officer) e) NGOs who worked in the same area. The information gathering involved assessing how the project had made changes in the community and, specifically, how it had made changes in the lives of the women in the community.



⁵Feed the future and USAID (2016) Women's Empowerment in Agriculture Index (WEAI). Participant manual. Developed by Feed the Future Knowledge-Driven Agricultural Development Project (KDAD) for U. S. Agency for International Development (USAID).

⁶<http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/127346/filename/127557.pdf>: <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/129719/filename/129930.pdf>:

Prior to the start of the project, IGSSS provided information on the processes and the methodologies used in both the projects. They provided an overview of the process from how the concept was designed and had evolved during the period of implementation.

The data collection was carried out using the following methods-

1) One-on-one qualitative interviews

2) Focus group discussions, key informant interviews and

3) Observations

In total, 49 In-depth Interviews (IDI), 10 couple interviews, 28 Focus Group Discussions (FGDs) and 9 Key Informant Interviews (KIIs) were conducted in the two states. A total of 107 community members were consulted in the preparation of this report. Data generated was of four types: information generated through direct interviews in the form of in-depth interviews and focus group discussions, quantifiable data from structured interviews and records, secondary data drawn from various documents and through observations. The two member study team held debriefing sessions on a daily basis to synthesise the observations and learnings.

A plan with themes was developed to analyze the data. The analysis was based on the five thematic areas that were considered for the tool developed. The subsequent discussion considered the three core questions based on which the overall recommendations are made:

- To what extent do the two projects use different approaches?
- To what extent have the two projects seen different outcomes in terms of women's empowerment and gender relations?
- To what extent is there a causal link between the project approaches and any observed changes in gender relations and/or women's empowerment considering if the outcomes could be attributions and contributions of the project.



General Observations



A. The difference in agricultural contexts and intervention impacts in both projects

The project communities in the two states are predominantly small scale farmers who hold two to three acres of land; the rest being landless farm laborers. In the project EASE areas, it was found that only few farmers have large landholdings. In both the projects, the communities resided near the forest areas and were mostly tribal. The EASE service users belonged to both tribal and non-tribal population; largely because the village selection strategy was based on the list provided by the HDFC, the donor.

The PLANT project funders were inclusive thus it helped the team in selecting the communities that were impoverished and in need. Both the projects selected the areas where cultivation was largely rain fed and, owing to climate vagaries, hence compromised.

The neighbourhood villages, without the interventions as planned in both projects, were largely underdeveloped and did not receive agricultural inputs as did the particular project villages. It was observed that they did not witness similar developments. The visit to the non-intervened areas in the vicinity showed a clear disruption in the continuity of agriculture, which has led to stress in the lives and livelihoods of the community. The dearth of external inputs and limited access to the water bodies has meant that these villages are able to grow only 1 crop a year. Only a few privileged families have access to bore wells which help them in cultivating and reaping the second crop. Such a dismal scene at home leads men from these villages to migrate for work outside, leaving behind the women who end up taking manual and drudgery inducing work in the fields.

B. The diversification and multi-cropping promoted by the project has gained acceptance alongside increased cropping cycles

It is a winning proposition for communities to carry out nutritional agriculture alongside commerce

For years, tribals grew a wide variety of crops that included grams and vegetables such as tomato and brinjal. Because of water constraints, expensive labour and lesser hands at work, tribals have largely given up on the traditional practices.. At the onset of the project, farming in the two project areas was largely rain dependent and resulted in the cultivation of crops one time in a year. Through the project intervention, agricultural cropping in the two project areas saw a phenomenal change. The EASE and PLANT farmers in the tribal belt have diversified produce and now cultivate a range of crops such as cereals, pulses and grams and vegetables. The farmers at Project EASE are now growing chilly, soyabean, wheat, grain, onion, garlic, cotton and pulses,, horse gram, green gram and vegetables.

“Now we are doing fisheries too. We were also provided with knowledge on agriculture, when peas, tomato are to be grown, what techniques to be used, how to make manure from earthworm, how to treat seeds. These techniques are very good and helpful. Even if IGSSS leaves, it has taught us so well, we can continue to do it in their absence.”

(From Lokanpura, Project EASE)

The project PLANT promoted new technology in rice cultivation using SRI (System of Rice Intensification). The SRI approach in cultivation is greatly appreciated in the community but farmers report it as being labour intensive. It is less of a commercial crop and primarily used for home consumption. Rice cultivation is followed by high yielding oil seed production as second crop and vegetables as a third crop. PLANT farmers have diversified to crops such as wheat, pulses, vegetables, onion, cotton, chilli, cotton, soybean and maize.. The diversity is seen in grains with the introduction of wheat (in both states) and millets (in Jharkhand). In one of villages of Project PLANT, a farmer was also storing traditional seeds for future cultivation.

“We are following the process. There is gap between the plants, they grow better now. With IGSSS inputs, we have learnt how to do agriculture with correct technique. Our expenditure is low, our produce is higher” (From couple interview, Belsar, Project EASE)

Another PLANT service women service user shared on how she had changed her cropping practices after being a part of the project as follows:

“It has been 3 years since we have adopted new method of farming. Earlier, we used to use the older ways; we didn't really benefit much from that. We used to get grain for 6 months of the year. But since the time we have started using these new seeds, we gain enough that is sufficient for the entire year”. (From Dhamansaria, Project PLANT)

The change in the approach used in cultivation has been explained by the Krishi Vigyan Kendra officials as follows:

“Earlier it was mono cropping with cultivation of rice crop only. We have been able to change that to some extent, though not in the whole district. Just before rabi (winter) season and after the 90-day cycle for grain cultivation, the farmers have started cultivating nizar (sorbuja). Nizar is an oil producing seed. We have replaced the local nizar (sorbuja) variety with the high yielding Birsa Nizar variety developed by the university. It is a 95 to 100 days crop. This is adopted for local condition. We have also introduced elephant yam which is a West Bengal crop consumed during Dussehra, owing to its religious significance.”

(From KVK Director, Jharkhand)

There is a paradigm shift from the usual forms of agriculture, which are promoted in these two projects, as against those that are practiced in other parts of the country. Consciously, the focus is not on commercial agriculture but on the nutrition sensitive agriculture. What is promoted is an integrated farming concept, upholding the traditional tribal practices. This has reduced or limited the need of loan procurement for carrying out agriculture and its' associated distress among farmers.

“Here, people are not going for commercial crops. They have integrated farming. They keep poultry, cows, cultivating vegetables in their homestead around the house (in addition to farming) ... we have promoted it (integrated farming).... There is no listed suicide in the state of Jharkhand. Taking loan is not a common practice among the farmers.”
(From KVK Director, Jharkhand)

It can be said that it is the intensity of crop diversification that differs across the two projects; in both the projects the cultivation is almost throughout the year. In tribal areas, the diversification and expanding cropping cycles follows similar patterns of 9 to 12 months period.

Diversifying agricultural crops has improved the diversity on the food plate at the household

In both the projects, women were provided with a variety of vegetable seeds and fish seedlings which they cultivated in their farms. Nutrition gardens helped in understanding the importance of consuming wide range of vegetables by cultivating the same in their backyards without the need to procuring them from the market. In addition, the introduction of multiple crops ranging from cereals, grams and legumes, vegetables, livestock and fishery for household consumption and for the markets has inculcated the concept of cultivation throughout the year. From the traditional pattern of eating carbohydrate based diet mostly consisting of one cereal, pulses or potatoes, there is an expanded range of carbohydrate consumption such as rice, wheat and millet consumption; proteins such as green gram, pulses, legumes and other local varieties of pulses and grams. Vitamin intake, through the varied vegetables harvested such as brinjal, ladyfinger, tomatoes, have increased, as has fat

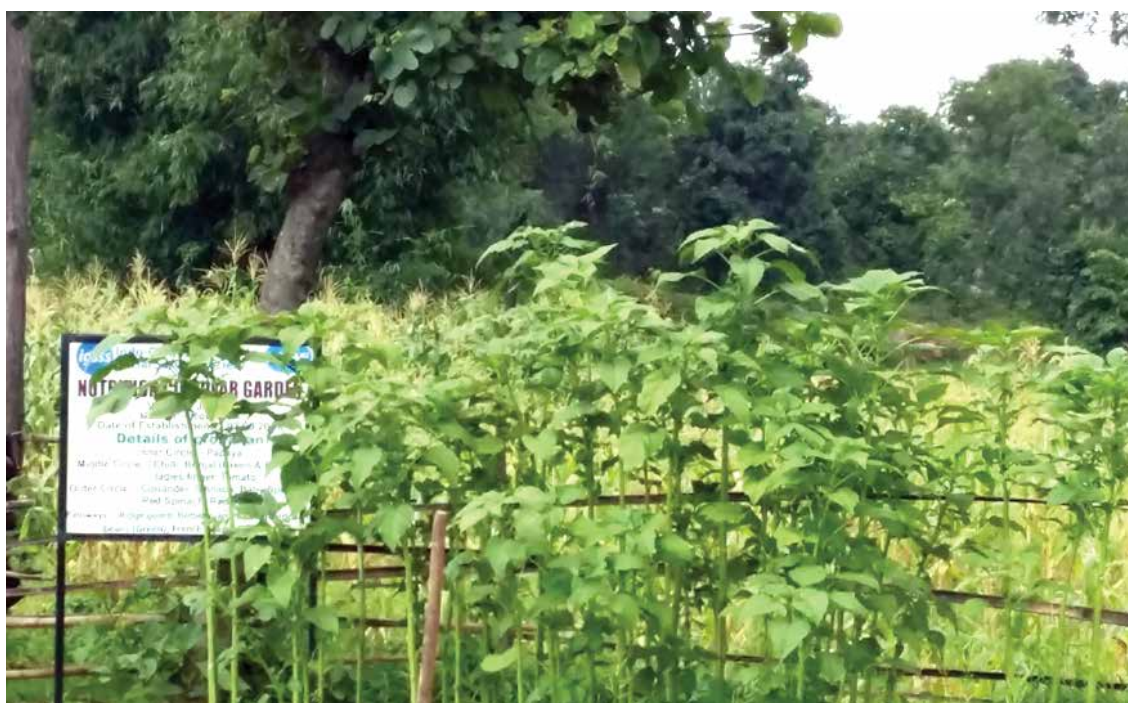


FIGURE 1: Circular nutrition garden

consumption, through oil seeds such as groundnut and nizar that are produced in the farm lands. In Project EASE and Project PLANT, the support came through provision of both information and quality seeds.

A very interesting concept of Circular Kitchen Garden, demonstrated in Project PLANT promotes vegetable and fruit cultivation in the backyard or homestead patches. Here, one can grow 14 types of vegetables and fruits. This concept is being understood and picked up by some farmers. Similarly, the project has promoted the cultivation of multiple crops simultaneously by dividing the available land into the portions for cultivating different cereals and grams. Male goats have been provided for breed improvement and pigs for livelihood generation as well.

"We do kitchen garden, and thus do not buy vegetables. We eat home grown fresh vegetables. Earlier, we thought it was impossible to cultivate wheat. Now, we grow wheat and vegetables in summer. Earlier, our farming methods were primitive; however after the arrival of IGSSS at our doorsteps, we started using technology. They have told us how to grow, wheat, maize, paddy and nuts. IGSSS has expanded our limited production knowhow, earlier we knew more plants on field meant more production. But after SRI, I have understood that a gap is essential for growth of plants, it gets all the nutrients. (From woman at Sandi, Project PLANT)

"Yes, there is a difference. We have started eating vegetables. We eat good food and vegetables now. Either, we take them from our crops or we buy them. We didn't eat them (vegetables) earlier. We ate very simple food by mixing rice and water; our food used to get dry and sour. We had to add salt and eat. Now we eat vegetables, now we eat fresh food." (From elderly single woman, Dhamansaria, Project PLANT)

It is evident that people are eating diverse food and partaking of a more balanced diet. Tribal communities traditionally cultivate produce for self-subsistence and sell the excess. The project has continued to promote these cultural practices in cultivation and the effect of food diversification is visible. Women at project sites, in both the states, have developed a voice on decisions related to the produce for sale and household consumption, thus making it possible for supply of year round adequate food for the household. Based on previous years' requirement, the current produce and the current year's requirement, women decide on overall household requirements for produce. In tribal communities anyhow, families are less likely to procure food products for daily consumption. The introduction of vegetables, especially through the 'nutrition gardens', the introduction of legumes and grams, cereals such as wheat and millets, fruit plants, fish and livestock has ensured that there is adequate food diversity in their diet.

Cultivating crops throughout the year provided not only income but availability of food throughout the year

What is most assuring in the two projects is that the farmers that were met, tribal or non-tribal, have not only diversified the crops but also have started practicing into the system of cultivating two to three crops in a year; a shift from the single cropping they practiced prior to the project intervention. The confidence that the communities have gained is palpable and visible. They are able to have both food and money throughout the year, now that the cultivation cycles have improved. This applies across both the projects. The livestock and fishery inputs have also assured that the flow continues to supplement, even during lean periods of agriculture.

Waste barren land in the village can be a source to make cultivation possible when land resources are less

Converting waste land to vegetable beds

At one of the villages of Project PLANT, the community was expressing that they did not have adequate land for cultivation. However, in the same village, there was a 4-acre waste land that had bushes that had grown wild for years. IGSSS saw potential in clearing the land for developing into a cultivable land. The community was hesitant to work on the project as they did not find much value in clearing the space. They got into consultative discussion with the community and with a commitment of the community to clear the land, IGSSS invested around INR 2 Lakhs to clear the land. The land was made cultivable and today the community has started growing vegetables and horticulture in the once barren land. The community is highly appreciative of the efforts. This initiative is also receiving praises from the administration and has been a model for other villages to emulate.

Going chemical free and promoting organic farming provided healthier options to the farmers, however, could not be leveraged in the absence of organic markets in the area

The Project EASE provided inputs to the women on 'farming without pesticide'. With the support of a private supplier, they taught women to make fertilisers and sprays for plants. On the other hand, Project PLANT promoted organic farming actively. The contexts of the two projects were different. As Madhya Pradesh has moved large scale onto promoting commercial farming, the high dependence on chemical pesticides had made it difficult for farmers to make a clean switch.



FIGURE 2: Male farmer with seed bank

“We have developed a unit for making pesticide in the village. We use organic waste and IGSSS has taught us how to mix different natural products to make. It is very useful. We spray it when our plants have some infection. We are finding it useful.” (From FGD with men, Keridi, Project EASE)

For the Project PLANT beneficiaries, they had not made a complete incentivised shift to chemical pesticides. They were happier to learn and continue organic farming practices. They used organic crops more for home consumption; even if they find it to be more labour intensive.

In the villages of PLANT and the tribal villages of Project EASE, the communities have not been greatly driven by commercial gains and this can be attributed to the sense of community. Nevertheless, what is missing in the chain, in both the states, is that the farmer does not get a higher price at the market for the promotion of organic food.

Creating water bodies play an important role in expanding cultivation cycles; governance systems for water management is equally important for equitable distribution

Constructing water bodies that fuel agri-diversification, has been promoted by both the projects, through technical knowledge transfer, direct support and convergence efforts. At Churchu, harvesting and conservation of flowing rain water is carried out through dovas or farm ponds (5% models). 8 such dovas have been constructed at Project PLANT villages and 7 in Project EASE villages. This has aided farmers to carry out Kharif (monsoon) and Rabi (winter) cropping through the excess stored water and it has also improved soil moisture content overall. Both the projects have established water committees who govern the use of water and assure that water is utilized judiciously with the maximum benefit to as many community members as possible. Increasing incomes, through the provision of fish seedlings for group enterprise in these restored/rejuvenated waterbodies, was a value addition and a portion of the earnings were earmarked specifically for village development. The importance of the water bodies is beautifully shared by one of the farmers as follows:

Farm Pond at Dhamansariya Village



Pre Intervention



Post Intervention

Farm Pond at Sandi Village



Before

After

“There was no water in pond in village here. We faced problems in irrigation and managing animals too. IGSSS has guided us so beautifully. They have helped us in making ‘dovas’ and, now, without water, we can take additional crops. We were able to retain water in the pond by digging deeper. Even when there is no rain, we can do agriculture.” (From men’s FGD, Sandi, Project PLANT)

Promoting allied farming such as livestock was a value addition to the families

The project has promoted livestock (sheep rearing at EASE and PLANT), improvement of sheep breed (PLANT), piggery at individual household or as joint activity of a women’s group (PLANT) and fish farming in water bodies (both EASE and PLANT). Animal kids and fish seedlings have been provided to women for individual ownership or for rearing as a group in a few villages.

The Project PLANT supported two goatery units, one with three females and one male goat, at Nagri village of Churchu Gram Panchayat, to be managed by 10 Birhore women, Birhore being a particularly vulnerable tribe. A piggery centre has been established in Tasnalo village as well. Twelve women SHGs have been supported with 3 females and one male pig. Women managed the end-to-end care at the piggery centre on rotation and have also agreed to distribute the piglets. The communities have been provided with a good breed of male goat with the intention of improving the local breed and increasing earnings of the community commensurately.

This becomes an opportunity to earning a supplementary income when one is in distress. The women feed the piglets with the food waste generated in the household or in the community. The cleaning of the pigsty is taken up on rotation by the SHG women in the group piggery unit. 50% of the earnings from the sale of mature pigs is planned to be shared among the members while the other 50% is planned to be parked for village development.



FIGURE 3: The Birsa male goat provided for breed improvement

At Project PLANT, there has been a special strategy of providing livestock to particularly distressed families. For example, widows with young children, who have been provided with pigs, as per the decision of the larger community, who also have a stake in such beneficiary selection. Interestingly, there is a comfort and genuine interest that is noted within the community on the process of distribution of the piglets for such vulnerable families. At Project PLANT, the ground rule set in the community is that when women have been provided piglets as a gift, they should hand over at least one of the offspring to another needy person in the group and thereby alleviate her difficulties. And so the cycle of giving is continued.

With the support from IGSSS and fisheries department, the two projects have provided fish seedlings to the water committee members which they cultivate in the water bodies. On harvesting, half the fish produced is given to the community and the earnings from the other half is utilised for the development of the community.

Communities report that managing the livestock is easy as they do not have to invest much on its care. Further, they consider reinvesting the earnings for sustainability and development purposes.. One very small yet very useful approach at Project PLANT is the training and deployment of para veterinary personnel in the project villages.

"We were given pigs in our village. One of our pigs fell sick. They called the Para-veterinary doctor (trained through the project) to treat the pig. My pig was treated and is now growing well." (From a woman, Khoibag, Project PLANT)

The project provided the training and access to community access services for livestock upkeep and care. This may be useful to consider in the other project sites as it reduces loss of wastage when animals fall ill and tend to die in the absence of proper health care in these areas.

Improving agricultural returns through advanced agricultural technical knowhow can impact labour migration

In villages, migration is a common phenomenon, it is seen men often migrate to cities for better earnings. But in the villages where EASE and PLANT were implemented, migration dipped among the population. Men returned to the villages when agriculture in the village was at its peak. In one of the villages where migration continued as before, men encouraged women to get involved in the project for acquiring information on improved agricultural practice.

"I used to go to other cities for work earlier. This has reduced now. I go once in a while. When I go out, she (wife) looks after the agriculture" (From a male spouse, Sandi, Project PLANT)

Looking at the patterns in the project areas of the two projects, in comparison with the control group, it can be said that migration is lower in the intervention sites. In the intervention sites, the migration patterns have been similar, suggesting that people have found value in both the models. The agricultural inputs have benefited more, obviously, when the respondents have owned land. However, the gains in reducing male migration have been much more visible in the Project PLANT area when compared to those from Project EASE. Project EASE had greater number of farm labourers participating in the interviews, they did not have landholdings and hence, were more vulnerable to distress migration.

Sukri Devi of Jordag Village with her newly received Livestock Asset



Comparison on value-added: Agricultural inputs

| Themes | EASE | PLANT | Control group |
|-----------------|---|---|---|
| Diversification | <ul style="list-style-type: none"> • Dependent on the local community agricultural resourcefulness and commercial interest in cropping. Tribal communities demonstrate greater engagement for diversification of crops. • Change in food habits visible. Dependant on family's engagement in crop diversification. • Impact on malnutrition is not uniformly visible across community members • Seed distribution has promoted diversification. • Seeds availed through private providers. | <ul style="list-style-type: none"> • Diversification of crops well received and practiced. Circular kitchen garden with 14 varieties of vegetable initiated. • Diversity of cropping has improved diversity in food intake. • Overall, community members did not visually appear malnourished; needs further nutritional studies to arrive at conclusion for impact on malnutrition. • Seed distribution along with tie up with Krishi Vigyan Kendra has promoted diversification • Path to continued seed procurement for sustainability laid down through tie up with Krishi Vigyan Kendra • Innovative approach of home grown vegetable through circular kitchen gardens | <ul style="list-style-type: none"> • Diversification of the crops is not seen in both the control area of the two districts. |
| Multi-cropping | <ul style="list-style-type: none"> • Well accepted and practice 2 to 3 cycles of cultivation • Water bodies developed • Water management committee in place • Mixed practices of crops, livestock and fishery | <ul style="list-style-type: none"> • Cultivation is largely on 2 to 4 cycles. Has penetrated in the neighbour's farm land. • Water bodies developed • Community institutions played active role managing community decisions such as cropping and managing resources such as water bodies and their use. • Mixed practices of crops, livestock and fishery. | <ul style="list-style-type: none"> • Mostly single cropping during rains is seen in the control areas in both the districts of intervention. |

C. Expanding women's access to agricultural technology, roles, livelihoods and markets

Providing machinery support as start-up venture input gift boosts women to confidently take the lead

IGSSS has provided technology and operationalisation support to the women at different levels:

(i) Mechanised women friendly agricultural equipment at Project EASE (ii) Machinery for food processing at Project EASE (iii) Technical knowhow on allied livelihoods at both projects (iv) Market linkage building know-how and support in both projects

In Project EASE, women have been provided agricultural machinery as gifts. Above and beyond this, they have been provided training and technical knowledge on running and managing an enterprise and establishing women's collectives to operationalise the enterprise. The project has established two spice units, two flour mill units, one pulse making unit and one organic manure production outlet. The machinery has been provided to the women SHG members and these are placed at selected members' residences. The electricity meter is in the particular member's name. Women are provided training on how to operate the machinery. The SHG members take time out from their routine activities to carry out the additional livelihood options. The tasks are divided among the members equitably; which is a testimony to the strong understanding in these groups.



Technology in the hands of women is a relatively new concept in these communities; traditionally, technology-based agriculture or enterprise was primarily carried out by men. In Project EASE, a group of 10 women with varied skills - managerial ability, banking and work ability - came together to manage the operations and accounts of the enterprise described above. The profits and savings were deposited in the group's name. Selecting members with acumen in business and having financial resources, the women have demonstrated that when given suitable opportunities, they can foray and succeed in unconventional ventures.

Women centred agricultural tools are empowering and reduce drudgery of manual labour

Farming in underdeveloped pockets of India is largely manual and labour intensive. IGSSS has provided agricultural tools for women through Project EASE, something which is not part of the Project PLANT. The Project EASE has provided farmers with 10 agricultural tools (see appendix for the list of tools). These tools were chosen in consultation with the Confederation of Indian Industries (CII), considering the local crops and practices and the women friendliness of the tools.

The women's roles, being envisaged therein, are diverse and involve end to end management of the process from planning to managing and renting of the tools to the community. Women have taken responsibility for stocking, management and financial matters related to the agricultural tools. The women's self- help group is responsible for the safe custody of the equipment, laying down and managing the rental procedures and overall documentation. They stock the tools in the Agriculture Resource Centre, which is most often the Panchayat Office or some public structure in the village. They also keep a record of the names of the persons who rent the tools for a nominal fee of INR 1/- to INR 50/-. The harvest machine is priced at INR 1100/-. The tools are rented out as per the requirements of the farmers.



The women farmers are highly appreciative of the agricultural tools and report that their workload has reduced.

"We also got the agriculture equipment; majorly we use the agriculture pump. The program is as per our needs, the pump is of great help now we can put pesticides on time." (From a couple, Belsar, Project EASE)

The agricultural tools provided by IGSSS are used by both men and women. Some tools are very much in use, for example water tank, pesticide sprayer; some are moderately used, for example, de-weeding cycle and some are hardly used, for example, the crop cutting knife. The reasons are many; some of the villagers have shifted their crops and hence the tools are not useful. For instance, the knife provided is for wheat cutting but wheat growing is a small activity in the farms; one must however note that wheat harvesting was promoted through the project. In one of the villages, the farmers opined that the equipment is more suited for Maharashtra, this needs to be further explored.

Are women using the tools? Has it reduced their workload? It is notable that women are now comfortable carrying out some of the labour-intensive work, such as weeding, using the de-weeding cycle. The men use the more labour-intensive agricultural tools such as the pesticide sprayers. However, the demystification of tools and technology has taken place organically for women through this process.

"The spice making machine is utilized. Earlier, we had to walk 8-10 kilometres for getting spices crushed. But now we have the machine within a radius of 2 kilometres. Though the rates are same, we save on time and can go at our own convenience. Earlier, for crushing 10 kilograms of spices, one had to make extra expenses on travel. With this machine we save a lot on our pockets." (From mixed FGD, Aronda, Project EASE)

"Earlier, we use to get the spices crushed whenever we went to the market. Usually, this was done by women. Now we do not have to depend on our husband or sons; now, anyone from the house can go to get the job done." (From a married woman, Choti Baru, Project EASE)

Are these efforts sustainable? The interactions suggest that farmers and women have internalized these learnings and understand the benefits of improved agricultural technology and processes. The change, to a great extent, is here to stay. It is not only the direct recipients of support who have benefitted; but there has been a wider replication in non-intervention villages as well. In both the projects, the conviction to continue a practice is to a certain extent dependent on the profits being accrued tangibly; the farmers and the women have realised the benefits and the value addition of the project inputs. There is overall feeling that the new system of agriculture is viable and profitable.

Technology and/or knowledge advancement in the hands of women lead them to foray in unconventional spaces

At Project EASE, the women's collectives were taught to run agricultural machinery by providing technical knowledge, operations and accounts management. The SHG women, on a weekly basis, have maintained accounts for the expenditure and earnings. What is noteworthy is that the enterprises that the women are running are robust with well-grounded operational mechanisms. All the units are up and running for two years, one year with practical no project support. Each group has made savings between INR 10,000/- to INR 15,000/- which is deposited in the bank. By selecting

members with acumen in business, the women entrepreneurs have demonstrated that when given opportunities, women can foray and succeed in unconventional areas. This livelihood model is promising and has demonstrated that women can deliver in business as well.

Walking the journey of aspirations, a move from fear to a relentless engagement

“Women use to run away seeing this machine, it took them quite a time to get handy with the operations”, says the spouse of an enterprise linked woman collective member, with a smile on his face. He was actually responding to the question of whether women SHG group activities had created an impression in their villages. A woman recalled the early days of starting the enterprise. “We had a lot of trouble with the power supply. We would start our work at 10:00 p.m., when the power arrived, and continue till 2 a.m. The machine was large; we chose a complex and challenging enterprise. All the women of our group, used to work with the machine till the wee hours of the morning. Preparing the pulses was a complex and long drawn out process. It involved both manual work and machine processing. It takes close to 8 days to complete the entire process. We needed to soak the pulses in water, manually dry the grains in the sun, collect them and then manually feed the dried gram into the machine. This cycle needed to be carried out three times to get good graded pulses”. “IGSSS helped us with persons who taught us well. At every step in their journey, they provided not only with good information but were there whenever we needed their help. We used to call them and they would be there”, she recalled with a pause. “Had it not been for their support, we would not have been successful” she added.

In the initial days, women were hesitant and unsure. These women needed to assess and grade the raw material. They had to pick the best grade of the raw material for better profits. They had to package and process it to market quality, fix the price calculating the cost, plan for the profits and the selling price and find sellers to buy the produce. We asked the women why they went ahead and sought an enterprise that was so complex; a woman replied “we were not getting a good price for the gram. IGSSS gave us several options and we felt that we must take the exciting one. There were others who were making grains into pulses in other villages but they were far away”.

This village lies in the interior forested area and does not have access to schools or roads. The closest facility is a lower primary school and an extension Anganwadi centre. The women and girls in the village do not study beyond a point. A handful of the men have studied upto standard 10th. With the support of IGSSS, HDFC selected one of the members as banking assistant and he generated interest among people to open bank accounts. He had to visit other neighbourhood areas and he got to learn about the educational facilities and options that are provided in the colleges around their villages. Today, there are about 5 students who have joined college and are doing non-traditional courses such as pharmacy. The women students either travel by bus from a point which is around 2 kilometres from the village and travel another 5 kilometres by bus or stay at the hostels, a feat the older generation did not dream of. Their journey is path breaking. The women have reached the helm of success. They have emerged confident, vocal and ambitious. There is no stepping back. They are empowered and now want to learn more. They express the need that they want more direction to move forward.



The Self-Help Group's effective and efficient management of the enterprise has brought agency into the lives of the women. Members have developed work systems and delegated roles and responsibilities among themselves. The result is that women are no longer dependent on men for planning, execution and marketing of the process. They also negotiate the price with potential buyers and decide rates at which produce will be sold in the market.

The selection of the female members for the SHG linked to enterprise was done with a well thought strategy; the selected group members were homogeneous and held cohesive bonds. The handholding support provided by IGSSS helped the groups to select a wide range of capacities in members; financial capability, ability to give time, collaborative spirit to work together and commitment.

Women were supported in selling their produce in the markets. Large agricultural markets are male dominated; hence, the local markets were tapped for profit and sale. Women's agency that they developed through the membership in self-help groups was harnessed to encourage them to go as a group to sell their produce at local markets. Women have become successful marketers and have been able to manage finances well.

Have agricultural tools reduced the burden of women in agriculture? Women from Project EASE who used the agricultural tools expressed that they were able to get more time due to reduced work load. Their manual labour has come down; the rentals for the tools are affordable. Community now sees them as competent women, who can shoulder responsibilities. In both the projects, EASE and PLANT, women express that they feel more confident and are able to engage with people better. The self-help groups, around agriculture and enterprise, promoted by the projects, have brought women together and they are able to develop comradeship; earlier they were just caged within four walls of their homes. They now navigate the village and travel on their own. It is often seen when women take lead, men's role gets diluted and there are fears of a backlash. Here however, men took critical care in supporting women, in several meetings, men participated and tried learning from the women.

Women who have gained financial competencies are making a difference in the household too. They are now decision makers in the matters of finance and are actively undertaking banking transactions. Male members look up to them for advice on matters relating to finance.

The project EASE has witnessed the challenge of benefiting single women. For this to happen, more investment in form of time and energy is required as young widowed women or separated women do not hold assets. In such contexts, the Project PLANT's strategy of involving single women in livestock cultivation provides critical lessons on how to make earnings possible for particular constituencies of vulnerable women.

The team met with the Ward leader for the villages of Barwah. She is responsible for the villages in both the intervention and non-intervention villages. We asked her to compare the development in the intervention villages with the non-intervention villages, sharing the information on the villages the project has covered. With a satisfaction in her eyes, which soon turns into a disappointment, she reports, "There is a lot of difference between the people in my village and those at Bali (where IGSSS works). They have organised as a 'samiti' (collective), 'there is no samiti' in my village. When I talk to the men, women and children there, I feel good. In my village, this does not happen. Even though women are educated in my village, they are not able to give good parenting to their children. They do not send their children to school because of which there is not much of talent in them (children). The women there are 'shikshit' (informed), they are mobile, and their talk is good."



FIGURE 4: The woman farmer selling her products at the market

Nutrition Garden at Bali



Opening market spaces to women expands their mobility and space

Women in the Project EASE intervention villages have studied the selling price of the products in the local markets and worked out a local mechanism for working out the selling cost of products. Women have enquired, estimated the production costs; this is a new learning for them, an exercise that women are doing probably for the first time. SHG women have also learnt the skill of approaching market sellers to buy their produce and negotiate the price. By grading and packaging, they have learnt the nuances of the markets. Women directly sell their produce at the weekly vegetable markets. They have received a decent price and that has motivated women to carry out vegetable farming with greater vigour. The skills of women in the two projects are similar in one sense; however, the products that they are selling are distinctly different and, hence, so are the rules that dictate the production and sale of these goods. The agricultural market price is fluctuating with the local prices, unlike the pricing of the processed food, which is somewhere related to the price of the grains, overhead costs and the profits to be made.

“Earlier we used to cultivate for our consumption. Excess produce would get wasted. We did not reach up to the markets. We did not even think about it. Our thought process is changed now. It is different now, we are able to sell and earn on it. We can now buy spice and other produce that are not cultivated here.” (From the women, FGD, Bali, Project PLANT)

Comparison: Technology in the hands of women

| Themes | EASE | PLANT | Control |
|--|--|---|---|
| Provisioning women friendly agricultural tools | <ul style="list-style-type: none"> • Women express that the burden of manual labour has been reduced. • Peer socialisation and support has increased. • Women are able to take time to rest and engage in recreational activities due to reduced burden of work. | <ul style="list-style-type: none"> • Not applicable | <ul style="list-style-type: none"> • Not applicable |
| Supporting micro-enterprise through women's institutions | <ul style="list-style-type: none"> • Women's self-help groups have demonstrated immense capacity to propose, plan, manage and operate profitable technology based micro-enterprise, manage finance and accounts and market and sell the processed products independently. • Technology made scale possible and increased profitability • Have created savings as a group • Have demonstrated confidence and interest to expand the enterprise. | <ul style="list-style-type: none"> • Women have been given livelihood skills such as pickle making. However, have not been able to take it up as a business. | <ul style="list-style-type: none"> • Not applicable |
| Promoting and expanding market linkages for women | <ul style="list-style-type: none"> • Women have proved their competencies in marketing and selling independent of men's engagement • The micro-skills in selling and marketing has increased their mobility and independent functioning • Demonstrated that business models around women's group is viable, can be efficient and effective. | <ul style="list-style-type: none"> • Women have proved their competencies in selling agricultural produce independent of men's engagement | <ul style="list-style-type: none"> • No concerted efforts to build market linkages for women |

D. Women's and men's capabilities and confidence was built through continuous training and handholding by experts and project staff

A multi-pronged approach that allows people to learn in the most suitable ways to meet their needs

The project has used several strategies for building technical knowhow among the farming community. In both project sites, farmers, both women and men, have received capacity building through formal training programmes. At Project EASE, farmers received inputs on themes such as, effective use of the agricultural implements of Agricultural Resource Centre, low cost input farming, preparation of various organic manures and pest repellents, crop rotation etc. by renowned and experienced resource persons



such as Mr. Govardhan Tiwari (organic farming specialist) and Mr. Narendra Tambe (Agronomist). At Project PLANT, with the support of the Krishi Vigyan Kendra, women were trained on pickle making, sauce preparation, mushroom cultivation, vermi-compost, SHG formation and book keeping, mixed cropping and vegetable cultivation. These trainings were effective since they were need based - hence every village got limited trainings based on their expressions of interest. These trainings bring farmers' and women's group to a designated place for a day's programme where they gain a new skill or knowledge. Both men and women who participated in the trainings have found the inputs valuable and several of them have tried them in their own farms. The SHG women were taught how to do diverse cropping during the different season; selecting, sowing and germination of seeds effectively and creating the right environment for growth. What was noticed is that in the control group villages, they did not have access to such trainings; only one village had received inputs some years ago and one training in the previous month.

One of the trainers said -

"We did participatory appraisals with the community and got the information from them. We then decided if it should be knowledge or skill-based training. I believe in learning by doing. The training is demonstrative along with theory. I do some research in the farmer's field. I treat them (farmers) as a scientist. Sometime demonstration is enough, however sometimes we need modifications. This is done by farmer's collaboration." (From KVK Scientist, Trainer for the Project PLANT)

9 Agriculture Resource Centres at Project EASE and 10 Farmer Field Schools at Project PLANT have been initiated. The purpose is to create a forum to discuss on agriculture related matters and learn from each other, usually at a periodicity of a month for the more formal trainings. The farmer who attends this session functions as a Lead Farmer and shares the knowledge with other fellow farmers. The positive impact of the shared knowledge is reflected in the conversations that were had with the people in the villages and in the observations of the diverse crops now being grown in the villages.

Leading peers to change farming practices: The Lead Farmer

"I am the one who teaches a group of farmers" a young adult proudly shares his new role in the village. Having studied up to standard 10th, this young farmer decided to stay back in the village and carry out agricultural work when IGSSS came into the village. Earlier, he would stay at his house during the rainy season and then migrate for labour work even though the family had 2 acres of land. "I come regularly to the Agriculture Resource Centre for the meetings. The farmers in my neighbourhood are not able to join. A few of us come and learn from IGSSS. I have learnt a lot through these discussions", he proudly shares. We ask him what made him join in. He swiftly responds, "IGSSS, before starting the project, had carried out a consultation in the community and I had attended it. They told us that they want to help us improve our agriculture and if we learn, we can get better yield. I thought why not I join?"

"They made me responsible to a group of farmers in my neighbourhood. My responsibility is to share what I learn here with them. I have been able to bring changes in the way they farm. They watch me carry out the new things in my farm and I discuss with them on how I have changed my practices", he says with brightness in his eyes. "I attended the trainings that IGSSS has taken. Our women have attended trainings too. When they discuss their new learnings, a few of us join them and at times, we ask them to share on what they have learnt. The IGSSS didi comes regularly and we also take guidance from her. Nowadays, I am able to make good earnings from the farm. I have some goats that I am rearing and they are growing well". We ask him if he wants to go to the city for labour work and his affirmative answer is, "We have learnt the trick of how to do agriculture. We do not need to go back and work for others. No one in my group goes for work to the city now".

The Agricultural Resource Centre is effective. The energy of each Lead Farmer is different; the motivated farmers are going out of their way to help other farmers. When there are motivated leaders who are willing to teach others, the churning leads to a consistent change process.

The Project PLANT has tied up with Krishi Vigyan Kendra while Project EASE accesses the training and the seeds from the established sources. Both these players had outreach interventions; however, Krishi Vigyan Kendra being part of agricultural extension services, is community practice oriented and has field interventions in some pockets that aided contextualisation. On the other hand, the private provider of seeds was available to the farmers over the phone and occasionally made field visits. Both these strategies were useful; however, the tie-up with the Krishi Vigyan Kendra appeared to be more sustainable. The women and men farmers were trained in the premises of the Krishi Vigyan Kendra and this gave communities a personal connect with the staff of the organization. Secondly, they knew where the seeds would be available. Several farmers have on their own reached out for further inputs and seeds directly and this is likely to make the multi-cropping endeavors much more sustainable.

This particular value addition was not possible for Project EASE as the trainings were conducted at a point convenient to the community and the participants were encouraged to personally interact with trainers.

Comparison: Building competencies and capabilities

| Themes | EASE | PLANT | Control |
|---|---|--|---|
| Learner focused multi-pronged approach for building knowhow | <ul style="list-style-type: none"> Formal trainings at sites for women SHGs, farmers and enterprise, closer to the community Weekly meetings of women SHGs for discussion at every month -Agricultural Resource Centre where men discussed agricultural issues Handholding and inputs by project staff | <ul style="list-style-type: none"> Formal trainings at Krishi Vigyan Kendra Weekly meeting of women SHG at every month Farm field schools for monthly discussion among male farmers Handholding and inputs by project staff Lead farmer handholding other farmers | <ul style="list-style-type: none"> Communities report that women and community as a whole have not received inputs for agricultural enhancement; few villages had received samplings in the last month and support for microfinance at Jharkhand |
| Technical knowledge partner | <ul style="list-style-type: none"> Tie-up with renowned and experienced resource persons such as Mr. Govardhan Tiwari (organic farming specialist) and Mr. Narendra Tambe (Agronomist) -Link for ongoing inputs for chemical free pesticide and seeds Field presence governed by support requirements | <ul style="list-style-type: none"> Krishi Vigyan Kendra has an ongoing partnership and provides regular input as knowhow, seeds, on the site inputs and researching to find appropriate agricultural practices and seeds/seedlings for local community. | <ul style="list-style-type: none"> Not applicable |

E. Institution building and strengthening their functionality drives the upscale and sustainability

The collaborative advancement through robust institution building is the crux to collective progress, the pivot on which agriculture, enterprise and sales flowered

At Project EASE, the self-help groups are formed and aligned with the need of the enterprise. Hence, members were selected based on their business acumen, financial soundness to save, the time availability and also keeping in mind the homogeneity with the group. The careful selection of members has helped in operating and running the enterprise without major problems. The Project EASE has some great lessons to provide in terms of strategies used for a social business model such as unity among members, wide range of competencies and capacity building in the team.

At Project PLANT, all households in the village met to discuss on farm related matters at the beginning of the project and, subsequently, at critical times. What could be said is that the Village Development Committee was an active player during the early stages of the project and hence remained invested in driving the execution of the development plans being made thereafter. Walking the talk with the community is a valuable tool that has built collective cooperation in the communities. The Project EASE went through a similar process; however, the effectiveness and robustness of institution building processes could not be observed consistently across all the villages.

Multiple approaches and modalities for institution building gives opportunity for different needs of people and requirement of intervention approaches

The projects have promoted three community based institutions

- (i) Women's self-help group
- (ii) Farmer's group
- (iii) Water committees

The project has established 19 Self-Help Groups at Project EASE and 20 at Project PLANT. As mentioned earlier, the women's self-help group at Project PLANT leveraged on the existing self-help groups while at Project EASE, women formed their own groups, one for the purpose of managing and rental management of the agricultural tools and the other for managing the social enterprise.

Building institutions are a way to strengthen communities, allow communications to flow, build mechanisms for governance and accountability. One couple said -

"Our perspectives are changing, our thoughts are changing, and we are getting all the information. Had it not been for the communities, we would have not learnt many things about agriculture. We are able to see all this because we have someone to show us. They showed us the way as to how to do it. We are doing it accordingly". (From a couple, Sandi, Project PLANT)

Women at both the projects, through the support of these community institutions, are accessing their social entitlements and civic rights such as bank linkages, Aadhar cards, ration cards and supplies and so on. Both projects have carried out significant work, however, the confidence among the women at Project PLANT is more palpable and evident. Prior to their involvement in the Project

PLANT, they did not proactively walk into the BDO office or the bank. Now they confidently meet the BDO, raise their concerns and receive their entitlements.

“Earlier, we did not know what to say. We used to sit quietly. Now we can talk in front of others. We are able to go to the BDO when we have problems. Our earnings have doubled and changes are visible in my family.” (From a woman, Sandi, Project PLANT)

The farmer’s group meets once in a month wherein they discuss matters related to agriculture. The meeting is generally held at the Farm Field School. The participation is subject to the availability of the farmers. Most often than not, the farmers discuss their immediate concern, however it may differ from group to group. At Project PLANT, this farmer’s group members acted as lead farmers. The concept of lead farmer is learning through sharing, a process that is informal where the lead farmer shares and transfers learning and experiences with other farmers under his charge.

Through the support of the project, the community has also established the water committee that meets to discuss water management in the village. This committee also moderates the cropping and use of water for agriculture in the farms. The water committee has helped communities decide and bring consensus among them on what would be good crops to grow given the water status and the season. This discussion helps them to maximise water usage and in turn cultivate their crops two to three times in the year.

Food Processing Training at Churchu



The agency that communities, especially women, have received as members of groups is significant; this is visible at both the projects. Women have gained confidence and self-esteem. Men and women have taken leadership to influence community actions such as water management and cropping at the farms within the parameters of the new knowledge that they have gained through the project. They have influenced beneficiary selection for the livestock programmes. They have also taken lead in exploring markets for their produce and getting good market returns. Groups have saved between INR 8000/- to INR 15,000/-.

It is important to take note that in the project PLANT, the potential of the existing self-help groups, through linking to microfinance, has been maximised. This has not only helped the project to achieve its targets better but also to maximise and consolidate the results through harnessing the skills that the women have received through microfinance. When most NGOs are hesitant to work in synergy with the work of other groups in the community, the project team at Project PLANT demonstrated that it is valuable to make the most of the existing resources for the community. These women's self-help groups and the community men are no longer static, they are dynamically thinking on how to expand on the newfound knowledge and experience on managing newer enterprises and markets. They have initiated discussions among themselves and are looking forward for ideas and further support from the project. In a true sense, their growth is here to stay.

Capacitating and strengthening community institutions central to competency building

Project EASE partnered with CII (Confederation of Indian Industries) for identifying the machinery for agriculture and the support of a reputed company working on non-pesticide agriculture as social responsibility which also provided financial support for the creation of water bodies. The tools were well designed and there was a lot of thought that went through in selection of agricultural and food processing machinery. However, on the ground, teething problems still remained on tool and equipment usage that have thrown up key lessons for the next phase. Project PLANT worked with the Krishi Vigyan Kendra for the technical support and seeds. There was a scientific approach that was used to match local conditions with the agricultural technology and seeds provided. The KVKs, having an organisation agenda to improve local agricultural practices, and their independent field activity for their work, proved to be a winning combination.

When community institutions collaborate with civic and welfare services, they are able to reach communities in better way; the strategy used by the two projects differed from each other. In Project EASE, there was a substantial focus on getting communities linked to the BDO office and improve direct linkages with the government system to access Aadhar card, bank linkage and social security benefits. While the project had desired to link community to ICDS (Integrated Child Development Services), there has been a challenge as the settlements are smaller in size and the Anganwadi centres are distant. Project EASE's efforts has resulted in 30 persons receiving Old Age Pension, 20 receiving Widow Pension schemes, 82 receiving NREGA (National Rural Employment Guarantee Act) Eligibility cards, 30 receiving BPL (Below Poverty Line) Ration Cards, 2 receiving *Kanya Abhi Bhavak* Pension schemes, 8 receiving disability pension schemes, and 3 benefitting from E - Housing scheme. The crux has been on how to get the community directly linked and capacitated through the institutions. The confidence among the community at Project PLANT was visible clearly through the successful convergences that were initiated.

Comparison: Institution building

| Themes | EASE | PLANT | Control |
|---|--|--|--|
| Multiple approaches and modalities for institution building to address diversity of community players | <ul style="list-style-type: none"> • Formation aligned to the enterprise needs: enterprise acumen, financial ability and resourcefulness • Self-help (women's, and farmer) and producer group (women entrepreneur group) key to collective advancement • Water committee as governance strategy | <ul style="list-style-type: none"> • Maximised the potential of exist self-help group of women working on microfinance with topping with agricultural competencies • Self-help (women's, and farmer) key to collective advancement • Village development committee an instrument to vision with the community | <ul style="list-style-type: none"> • Not applicable |
| Collaborative advancement through community institutions | <ul style="list-style-type: none"> • The benefits of the enterprise in the hands of a few | <ul style="list-style-type: none"> • Learnings of the project percolated with a broader community | <ul style="list-style-type: none"> • Community institutions are present in the control districts of Jharkhand; however, the collective advancement is not evident or visible for agricultural improvement |
| Lead farmer as an instrument for change | <ul style="list-style-type: none"> • Not applicable | <ul style="list-style-type: none"> • Lead farmer, the member of the farmer's group is the instrument to share learnings and penetrate agricultural practices with other farmers | <ul style="list-style-type: none"> • The concept of lead farmer as an instrument of change is not seen in the control area of the two districts |
| Capacitating and strengthening of institutions | <ul style="list-style-type: none"> • Tie-up with CII for technology • Tie up with individual resource persons • Training, handholding and problem solving | <ul style="list-style-type: none"> • Ongoing and continuing tie-up with Krishi Vigyan Kendra | <ul style="list-style-type: none"> • Strengthening of community institutions is carried out for microfinance activity in one of the control villages in the district of Jharkhand by a local NGO |

F. Technology, training and Transformation of women's role brings progressive changes in woman's status in social spheres

Women as informed and knowledgeable producers are given valuable positioning in productive decisions

In the project areas, the decisions related to cultivation were taken by the head of the family or by the male members of the family. It is an inevitable phenomenon in a patriarchal society. In the project EASE, woman had gained knowledge in agriculture. The shift was dramatic - women who erstwhile were doing household chores and drudgery inducing agricultural labour, were now seen attending meetings and discussing matter related to strategic crop cultivation. The older women were often joined by their daughters in law in the groups. The women in the SHG groups now discuss issues of crop utility with their spouses as well. Women also became teachers to men who migrate to cities for work; they encourage these young men to attend these meetings as well.

"My wife also goes for meetings. I am able to see that their voices have got louder and they are more vocal and are doing good work" (From family member male, Sandi, Project PLANT)

"Now she sits with us for discussions. She is able to talk in front of people. Now we both are involved in the decision-making process and take the decisions mutually as against earlier. (From male spouse, Sandi, Project PLANT)

As women began talking about agriculture and took lead in decision making, it improved their status in the family as well.

"Our relationship has become better now. When I come home, she tells me, something needs to be grown. I ask her how? Then she guides me. She tells us to leave space between the plants. We can walk in between the plants. She goes to meeting the meetings regularly and fetches good information. She is able to put her point across clearly. We take the joint decision on the matters other than agriculture. I stay out (meaning work in another city and stay there). When there is an emergency, she takes decisions on her own; she takes money from the group. Even if we have to send money, it will take time". (From male spouse, Sandi, Project PLANT)

Women are able to find space on how produce should be utilized

The agricultural markets are predominantly male driven and still a lesser explored territory for women. However women, through village markets, have come forward to sell produce and earn better incomes. In both the projects, the women beneficiaries have now gained some say over the matters related to marketing of produce such as food grains, gram and pulses, vegetable, livestock, fish or by products of the food processing units. Markets require interaction with informed persons and women have received a head start to connect with the markets. This is a long journey and it needs to be continued.

Ownership of agricultural and other assets and resource is governed by traditional norms, the project has shifted the goal post, it opens doors for opportunities that need consideration

Women in SHG have ownership of the agricultural equipments and the enterprises. The community says women have demonstrated the capability in managing these assets and the enterprise. This has

led to the change in the status of women in the household as they are now able to look after financial management in homes. In the interviews women shared that men now give their income to spouses and they manage money better by cutting down unnecessary expenditure. Many women have opened bank accounts and deposit their savings in these bank accounts.

Land and other assets in the project area are still owned by the elders of the house. Women's major assets include gold and silver, traditionally. Women, lately, have owned money and made savings in the banks. In both the projects, similar trend was visible amongst the beneficiaries.

Women have gained a rightful place in the household and have control over expenditure, credits and savings

The earning of the produce has always been in the hands of the older members of the family. As women have become important part of the community, they now put forward their demands on how to use and manage these earnings. Women rightfully decide how money should be spent and provide their own explanations for the same.

The communities, associated with both the projects, in the past, used to depend on external money lenders for loans during their financial needs and emergencies. With the self-help group formation and consolidation, micro finance activity has become robust. Currently, they pay INR 2 per for the loan of INR 100 from SHG. Earlier, when the facility of loan from SHG was not available, people were harassed by the money lenders continuously.

Women, however, play a greater role in the micro financing activity of the group by accumulating savings that are generated. This activity has led to the emergence of an interesting trend - men have also started coming forward in saving money and initiating lending in their circles.

Women have gained control over meaningful leisure, socialisation and are better equipped to manage time schedules and workload

EASE project made a paradigm shift by reducing the "women's work burden" by facilitating the use of technology. Earlier, the livelihood options and actions were generally carried out without lowering the burden on women.

"Let her continue to contribute in the discussion, I will cook lunch for the family"

The team witnesses one such incident; one of the SHG women and her mother-in-law were participating in the interview. After a few minutes of discussion, the mother-in-law leaves the room asking the daughter-in-law to continue the discussion while she cooks meals for the family. We also witnessed men cooking at the household when the woman was in a discussion with us. Women, it is perceived, move with much more freedom within and outside the village and in social spaces.

Comparison: Changing position of women post-intervention

| Themes | EASE | PLANT |
|---|---|--|
| Knowledge as a value in providing a place for decision making | <ul style="list-style-type: none"> • Women have found space in the decision-making process -Women have learnt how to voice their opinions to be heard | <ul style="list-style-type: none"> • Women have found space in the decision-making process -Women have learnt how to voice their opinions to be heard |
| Familial relationships | <ul style="list-style-type: none"> • Mother-in-law and daughter-in-law work as partners in daily chores and in enterprise • Husband and mother-in-law support woman to participate in self-help group meetings and activities | <ul style="list-style-type: none"> • Agriculture binds communities, extended family works one each other farmlands and this reduces agricultural input costs |
| Women control over produce and earnings | <ul style="list-style-type: none"> • Full control of woman on the enterprise, the produce and the earnings | <ul style="list-style-type: none"> • Woman are seen as equal partners having equal share in produce and earnings |
| Right over property | <ul style="list-style-type: none"> • Control of enterprise machinery and agricultural equipment in the hands of women • Property rights with the head of the family/husband | <ul style="list-style-type: none"> • Property ownership is usually with the ancestors • Land records have not incorporated change in the current ownership |
| Control over expenditure, credits and savings | <ul style="list-style-type: none"> • Family has moved away from market credits -Self-help groups main source of emergency funding | <ul style="list-style-type: none"> • Family has moved away from market credits • Self-help groups main source of emergency funding |
| Leisure, socialisation and time management | <ul style="list-style-type: none"> • Great levels of satisfaction of leisure time activity and socialisation • Technology has reduced drudgery of manual work | <ul style="list-style-type: none"> • Great levels of satisfaction of leisure time activity and socialisation • Women do not feel overburdened |

Discussion of Findings/Conclusions

Taking the areas of inquiry of the evaluation, the thread of discussion will be addressed under the three themes

- The difference in approach across the two projects
- Difference in the outcomes across women's empowerment and gender relations across the two projects
- Causal linkages between project approaches and changes in gender relations and/or women's empowerment

A. Is there a difference in approaches across the two projects?

The striking difference between the approaches across the two projects was the use of technology; there was more similarities on the agricultural interventions

The learning of the two projects resulted in identification of the following major components of approach as:

- Shifting from customary mono - cropping to manifold cropping, diversified agriculture and horticulture
- Integrated and organic scientific farming
- Promotion of knowledge-based agriculture
- Rain water harvesting, conservation and enhancing water use efficiency for sustainable agriculture
- Post - harvest processing and value addition
- Integrated livestock and fishery development



- Development of an appropriate, farmer- centric institutional framework such as women's self -help group, women's enterprise self-help group and farmer's group, to support agriculture production systems and forward linkages
- Promotion of agriculture- supplier linkages
- Microfinance and saving for financing in distress

The approaches that exist exclusively in the projects include:

- Breed improvement – at Project PLANT
- Circular diversity promoting nutrition kitchen gardens - at Project PLANT
- Technological solutions with active involvement of women in the process of technology adoption – at Project EASE

The Project EASE is a technology driven project with two sub-approaches, provision of agricultural machines to ease women's burden and technology for establishing women centric enterprise. The Project PLANT is a holistic community driven approach that is purely agriculture based. PLANT has linked farmers with agricultural knowledge. While this component is present in the Project EASE, the technology intervention has taken the centrestage placing agriculture as an associated intervention. Institution building in the Project EASE required communities that can understand business models while for Project PLANT, the strategy was more about carrying everyone along for maximizing scientific agriculture. To promote communities that develop robustly, it is important to work with institutional mechanisms that consider marginalised and disadvantaged societies within the approach. Within these communities, it is important to look at excluded groups and work out mechanisms that are more likely to address poverty, the fundamental goal of development interventions.

Institutional knowledge partners' role in sustainability differed across the two projects

The Project PLANT had made conscious efforts to strategize a robust knowledge partner, Krishi Vigyan Kendra, as an ongoing partner throughout the project phase. The Project EASE had strong partnerships with CII and a private agency for training, seeds and technology decisions.

Women's role as contributors to economy is distinctly seen in both projects; knowledge and competencies made women be recognised

The entrepreneurial activity carried out in Project EASE was effective in breaking the traditional norms of women managing an enterprise. It also broke the myth that women cannot handle or operate machinery efficiently. In Project PLANT, the SHG women are seen as agriculturally sound and have been able to get their voice heard at the household and the community meetings. Both the projects gave power to women to rise above the traditional roles.

In the Project EASE model, a select group has been empowered while in the Project PLANT, the model of empowerment is penetrated by other members of the community emulating the actions by observation, exchange of learning and being co-players.

In both the projects, women have managed produce and the earnings of the produce. Women in both the projects are involved in microfinance. They are able to change the age long tradition of letting men

take charge over financial matters. Interestingly, in both the projects, men are highly appreciative of the women's ability to save money. The women's ability to save has reduced the community's dependence on external credit.

Economic empowerment and as knowledge holders, women have been valued for their decisions both in private and public spaces; working on technology has an edge when it comes to respecting women's agency

Women now have their say and voice in several matters that includes not just agriculture but also in the matter of education of their children. The use of technology has given women an edge as contributors in a space that was primarily male-dominated. Project PLANT has made women leaders, not only in the agricultural fields, but in households as well.

"Husbands are ready to send her for the meeting and they don't see any problem with that. My aunty is now able to talk properly and with lot of confidence. She never used to talk with this much confidence earlier.... People from IGSSS used to come here to support women from SHG, but even if IGSSS do not turn up they (women) will run the group....I also go for meeting and attend them. ...We are men. They call us and ask us to listen to them. I get to know more about agriculture during this meeting like how to make organic pesticide (From Farmer's Committee member, Mehndikheda, Project EASE)

Women from Project PLANT and EASE have reached out to the local administration and raised their concerns and issues. They have been able to access civic rights and entitlements. In the Project PLANT women have a direct access to Block Development Officer which has put them in a better position. The access is not limited to the women; the men also have reached out with much more purpose than they used to do in the past. The male members who were part of the FGD at Project PLANT said -

"When we feel the need to have a water tank, we write an application and send it to the Block Development Officer. They check the necessity of the construction of the well in the village, if they approve, under MNREGA, we construct well". (From male FGD, Tasnalo, Project PLANT)

The expansion of their reach is expansive and the benefits have expanded to spaces that did not figure out in the project approach. One of the women shares the access she has got within the health services as,

"We also got information on various other aspects like where to take the child to doctor. They have given us very good suggestions. They all give positive suggestions, what food to eat, which kind of food to eat. I also know that even if IGSSS is not there, we will be able to take care of ourselves through the knowledge we have". (From a married woman's interview, Belsar, Project PLANT)

When women manage productive earnings, they contribute towards family financial stability irrespective of the intervention approach used

Since women have gained control over earnings of the enterprise and the agricultural sales, they have also become the custodians of their husband's earnings. This is a promising trend, acknowledging

the competence of women to handle money. It is also promising to see women being consulted in partitioning and deciding on the amount of produce for sale and home consumption.

However, neither of the projects considered property as an asset to be claimed by women in the communities; what they have is only small savings. Landholdings continue to be in the names of the elders and, at Jharkhand, in the name of the long expired elders in the family.

One interesting trend that is noticed is the increased satisfaction among men on the growing independence of the women. Women no longer depend on their spouses to move around. In Madhya Pradesh, the mobility is further attenuated by the solar lighting provided through the project donor. This has broken the barrier for women to move around late at nights. In both the states, women go to market space and sell their produce without any constriction.

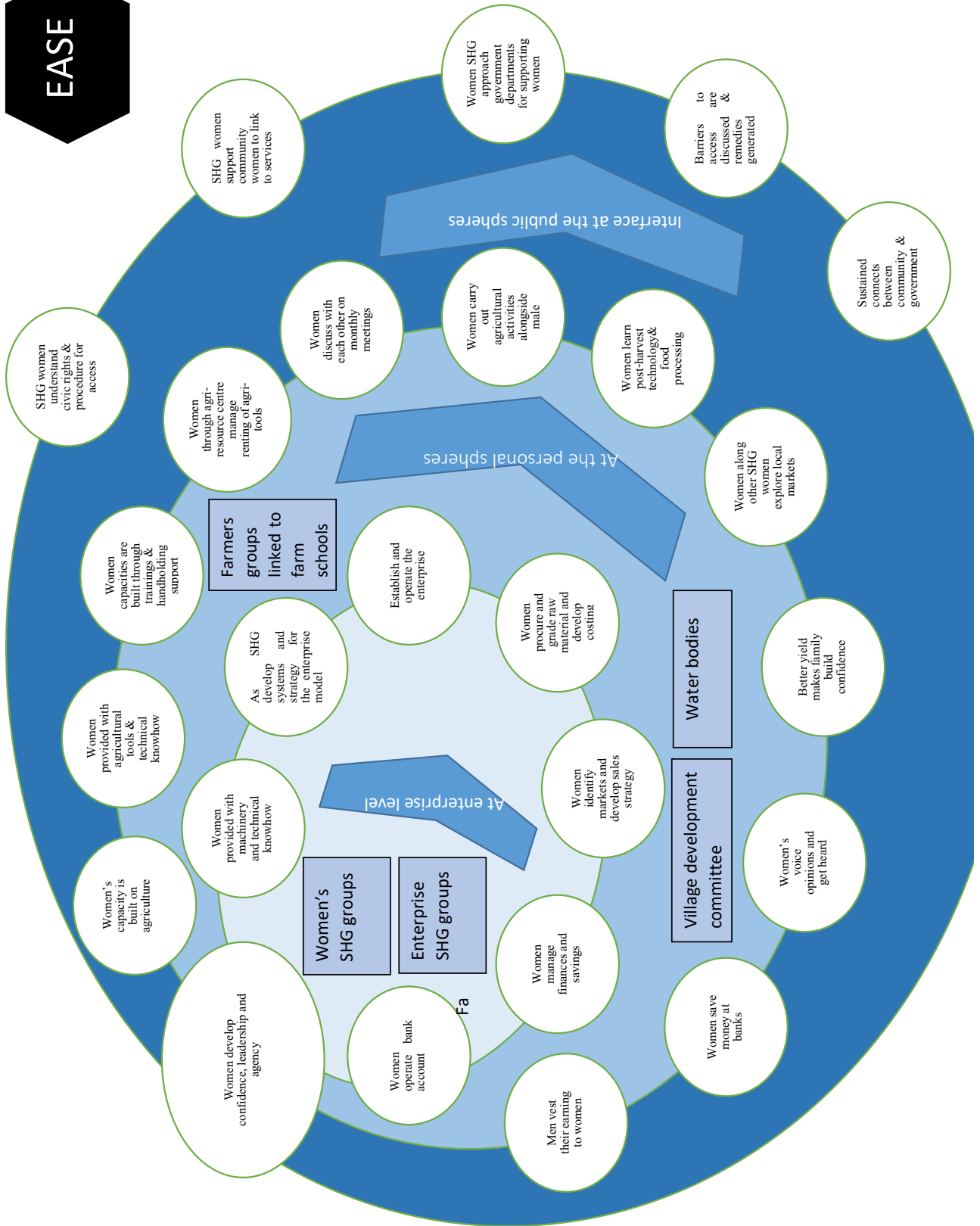
B. Causal linkages between project approaches and changes in gender relations and/or women's empowerment

The two projects had different pathways that were governed by the process of the intervention. When one looks at the causal linkages for change between the two projects, they appear distinct and it was the role of the institutions that have made the major difference. With the help of the pictorial diagram, causal pathways and linkages between the approaches have been delineated. The project has helped in building confidence, leadership development and competency building among women. The competencies have been consistent, scientifically driven.

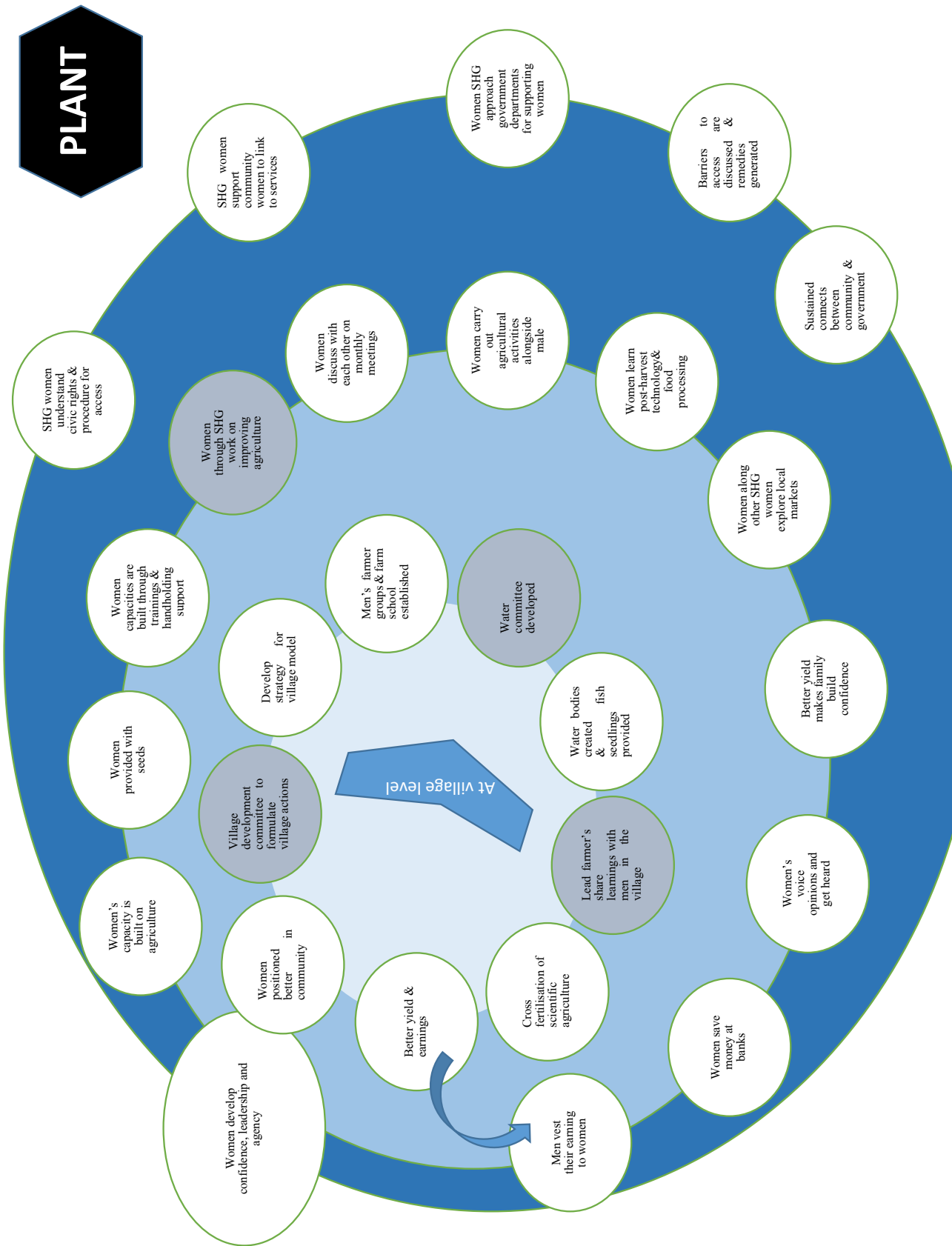
What needs to be however kept in mind is that mainstreaming communities within the ecosystem and making them part of the ecosystem by breaking the barriers of access makes exit or downsizing operations easier. The thinking needs to be laid down in the formulation phase and the community needs to be on board on the exit planning right from the very beginning. The handholding approach needs to be empowering and geared towards independent functioning.

The causal linkages for the two projects are pictorially represented as follows:

EASE



PLANT



C. Distinguishing attribution and contribution of change

1. Women competent in handling agricultural machinery and food processing enterprise

Attributed to project: Women were provided with, and trained on agricultural machinery and technology that was women centric and easy to use.

Resultant women's empowerment and gender equality: Having effectively and efficiently taken responsibility to manage, operate and manage the rental logistics, women at Project EASE have developed competencies which are visible, demonstrative and well respected by themselves and their community, a skill that is not seen among the control villages. The knowledge, skills and motivation to work as a group with accountability, responsibility and efficiency is a direct contribution of the project. The woman expressed confidence to sustain and the ability and motivation to expand their enterprise. Women managing technology led enterprise and agricultural tools are unique to Project EASE.

2. Women are considered for knowledge on cropping and participate in decision making in public and private spaces.

Attributed to project: Women's knowledge and skill were enhanced through ongoing input-enhancement in scientific agricultural practices, improving better returns on produce through food processing and expanding crop diversity and agriculture throughout the year. Women have learnt on how to approach the government, raise their voices and work towards their own and community betterment.

Resultant women's empowerment and gender equality: In an ecosystem where women's role in agriculture is shrinking, the project shifted positions by empowering women with knowledge and technology through the self-help group platform. Women have learnt to put forth their opinions, voices and new learning with their spouse and elders in the family; leading to a consultative decision making where woman is a member in the discussions at the household. At both the projects, the women are valued as holders of knowledge.

3. Women are gradually gaining access to and decision-making power about productive resources

Attributed to project: The project equipped them with knowledge on marketing of produce thereby expanding women access to money from market sales in their hands

Resultant women's empowerment and gender equality: Women are able to own a portion of their money through the sales of agricultural produce and the food processing initiative. Women are the owners of agricultural machinery, the food processing unit and the profits from sales of the food processing and agricultural produce. Women in both projects are able to partake in decision making at the household.

4. Women as safe keepers of money and for savings at household

Contribution by project: Women have developed financial literacy through the self-help groups, food processing enterprise and marketing of processed food and agriculture produce at local markets

Resultant women's empowerment and gender equality: Women often leave financial matters to men and elders mainly because they are perceived as incapable of handling finances. Family members do not view women as being world wise to handle money. Women's newfound competence in managing enterprise and marketing of processed food and agricultural produce has built confidence in woman that has resulted in men handing over their money for safe keeping and for savings to women. Women have bank accounts and are saving money at the bank. Women have a say on the money that is in their hands. They are able to question the spouse on how and why the money is used. She also has the freedom to use the money. She shares with the spouse on her needs and expenses. Using the same platform of self-help groups working on microfinance established other organizations, Project PLANT has consolidated and maximized local strengths. This is visible in both the projects.

5. Self-help groups serve as safe creditors in need and for emergency

Contributed by project: Women had learnt to manage money and save for the future keeping aside money from their enterprise (Project EASE) and from microfinance as savings for the SHG. Even at the household, she is looked upon for creating household savings. In times of emergencies, the family and the needy approach the SHG women for emergency finance.

Resultant women's empowerment and gender equality: Managing money brings in agency in women as they have to negotiate for loan and for providing loans. Alongside the skills of saving has provided space for granting small loans to members and the community members as needed. This activity is supported by the ongoing microfinance activities that the women's group carry out. This is seen in both the projects

6. Women's participation in public spaces and interaction with local government and panchayat

Attribute to project: In the State of Jharkhand, the project has enhanced women's access to public utilities, civic and welfare services and panchayats while in the State of Madhya Pradesh, it is more localised support.

Resultant women's empowerment and gender equality: With the initial boost from the project, women independently or with members of the SHGs have accessed the BDO, the banks and the KVK for their needs and rights. They seek services on their own and have knowledge on the processes, escalating grievances to the BDO and availing benefits. Almost all project women in the two states had bank accounts and Aadhar cards. Those eligible for pensions had either sent in their application and/or had received the pension.

7. Women in leadership position advocate for women's rights

Contributed by project: The project has promoted the formation/strengthening of SHGs through their active involvement in enterprise, management of agricultural machinery and cultivation and marketing of crops. The leadership that these collectives have provided has opened doors of opportunities.

Resultant women's empowerment and gender equality: Women have taken leadership for resolving local matters with the support of the panchayat and raised issues related the constrained access to welfare services. On behalf of the community, they have raised petitions. In one village women have worked together to reach housing to the needy and have made plans to provide houses to the community as a whole with support of the government schemes.

8. Women have able to balance time and have leisure

Attributed to project: Women have learnt new skills to enhance livelihood, however, the focus has been to reduce their burden rather than overload with work and draw support from each other

Resultant women's empowerment and gender equality: Women have been able to expand their agriculture and earning and at the same time draw comradeship and support for agriculture from the SHG women. This has reduced the burden of work. Women have learnt to effectively balance work with leisure within the village and with the social sphere.

9. Children's education is receiving attention

Indirect effect of project: Both the projects have exposed community to a range of possibilities and opportunities

Resultant women's empowerment and gender equality: Women have realized the importance of education for their children and are sending their children to school. A few have reached college education; however, their numbers are small. This is an indirect effect that is seen in both the projects.

Challenges in Implementation

Both the projects have been able to circumvent most of the local level problems and challenges with the commitment of the dedicated and longstanding staff that has put in a place sound problem solving approaches on the ground. Some challenges were beyond their capacity and control and these are listed here.

1. The Project EASE was planned for funding for three years; however, the funder's CSR strategy changed and the funding was stopped after a year. IGSSS did not want to close the project and hence supported it for a few months with their internal funding and when the funds were delayed for more than a year, the self-help groups were energized by committed staff members who were no longer working with the organization.
2. Maximisation of earning of organic agricultural produce has been limited at Project PLANT and hence the organic farming promoted by the project was not practiced in full scale. Farmers cultivated it for personal use only. The absence of organic food market chains was a dampener for maximising full potential and impact of the project.
3. Social change process is a long-drawn process. Interventions will not be able to demonstrate impact in the shorter time that the CSRs expect to see as results. On the other hand, it is also important that the outcomes are considered with a lens of practicality and possibilities of attaining those results, within the said turnover time, are feasibly factored into project design.

Recommendations

Through project learnings, few key recommendations have emerged, as follows:

1. The two approaches have different outcomes at the household and community level and there is a need to introduce technology-based interventions in future programming within the projects that work on improving livelihoods of people.
2. Promoting agriculture through natural farming in tribal area through improved water management systems, improved seeds, better farming methods and market linkages has been advantageous. While the agricultural support is continued in future programming, the next step would be to build better quality controls and better pricing through organic market chains. Agriculture should go beyond just providing household financial security to moving towards familial nutrition security, an approach followed in Jharkhand.
3. Livestock is a good support for improving incomes. The livestock promotion can go alongside creation of para veterinary workers who can support in ensuring that the livestock are free from disease. Narrowing down the beneficiary selection to include needy women, especially young single women in distress can prove to be beneficial for social inclusion related outcomes.
4. Agriculture machinery and equipment is a wonderful tool to make technology use possible for use among women farmers. Deciding on the appropriate tools should be through a field study, preferably supported through agriculture technical institutes such as Krishi Vigyan Kendra and industrial bodies such as CII.
5. Diversifying sources of incomes through promotion of alternate livelihoods is a brilliant strategy. The skills provided need to be aligned to enterprise development.

6. The concept of farm schools and SHGs as collective instruments for change has provided impetus to change. Having farmers' groups in each village is a good instrument to promote transfer of learning among men and for supporting women with the new knowledge that men farmers have gained.
7. Building linkages with governments, especially the Block Development Officer, is a powerful tool. Working with government acts as a proactive enabler and is good tool for future advocacy and public engagement on larger issues related to agriculture and livelihoods.
8. A comprehensive development, that includes schooling and college education promotion among children and youth, can help families to bear future shocks and promote long term security of rural households.
9. Land records are important instruments that are often a concern among tribal and rural communities. Working alongside District Legal Aid cells, villages could be supported to put in place para legal workers who can help communities streamline their property documents, at a time when the entire system of land records is being digitized countrywide.

Appendix

Technology provided

| S No | Agricultural Equipment | Utility/Function |
|------|--|---|
| 1 | Seed Treatment Drum | No chemicals used, less harmful effect on seeds and hands. |
| 2 | Fertiliser Spraying equipment | Equitable distribution, no direct contact with the hands |
| 3 | Fertiliser Broadcaster | Equitable distribution of solid fertiliser, no direct contact with the hands |
| 4 | Weeding machines – (A) Twin Wheel Hoe Weeder (B) PEG type dryland Weeder | No need to bend or hunch over while weeding |
| 5 | Harvest Sickle (advanced) | Light weight, sharper edges, less effort |
| 6 | Grain Grader | Helps in separation of grains according to shape and size with minimal effort |
| 7 | Cotton Stock Puller | Can be used in a standing position, less effort |
| 8 | Groundnut Grain Extractor/ stripper | Less physical strain on wrist and fingers. |
| 9 | Groundnut Peeler (sitting type) | Less physical strain on wrist and fingers. |
| 10 | Battery operated cotton selection machine | Less physical strain, less health hazards for women on the cotton-picking fields – respiratory problems for example |





28, Institutional Area, Lodi Road, New Delhi-110003
Tel: 91 11 45705000 E-mail: doc@igsss.net
Website: www.igsss.org
Facebook: www.facebook.com/igsss
Twitter: [@_igsss](https://twitter.com/_igsss)