



# Integrated Livelihood Approach for Landless & Marginal Farmers through Convergence by LKP in West Bengal



**Reproduced from**

**Compendium of Agro Ecological Best Practices, Mahila Kisan  
Sashaktikaran Pariyojana, DAY-NRLM, MoRD, Govt.of India, 2018**



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## Loka Kalyan Parishad

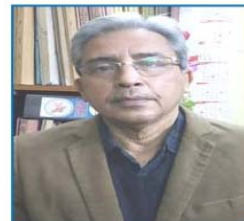
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Loka Kalyan Parishad (LKP), a Kolkata based nonprofit voluntary organization has been striving for sustainable development of the poorest of the poor through Decentralized Natural Resource Management (DNRM) with a special focus on women empowerment since 1977. In course of its journey, LKP accomplished number of projects leaving remarkable footprints in the development pathway for the underprivileged sections in the society.

The MoRD, Government of India launched a national programme called DAY – NRLM with MKSP on mission mode as one of its components in partnership with NGOs and CSOs in the country. The West Bengal State Rural Livelihood Mission (WBSRLM) was the co sponsor to implement it in the state of West Bengal. Loka Kalyan Parishad having sound domain knowledge and relevant experience in rural livelihood development was awarded the project as the PIA in the districts of Birbhum, Purulia, Uttar Dinajpur, Dakshin Dinajpur and Alipurduar for empowerment of 60,000 Mahila Kisan households through creation of sustainable livelihood opportunities based on community managed sustainable agricultural practices raising their production, productivity, and income level.

The core principle of agro – ecology was followed in course of implementation of the agro based project integrating trees, crops and livestock, focusing on ecological relationship within man, animal and plants in the ecosystem in various agro climatic zones in the rural area. LKP introduced a few potential BEST PRACTICES and livelihood prototypes/models to bring back the chain of interdependence through agro - ecology to work in harmony with society.

In course of the implementation process, in order to re-examine the approaches and to build on simple solutions to achieve the project objectives PRADAN as DAY- NRLM Support Organization was given responsibility to document the best practices emerged in the six key states of operation. The study covered identified best practice sites from nine implementing agencies across six states. Out of thirty two cases selected at first instance, the eleven most promising cases have been described in detail in the 'Compendium of Agro Ecological Best Practices' brought by the MoRD, Government of India. It gives me immense pleasure to announce that LKP's work in MKSP was recognized as a model and found place in the compendium in an article on 'Integrated Livelihood approach for Landless & Marginal Farmers through Convergence by LKP in West Bengal'.

We have taken the opportunity to reprint the article on LKP along with some relevant portions as it is and put the same in this document for further dissemination wherever appropriate places. We are thankful to NRLM and PRADAN NSO team for inclusion of the article on LKP's work in the MoRD compendium that inspires us to go further to achieve dignified livelihoods for landless and marginal women farmers.

(Shyamal Gan)  
Project Director





अमरजीत सिन्हा  
AMARJEET SINHA



सत्यमेव जयते

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### Message

Agriculture is the backbone of the Indian economy. And women farmers constitute most productive asset for the agriculture sector. Over the years, there has been a gradual realization of the key roles of women in agricultural development and their vital contribution in the field of agriculture and allied sectors.

Across regions, women farmers have played and continue to play a key role in the conservation of basic life support systems for agriculture such as land, water, flora and fauna. They have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance.

But despite women's extensive and varied participation in agriculture, they hardly get an identity of a farmer and don't have equal privileges, access and control like their male counterparts. Their farm work has become more labor intensive, mostly unskilled and yields meager economic returns.

In order to address this pertinent issue, Mahila Kisan Sashaktikaran Pariyojana (MKSP) was introduced as a sub component of Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM). MKSP focuses on Women's centrality in livelihood domain and therefore aims to provide direct and indirect support to enable them to achieve sustainable agriculture production. The key objectives of MKSP has been to promote women friendly sustainable agro-ecological practices, agri-nutri gardens, Custom Hiring Centre. MKSP strongly believes in development of community leadership and created a large pool of community extension workers like Krishi Sakhi and Pasu Sakhi for imparting improved skills to women farmers in sustainable agriculture, livestock and NTFP based livelihoods. Till December 2017, MKSP has reached out to 33.06 lakh women farmers & their households spread across 189 districts in twenty-two States. In this context, it is very important to reflect on the best practices those have emerged and established during this period in different parts of the country.





PRADAN as NRLM Support Organisation (NSO) has been given the responsibility to conduct this joint exercise in collaboration with NRLM.

I am thankful to NRLM and PRADAN NSO team for facilitating this exercise at multiple levels, bringing all key people involved on board to bring this publication. Special thanks to respective State Rural Livelihoods Missions (SRLMs) and MKSP partner organizations for their constant support and involvement during this exercise.

Today, more than ever, we must work with nature, instead of against it. Demand for sustainable livelihoods is set to rise in coming days. We now need new solutions for managing our natural resources to offset the rising challenges to livelihood security from population growth and climate change. This report recommends series of solutions to boost sustainable integrated approach to farm-based livelihoods.

I hope this book is going to be a ready reference for implementing agencies and development professionals in the field of sustainable livelihood promotion.

  
[Amarjeet Sinha]



एक कदम स्वच्छता की ओर  
**ATAL DULLOO, IAS**  
JOINT SECRETARY



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### Message

MahilaKisanSashaktikaranPariyojana (MKSP) is a major flagship programme of Deendayal Antyodaya Yojana – NRLM (DAY-NRLM). The major focus areas of this programme are women-friendly interventions and revival of sustainable agro-ecological practices. The primary objective of this programme is to empower women in agriculture by making systematic investments to enhance their participation and productivity, as well as to create and sustain agriculture-based livelihoods of rural women.

For a long time, livelihood promotion has been more input intensive, external dependent keeping small producers at bay from mainstream access and benefits. In doing so, it has often brushed aside traditional and Indigenous knowledge that embraces greener approaches.

By establishing efficient local resource-based agriculture, women farmers can gain more control over the production resources and manage the support systems. MKSP seeks to enable them to gain better access to the inputs and services provided by the government and other agencies. The increased production capacities of women farmers lead to improved food and nutrition security for their families and communities.

MKSP is being implemented by Project Implementing Agencies (PIA) i.e. by State Rural Livelihoods Missions (SRLMs) themselves or partner organizations who have expertise in working with communities at scale in agriculture and allied sectors.

Seven years since inception of MKSP, it is time for us to re-examine our approaches and build on smart and simple solutions to help achieve MKSP objectives.

In this context, PRADAN as DAY-NRLM Support Organization was given responsibility to document the Best Practices emerged in MKSP in six key states of operation. It gives me immense pleasure to share that NRLM is bringing out this "Compendium of Agro Ecological Best Practices" based on experiences in six operational states. I am happy that this important document is being formally launched on an important day being celebrated as "Ajeevika evam Kausal Vikas Mela" on 5<sup>th</sup> May, 2018.

I am thankful to PRADAN, their entire study team members, our state unites in the states of Odisha, Madhya Pradesh, Jharkhand, Chhattisgarh, Bihar and West Bengal and all partner organizations for making this joint exercise a meaningful one and bringing out this useful document.

The best practices thus evolved would be the knowledge resource to be emulated in scale by different State Rural Livelihood Missions (SRLMs) and development agencies. I foresee the best practices documentation exercise will be a regular programme across operational states to create and update an institutional experiential knowledge bank that would inspire and guide institutions and individuals in the field of Livelihood promotion.

(Atal Dulloo)





## FOREWORD

By Executive Director, PRADAN



**S**mallholder farmers, especially rural women, constitute a significant share of total farming households in our country. The agriculture sector employs 80% of all economically-active women in India. They are assuredly the most productive workforce in the economy.

However, women in farming are generally not able to access extension services and production assets like seeds, water, credit, subsidy, etc., as most of them are not recognized as farmers due to lack of land ownership. In many cases, they are not considered as beneficiaries of various Government programs/services. It is important to recognize and strengthen the contribution of women farmers in the rural livelihoods domain.

Experiences of promoting women-friendly livelihoods, at scale, are quite limited in our country. Complexities of such models are not clearly understood, nor fully decoded. Mahila Kisan Sashaktikaran Pariyojana (MKSP) by Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM) of Government of India, is one of the important and systematic initiatives to establish such prototypes in various poverty pockets of the country. MKSP recognizes the centrality of women in agriculture, and therefore aims to provide direct and indirect support to enable them to achieve sustainable agriculture production.

PRADAN as a DAY-NRLM Support Organization (NSO) for DAY-NRLM, has been given the responsibility to document Best Practices under MKSP in six select states, namely Odisha, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh and West Bengal.

To facilitate this objective, a study was conducted to capture the best practices that have emerged from six years of MKSP's journey into some of the major poverty pockets of India. The objective is to draw lessons systematically so as to reach out to a larger section of excluded communities.

The Best Practices study was designed around three broad intervention areas of MKSP – Agro-ecological practices; Last-mile extension services for livestock; and Farm mechanization-Custom Hiring Centres (CHCs). In the realm of agro-ecological practices, the core focus is on strengthening farmers' sovereignty. Dedicated attention to increase organic inputs (and reducing the inorganic content), is becoming the driving force with better and innovative usage of home-made bio-fertilizers and bio-pesticides. Seed sovereignty is also gaining momentum with a focus on reviving selected indigenous seeds. Rearing of small ruminants in PRADAN's operational area in Odisha has demonstrated new ways of integrated livestock promotion that are gaining popularity among smallholders. On the theme of drudgery reduction, a number of new models are in different stages of development. A slew of improved tools in all categories including manual, animal-driven and mechanical, are emerging. These tools are helping women farmers complete their agricultural operations in a timely and cost-effective manner.





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## FOREWORD

The process of documentation covered success stories in these three areas and mapped the desired outcomes as to what worked well, what did not work, challenges, lessons learnt, gaps, scope for improvement, and the way ahead. The Best Practice documentation has also looked into the factors such as inclusion of the very poor, ease of replicability, and sustainability of the intervention.

The major finding from the study is that the women farmers and their collectives are taking charge of their livelihoods as desired in MKSP. A shared understanding about the approach was developed among MKSP Partners and SRLMs during this period. The models presented are ready for scale-up with a few modifications based on local contexts.

Overall, it has been a collective exercise and a joint journey with the Livelihood Missions, which has been quite enriching for PRADAN. This has helped us connect with DAY-NRLM, respective SRLMs, and development partner organizations more meaningfully. I thank the DAY-NRLM team for giving us this important responsibility of documenting Best Practices that would be a ready reference for livelihood practitioners and organizations. We are also grateful to the SRLMs in the six states, NGO partners and community-based organizations (CBOs) for their enthusiastic support in bringing out rich experiences across different themes.

I would like to thank my colleagues in PRADAN, for their invaluable contribution in generously sharing their knowledge throughout the report's production process. I also thank the NSO colleagues for their valuable time in coordination, framework development, compilation of best practices, and successful completion of the report.

This publication represents substantial contributions of DAY-NRLM, SRLMs and partner organizations' campaigns towards promotion of sustainable livelihoods. I foresee this study to be a regular exercise by DAY-NRLM at a national level.

I am quite hopeful that this Study Report will inspire healthy discussions and action at all levels towards more sustainable management of natural and human resources, and evolution of dignified livelihoods for smallholder women farmers.

**D. Narendranath**  
Executive Director, PRADAN



## 1.: Introduction

Women and their collectives like SHGs (Self Help Groups) and other community based organizations (CBOs) have supported women by providing financial security for many years. Those organizations have served as peer forums to support each other in the socio economic development of rural women by addressing their empowerment and livelihood enhancement issues. It requires a systematic effort to transform the lives and livelihoods of women and to recognize them as farmers and entrepreneurs.

Mahila Kisan Sashaktikaran Pariyojana(MKSP) is a pioneer program of the Indian Government's Deen Dayal Antyodaya Yojana- National Rural Livelihood Mission(DAY-NRLM) to support women in strengthening their livelihoods and empowering them in a sustainable manner. The program focuses on smallholders' farmers especially women in enhancing their skills, knowledge and self confidence to participate and prosper in sustainable farm livelihoods. The objective is to enhance their income and food and nutrition security through a basket of livelihood activities. This program also aims at creating various opportunities for women to foster their empowerment process in social-political as well as economic domains.

DAY-NRLM aims to reach out to all the villages in the country in a phased manner by 2021-2022, with the intent to enhance the livelihoods of poor families. MKSP, through its poor, women friendly and sustainable approach, thus becomes a platform for promoting women led sustainable livelihood interventions.

MKSP is being implemented by a number of Project Implementing Agencies(PIA), i.e, by State Rural Livelihood Missions (SRLMs) themselves or partner Civil Society Organizations(CSOs) who have expertise in working with poor rural communities in the farm sector. Within seven years of its launch, it is now the time to look into the best practices thus evolved would be the knowledge resource to be emulated in scale by SRLMs and other partner agencies.

PRADAN has been supporting DAY –NRLM as an NSO, as a knowledge and capacity building partner in strengthening its livelihood theme. With support from MKSP, PRADAN has carried out field studies to identify and document best practices in six states, namely Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal.



### **Rationale of the study:**

- Pro-poor and women friendly, large scale livelihood experience are limited in the country
- Complexities of such models are not clearly understood or fully decoded.
- MKSP is one of the initiatives to establish such prototypes
- There is a need to now draw lessons systematically so as to reach out to a larger section of left out communities

### **Purpose and objectives:**

The aim of this exercise is to identify, assess, compile and disseminate evidence based best practices that have emerged in the MKSP providing pro-poor, sustainable livelihood solutions, which could be widely replicated and scaled up. Thus, however, in no way evaluates the project .The existence or absence of best practices or for that matter the quality or significance of such best practice, does not in any way reflect the performance of the project or that of the implementing agencies.

The best practices would necessarily cover various aspects like technical packages, implementation mechanisms and institutional arrangements which have become instrumental in adding to the effectiveness and efficacy of these projecting terms of achieving the desired outcomes. The outcomes of the MKSP project are listed below:

**Women Empowerment:** This has been explored with women members and their families and institution and regions in terms of shifts in the intra household level decision making, division of labor, enhanced skills and knowledge in farming practices, increased control over income realized and increased access of women to various resources and services.

**Food and nutrition security:** Dimensions such as enhanced productivity in cereal crops so as to have round the year food sufficiency and interventions in vegetables, pulses and livestock for family consumption for better nutrition through food diversity have been studied.

**Economic impact:** This has been considered both from enhanced income due to higher productivity and more area coverage and also due to the decrease in production cost. The focus was to see whether the net additional income is significant for the family, i.e, equivalent to 200 days of local minimum wages from the basket of activities taken up by them.

**Drudgery reduction:** This is being targeted through the use of gender friendly tools and technologies, particularly for women in agricultural sector. Access to user friendly farm





implements designed to reduce their drudgery and physical stress, enhanced skills to use them and increased participation of men in the activities generally taken by women are some of the aspects studied.

Besides the above, the best practice documentation has also looked into factors like poor interventions, ease of responsibility, and sustainability of the intervention and the scope of convergence.

The documentation has been carried out in six States covering the experience of nine agencies namely JEEVKA, TSRD(Tagore Society of Rural development), LKP(Loka Kalyan Parishad) Baster Seva Mondal, PRADAN, Harsha Trust, ORISSA, MSSRF, and ASA(Action for Social Development). Eleven select cases have been compiled here. Each case has been described in details in terms of the key problems or issues that the poor women farmers face, the idea of the model to address the issue, the interventions, result areas, emerging best practices and possible way forward.

In each case the emerging best practices have been identified in different domain areas such as nutrition security, farm mechanization, livestock rearing, sustainable agricultural practices etc. A short note on each domain has been developed to compile, compare and analyze the best practices emerging from different cases. This note also includes some recommendations that can be adopted while promoting the related themes in future.

Finally, a chapter on comprehensive recommendations has been provided, by bringing all the best practices together. Any Government or non Government agency interested in taking up similar projects, aimed at empowering rural women by strengthening their livelihoods on a large scale can follow these recommendations.





## 2. Integrated Livelihood Approach for Landless & Marginal Farmers through Convergence by LKP in West Bengal

### Background:

Loka Kalyan Parishad (LKP) has been working in the backyard districts of West Bengal and is working with about 60,000 Mahila Kisans spread over 11 blocks of 5 districts. It has been partnering with WBSRLM (West Bengal State Rural Livelihood Mission) to implement its MKSP project since 2013 in the Labpur block of Birbhum district. Around 60% of the population belongs to the SC, ST and OBC community. Agriculture and wage labour are the major sources of livelihood in the area.



### Contextual Issues, Problems & Challenges:

With very high population density, the average landholding of the farmers is less than 1 acre and this is decreasing gradually. About 51.56% families are considered to be landless. Agriculture is mostly rain-fed and the average food security from owned land is about 3-5 months only. The landless families mostly take land on lease from individuals as well as from the *Gram Panchayat*. However, the leased land is also very small. The issue of land availability results in decreasing livestock rearing due to less availability of grazing lands for animals which is affecting the availability of compost. Gradually, most of the male members of the families are migrating to other districts and states in search of opportunities, while carry on the agricultural activities along with household work. The nutrition status of women is very poor, where more than 70% of the women and children of the targeted population are anemic.

### Core Idea:

With very high degree of landlessness, nutritional security has become a huge issue in the area. The idea was to ensure access to land individually or collectively through leasing land from individual land owners with surplus land or from common *Panchayat* land with the involvement of SHGs and PRIs. The SHG members are trained to utilize these small land areas to produce nutritious food round the year by adopting available inputs and organic practices. This is supplemented with strengthening small livestock like BYPs, goats, etc. to further add to family nutrition and income in the hands of women. Collaboration with *Panchayat* bodies and various line departments strengthens the overall livelihoods scenario of women farmers, enhances self-confidence, and contributes towards empowerment in general.





### Key Interventions:

- Promotion of individual and community nutritional gardens in small, unutilized land areas.
- Ensuring sustainable practices like the preservation and use of local seeds, seed treatment, application of organic manure (Compost, Azolla, Amritajal and Jeevamrit) and organic medicines (Neemastra, Brahmastra and Agneyastra) in kitchen garden.
- Ensuring improved rearing practices for goats and backyard poultry.

### Strategies:

The key strategies followed by LKP while grounding the above interventions can be listed as below:

- Strengthening the relationship of SHGs and the community with PRIs.
- Ensuring convergence with the bottom-up planning process.
- Triggering convergence for landless community to get leased land.
- Designing interventions that the community can do easily with available local resources.
- Nesting of local para-professionals and CRPs.
- Intensive training of SHG members by the local para-professionals and CRPs around interventions.







### Results:

The followings are the district outcomes observed in the project area of LKP while making the field visits.

**Outreach:** The project is running in 11 GPs covering 14,489 Mahila Kisans to 1,660 SHGs. The study team had visited Indus and Lavpur GPs of the block. In these two *Panchayats*, about 90% of the members have adopted different activities promoted by LKP. 2190 SHG members have opted for individual kitchen gardens, 1,900 families have been covered under the livestock programme, 1,920 farmers are producing vermin-compost, and 660 farmers are practicing non-chemical farming practices completely.

**SHGs and PRIs on a single platform:** A smooth and healthy relationship the SHG and PRI systems has been established. The development work is being carried on via a participatory approach. The members of MKSHGs (Mahila Kisan SHGs) prepare their livelihood plans, which are consolidated at the village/sub-cluster level. After being approved in the *Gram Sansad Sabha*, the consolidated plans are incorporated into the annual plan.

**Capacity Building of CRPs and SHG members:** The CRPs under MKSP have been developed mostly around agriculture and animal rearing. They have also gained expertise to extend help in other areas like fisheries and some off-farm activities, including the livelihoods planning process. Experts from reputed institutions like BCKV, KVKs, CADAC, NIRD, SIPRD, and from Government line departments have trained CRPs. They are also supported by field-level handholding by LKP experts.

**Approach to landlessness issue:** The private land and public land that remain fallow after harvesting of *Aman* rice are taken on seasonal lease in private-private and public-private mode season to season for a short period. The MKs are growing Rabi pulses, oil seeds, etc. and if reliable irrigation is available, they are opting for wheat cultivation. Similarly, on common land, the public-private partnership mode is adopted by the landless SHGs where they take up agro-forestry plantation for fruit, fodder, fuel and timber. Ponds and other water bodies are also taken on lease for integrated farming. This leasing of land to individual landless and landless groups is finalized with the involvement of SHGs and PRIs.





**Preparation and use of organic nutrients:** The women farmers here prepare vermin-compost and follow the *Nadep* pit method to prepare compost with the support of CRPs. Members are preparing and using organic nutrients and pesticides extensively. Bijambrit is being used for seed and seeding treatment, Amritjal and Ghana-Jeebambrit as nutrients, and Brahmastra, Neemastra and Agneyastra as organic pesticides.

**Quality traditional seeds through seed banks:** The preservation of seeds has been given utmost importance in the visited project villages. It has been a group-based activity operating in a village with 2-3 SHGs selecting one member to take charge. This model provides assured quality seeds in time at a fair price. Nowadays, they are also selling surplus seeds when the market price is high.

**Nutrition garden:** Most of the families in the visited villages have adopted the nutrition garden model in small plots of about 2-10 decimals as per the availability of land near their houses. Crops are grown throughout the year. Nutritious fruit plants like drumsticks, papaya, citrus, guava, etc. are also an integral part of the kitchen garden, which ensures the availability of chemical-free and nutritious food to the families round the year. The women are enthusiastic about the activity and their gardens are being promoted in an integrated manner by using available local resources. The traditional seeds, the vermi-compost, Azolla and Nadep are integrated with kitchen garden, and the models promoted are low-cost and easily managed by them. Four different models were observed during the visit:

- Community nutrition garden in leased land taken up by a group of landless SHG members.
- Individual members doing it on their own land or on land leased from other farmers.
- Some are doing it around small farm ponds close to their house along with fish farming.
- In schools, also SHGs are promoting nutrition gardens in schools, which help children in getting chemical-free nutritious mid-day meals.

The following is a case study of a successful, typical member of the visited project villages.

### **Case of Asrufa Didi:**

Asrufa Begum is a member in Nabisaheb Swanirbhar Dol SHG in Dakshin Durgapur village situated in Indus GP of Lavpur block. She has 5 decimals of homestead land and is growing a nutrition garden after receiving training on this from LKP. She grows multiple crops in 3 seasons, i.e. pre-kharif, kharif and Rabi. She grows leafy vegetables, cucurbits, cole crops, solanaceous crops, papaya and drumstick. She has adopted vermin-compost, Amritjal and Azolla, using traditional seeds, application of organic medicines and fencing using plastic



nets. She is able to earn about Rs. 15,000 from this small patch of land after fulfilling the consumption needs of her family for the whole year.

Return vs investment (2017)		
Season	Investment (Rs)	Income from selling (Rs)
Pre-kharif	650	4,650
Kharif	550	3,445
Rabi	755	8,600
Total	1,955	16,695
Profit	14,740	

**Livestock:** Integrated livestock has been one of the major interventions promoted by LKP. The families prefer chickens and ducks to other small and large ruminants, as with low land holding, grazing is a challenge here. Around 10% of families are keeping 2-3 goats and 40 to 50% members are keeping poultry. These birds are providing meat and eggs. The whole programme is run in close collaboration with the Animal Husbandry Department of the local Government. The major interventions being carried out are ensuring deworming, vaccinations, medications and breed improvements. A group of women service providers have been trained under MKSP by the department experts. It has been observed during the field visit that members keeping 8-10 birds are able to get Rs. 6,000 to Rs. 8,000, after fulfilling their own consumption needs.

**Overall outcomes:** The overall interventions around kitchen garden and the livestock, especially poultry, are making the family self-sufficient around nutrition, along with ensuring additional income for women. Women highlighted the quality of produce from their kitchen gardens and are enjoying this income-generating activity. The linkage between SHGs and PRIs is very vibrant. During interactions it was evident that the women are having increased say in their villages and *Gram sabha*. They have developed much confidence to deal with other stakeholders and are now also taking decisions in their villages and *Panchayats*.

#### Key learning and Best Practices:

- The round the-year kitchen garden model with a mix of vegetables and fruit trees in small plots, following locally prepared organic inputs, including local seeds, is a promising activity.
- Further ideas of using plastic nets along the fencing which not only protects the crops, but also creates opportunity to keep small livestock like poultry and goats are worth replicating. Both these activities, especially BVP, can be very well managed by women, and bring nutritional security and addition income.





- CBO and PRI convergence for addressing livelihood issues, especially related to landlessness. The coming together of SHG and PRI for overall development of the area is quite visible, especially to help the landless families in getting private and public land on lease. This is a great respite for the landless and marginal farmers of the area, especially women.
- Livelihood plan of SHGs and linking it to *Gram Sabha*: This has truly built the confidence of the SHG members and equipped them much to clearly take decisions on delegation of responsibility. They have also realized the importance of *Gram Sabha*'s role in strengthening their livelihoods and accessing the provisions under various Government programmes meant for them.
- Converging with line departments for capacity building of members and community; the strategy of leveraging opportunities of training from various departments is also worth adopting. This facilitates a collaborative for women farmers to participate in and influence various interventions run by Government departments. After all the goal of DAY-NRLM is to build the capacity of SHG members and their collectives to effectively collaborate with various stakeholders to improve their livelihoods.
- Focusing on livestock as a whole with poultry for marginal communities: The whole livestock intervention is being done purely through convergence. The crux is that all the livestock reared in the area is targeted. The introduction of poultry is giving good results and is well-accepted in the area.

### **Way Forward:**

All the best practices around sustainable agricultural practices are largely confined to homestead kitchen gardens. Efforts need to be taken to replicate this into their main field crop. The much-promising system of land leasing can be expanded to other potential domains like leasing of *Panchayat* water bodies for fish farming large waste-land for orchards development, etc. Livestock intervention is also carried out very sub-optimally. Other avenues should be explored to add intensity to this activity. The practice of conserving local seeds through SHG collectives should be further explored. For example, it can be done through an entrepreneurship model for better sustainability.



After analyzing all 11 case studies , the study team put forward specific recommendations on Sustainable Agriculture, Integrated Livestock, interventions and strategies in SA practices. Best Practices emerged along with overall recommendations which are as follows:

## **Sustainable Agriculture: Analysis & Recommendations**

Current agricultural practices largely require highly chemical intensive inputs that have made farming more and more expensive, externally dependent, uncertain, less rewarding, as well as unsustainable. India is currently the largest producer of chemical pesticides in Asia and tenth largest consumer of these in the world. It is proven that those chemical pesticides have adverse long term effects on surface/sub surface water and soil biota, which adversely affects soil and human health. The quantity and frequency of chemical use in farming have been alarmingly on the rise with every cropping season. Soil is being over burdened with more and more chemical fertilizers and toxic pesticides, yet the net returns continue to decline.

Today more than ever, we need to work closely with nature, instead of against it. Demand for food, fodder, fiber and fuel (Fs) are set to rise in the coming days. Agriculture is the source of these Fs. We need sustainable solutions for our agriculture to offset the rising challenges of food and nutrition security from population growth and climate change. The recommended approach is adopting sustainable agriculture, which has emerged from a series of our Best Practices' sites.

Sustainable agriculture is a set of agro-ecological practices, which not only take care of the people and their environment, but also provide better management of soil, seeds, nutrients and water, resulting in better productivity sustainably. It reduces investment cost for the farmer in a more sustainable way, by focusing on the productive use of locally available biomass and adopting improved agricultural practices.

### **Interventions to Establish Sustainable Agriculture Practices**

The case studies across various locations in different states provide enough evidence of these agro-ecological practices being adopted in scale. These practices have significantly replaced the use of chemicals in seed treatment, nutrient management and pest management, and adopted improved and indigenous seeds. The details are given in the table, domain-wise:



Activity	Existing Practices	Sustainable agriculture best practices identified from cases	Rationality
Seed	Local seeds are gradually replaced by high yielding variety (HYV) and hybrid seeds from markets	Identification and multiplication of good quality local seeds (Mostly observed in the case of paddy, millets, pigeon pea and brinjal) along with use of improved varieties and less or no use of hybrid seeds	The local varieties are climate resilient, have been used for decades, and have more adaptability to local conditions. It is observed that in MSSRF, ORRISA, LKP and PRADAN project areas, the farmers largely adopt improved seeds both from indigenous and improved categories. The crop loss was less Vis-à-vis hybrid seeds used by other farmers in the area. In south Odisha (Seed Mother model) and PRADAN Balaghat, Madhya Pradesh, major thrust has been of conservation and promotion of quality indigenous seeds through seed bank and seed mother models.
Seed segregation and seed treatment	Farmers either use chemicals or are not taking any preventive measures to control seed-borne diseases	Use of Bijamrita of desi cow urine, Tricoderma. Initially healthy seeds (especially in paddy) are segregated through brine water solutions	The desi cow urine is the common ingredient in both the products. It contains anti-fungal activity against dangerous pathogens, and ensures prevention of seed-borne diseases and better seeding growth.
Nutrient	Less or no	Use of green manure,	Improved composts and bio-





management	use of well-decomposed compost and more use of chemical fertilisers	improved composts like well-decomposed FYM, Hadri, Liquid bio-fertiliser like Jibamruta, Amrut-jal, Amrit Khad, Panchgabya, egg tonic etc.	fertilisers are rich sources of most nutrients required by the plants, unlike 1-2 nutrients in chemical fertilisers. Besides multiple nutrients available in those products, the microbes present in them play an important role in forming nutrients from no-available forms present in the atmosphere and in soil as well. The right doses of nutrients lead to enhanced immune systems of plants and reduced incidence of diseases. While the chemical nutrients are also hygroscopic in nature and lead to depletion of soil moisture and micro-organisms in the soil.
Application of chemical pesticides (Pest and disease management)	Complete dependence on chemical-based approach (pesticides, fungicides) to kill and control pests	Strengthening NPM (Non Pesticidal Management) approach: It is a set of nature alternatives to chemical pesticides through use of home-made bio-pesticides like Nemastro, Agenyastra, Handi Khata, and Amrit Pani regularly to the plants to prevent incidence of disease and pests	These bio-pesticides act as pest repeliants and anti-feedants, thereby facilitate restoring micro-eco-systems through maintaining the food web within and above soil for natural control of pests. They sometimes also paralyse pests due to their excessive bitterness. These practices do not kill the useful insects and hence maintain the nature's eco-system by keeping harmful insects' population under control



Beside the above suggested measures, the following additional aspects should be incorporated to further strengthen and nourish sustainable agriculture:

- Climatic changes and their adverse effects on farming have brought many challenges. The threat can be reduced by three different ways. Firstly by bringing changes on to cropping patterns and agronomic practices like adoption of SRI principles and replacing high water-consuming crops like paddy and sugarcane with pulses and oilseeds. Secondly by introducing women-friendly and smallholder suitable farm mechanization. And lastly by opting for INRM(Integrated Natural Resource Management) measures to improve in-situ moisture conservation on a large scale.
- Adhering to SCI (System of Crop Intensification) principles for all crop planning will help in better plant growth leading to better productivity with less seeds, fertilizers, water and other agricultural inputs.
- Lastly, agriculture and animal husbandry need to coexist together to mutually complement and supplement each other, and address the broad objectives of sustainable agriculture and ensuring more returns to the farmers at regular intervals.
- Introduction of inter-cropping or multi-cropping gives more returns per piece of land and addresses production risks more effectively. Area-specific suitable crop combinations need to be taken up with suitable crop geometry, so that they are complementary to each other and do not compete for sunlight, water and nutrients.

#### **Strategy to Promote Sustainable Agriculture in a Cluster:**

While, in principle, people realize the importance of adopting sustainable agriculture practices, but practically grounding them, especially in scale, has been a challenge to everybody, especially to the promoting agency. The best practice cases have provided some insights around this. Based on these, the following steps may be taken to promote this in a new cluster.

#### **Step 1: Building perspective of implementing agency.**

It is important to make everybody understand that sustainable agriculture is more about a phenomena, rather than a set of activities.

#### **Step 2: Careful selection of location and community.**

The initial success is very critical. Thus we should start with organized smallholder farmers. It would always be more effective if we involve women collectives/farmers in the whole process.

#### **Step 3: Raising concerns and awareness among community.**

Mobilise the community by making them realize the current undesirable and vulnerable scenario of their farming system in their own village/locality.



#### **Step 4: Promote SCI principles in few crops.**

Adoption of SRI principles enhances the productivity even after compensating for the potential loss of use of lesser dose of chemical fertilisers in initial years. We should start with this intervention.

#### **Step 5: small-scale demonstration.**

We have to create some demonstration plots with a few groups of farmers in strategic patches. This would not only help in developing the contextual models, but also act as a demonstration site for other farmers.

#### **Step 6: Grooming of village/hamlet-level resource persons.**

As a strategy we need to groom some local farmers, preferably women farmers, as local resources to demonstrate and train fellow farmers on the process of promoting sustainable practices in the locality.

#### **Step 7: Developing package of practices based on gradual elimination of chemical measures.**

We should not aim at complete replacement or alteration of currently prevailing chemical-intensive farming systems. We should adopt a gradual approach, say over a 3-5 year period.

#### **Step 8: Level entrepreneur's to supply organic inputs to farmers.**

Some village-level entrepreneurs need to be groomed to prepare various organic extracts and make these available to other fellow farmers on payment.

#### **Step 9: Market intervention.**

Efforts should be made to certify crops following sustainable practices as organic products, to fetch premium price in the market.

#### **Conclusion**

It is observed that in all the best practice sites, the effectiveness of sustainable agriculture practices has been provide. The excitement is distinctly visible among women farmers. There has been a significant cost reduction in the production of organic-products. The dependency on external inputs has also come down significantly. The quality of produce is distinctly different. The organic products are sold in the market first, before the other products, but they are yet to get an additional price. Mostly farmers start adopting these practices in their homestead for their on consumption. For large-scale replication and sustainability it would require concerted and collaborative efforts from various agencies, including Government and market players. Some systems are required to make the organic inputs available at the doorstep of farmers and better price are realized in market. Hope in the near future, this will become a reality.





## **Integrated Livestock: Analysis & Recommendations**

### **The current Scenario**

For most of the families in rural poverty pockets of India, livestock has always remained an important source of livelihoods for generations together. However, the focus on this, especially on small livestock, has always remained negligible from mainstream development agencies. However, the fact remains that the poorer the family, the higher is the importance of small ruminants and poultry birds in their life.

It is often perceived that the bottom quintile of rural households remains unaffected by most of the development efforts in the world. The best practice study across the states observed that interventions in small livestock are able to reach out to the poorest sections effectively, including the landless, physically handicapped, single women and elderly. However, in the absence of a proper support system, small livestock like goats, sheep, pigs, poultry birds and ducks are reared at much below their potential level.

As a part of farming systems, sustainable farming cannot be conceived without strengthening the livestock sector. Further, since women are more closely associated with livestock, no women-empowering intervention like MKSP can be fulfilled without giving due importance to the livestock sector. This is because the livelihoods of poorer and socially disadvantaged communities like SCs and STs cannot be conceived without these livestock. Their spiritual life, rituals, guest treatment, and observance of various festive seasons cannot be imagined without livestock. In the time crises, it serves as the last resort.

### **Strength and Weakness Analysis**

Almost all kinds of small livestock like poultry birds, duck, goats, and sheep share common characteristics. The major strengths and challenge areas can be listed as below:

#### **Strength area:**

1. High regeneration capability
2. Can be reared in much diverse agro-ecological context.
3. Do not need much time and resource investment to rear.
4. Can be reared in any season-round-the-year activity.
5. Less affected by climate change scenarios.
6. Highly flexible-can be done at varied scale at any time depending on individual, local and seasonal requirements.
7. Very high demand in the market.

#### **Major challenges:**

1. Mass mortality arising out of deadly disease outbreak.
2. Jungle predators during free grazing, especially of the kids and chicks.
3. Potential threat to crops from grazing.
4. Lack of established service systems either from the Government or to connect to markets.



### Key Approaches:

Looking at the above strengths and challenges, the following two strategies have been successfully followed by different agencies under MKSP;

- 1. Focus on livestock as a whole, rather than limiting to one species:** As shown in the above analysis, all the issues relating to small livestock are similar. Thus any specific intervention to address a specific issue, more or less becomes effective for all the species. For example, the doorstep vaccination system can potentially address the mass mortality issue of all the birds, goats, sheep, etc. In many ways, rearing of different kinds of livestock complement each other. For example, in case of goats, it takes about two years to get income. BYP on the other hand can provide income within six months, thus helping the farmer to not sell the goats pre-maturely. Taking care of birds helps control predators. So it is critical for the family to stay at home, which helps to take care of goats and sheep as well. Thus rearing of all potential small livestock should be done in an integrated manner. For the poorer families, income from different species significantly enhances the income potential, as the scaling up individual livestock is limited depending on factors including the availability of grazing land or size of the backyard.
- 2. Sustained service system:** The most critical issue of mass mortality due to outbreak of deadly diseases has been addressed quite effectively by establishing doorstep vaccination services by CAHWs/Pasusakhis in the best practice cases. They have been groomed as entrepreneurs and the payment is made by the individual rearer from the very beginning. Once the rampant mortality is checked, farmers gain confidence in making further investments in term of additional care, constructing sheds, adding mother stocks, etc. This service is required in a continuous manner, and thus the system has to be robust and the service providers need to be efficient. The returns to the service should be significantly lucrative and certain. Taking up all livestock together enhances the returns potential. Involvement of SHG collectives ensure certainty to their returns. Further, the activity needs to be promoted as a cluster approach converging at least about 2,000 families so as make the service system economically viable. In addition, the efficiency of vaccination and deworming can be improved when the activity is rolled out in saturation mode.

### Result Areas:

Among all the livelihoods strengthening efforts taken under MKSP, the excitement around this activity has been clearly visible among the women farmers. The impact was distinctly visible looking at the increased herd and flock size within 1-2 years. Within 2-3 years, families started earning about Rs. 20,000 to Rs. 30,000 per year invariably and are consuming 20-30 birds annually. To a large extent, mortality has been checked. People have started investing from their own pockets to expand and intensify this activity. Thus,



it has been observed that this activity can support the poorest of the poor households in the project, including the landless, physically handicapped, and single or older women.

### **Best practices**

The best practices that emerged and are recommended can be summarized as follows:

1. All the major small livestock being reared by the families in the project areas should be covered under the model.
2. The role CAHWs/Pasu sakhis (is very crucial. From the beginning CAHWs/Pasusakhis should be groomed as entrepreneurs to provide the services and the community should pay for the services.
3. The CAHWs/Pasu sakhis should be thoroughly trained in the areas of de-worming vaccination and medication (largely of first-aid services and mostly using ethno-veterinary measures) for small livestock of the area with the support of Animal Husbandry Department and thematic experts.
4. The CAHWs/Pasusakhis should be nested within the women collectives like VO's and GPLFs promoted in the area, who should ensure their payment from the individual farmers.
5. Regular de-worming is very crucial, but often ignored. The experience from best practices shows that it enhances the effectiveness of the vaccination process. At the same time regular de-worming enhances the feed conversion ratio (FCR). The potential weight gain increased by about 20-25% in case of birds and about 10% in case of goats/Sheep.
6. In the areas where the threat of predators is high. The mother Unit idea should be promoted where the chicks are grown in more controlled conditions by entrepreneurs for about one-two months. The individual households can then rear the hrown-up birds.
7. In the areas where the scope for open scavenging is limited due to less backyard area, it is observed that cross-breed birds like Kroiler rearing for egg-laying purposes is more effective.
8. But in a free rnging condition, rearing desi breed birds is found to be more efficient and cost-effective than the cross-breed ones who succumb more to predators.
9. Similarly in the case of goats. The local Black-Bengal breed with twin kidding characteristics are more suitable than the other so-called improved breeds introduced from outside, at least in the initial years. This is especially in the case of poorer farmers, who require time to gain additional knowhow.
10. CAHWs should work closely in collaboration with the Animal Husbandry Department to avoid any potential conflict. They should act as a link between the community and the department. As far as possible, vaccines available from the government should be used: however, maintenance of cold-chain needs to be ensured.





### 3. Overall Recommendations

The overall objective of the exercise was to identify the best practices being adopted by the MKSP partner organisations in achieving the projects stated objectives such as Women Empowerment, Food and Nutrition Security, Enhanced Economic Impact, and drudgery Reduction. The field study covered a wide variety communities, geographical contexts as well as a large set of activities. This study covered 32 identified best practice sites from nine implementing agencies across six states. Out of these 32 cases, the 11 most promising cases have been described in this document. The exercise brought forth many practices that are either rooted and adopted as best practices, or have emerged as “green shoots” with high probability of adding efficiency and effectiveness in achieving economic empowerment of women farmers in a sustained manner. These practices are primarily of two kinds, i.e. different technical practices related to specific thematic activities, and the approach or methodology that has helped in adding efficiency and effectiveness in meeting the board objectives of the MKSP project.

Based on the insight gained during the study process, the following recommendations have been listed. These would help agencies and individuals interested in promotion of women-centric livelihoods in rural areas under MKSP or similar projects taken up by NRLM in their current or renewed forms.

#### Key Recommendations

##### 1. Women empowerment

It has been observed that bringing about a shift in the existing social norm to establish “women as farmers” needs a well-conceived strategy and rigorous engagement. This is more of a journey that the SHG collectives need to follow rather than just a time-bound engagement. The clarity as well as intensity of engagement to strengthen women as farmers varies widely in these cases. Moreover, beyond MKSP, this component of strengthening women as farmers or establishing the importance of women’s role in agriculture is yet to get adequate and systematic attention from other livelihoods initiatives in most State Mission units. It needs conscious and dedicated efforts to orient all the key State officials and bring about required focus, systems and processes, as well as capability to plan and progress around this objective. Building on the insights gained from these Best Practice cases, we can adopt the following practices to foster women empowerment:

- As women do not consider themselves as farmers, large-scale high impact sensitization and visioning exercise need to be conducted among SHG members to create real disruption in the minds of women, so that they proactively participate and build their capacity to individually and collectively assert and establish themselves as farmers.



- The women collectives are to be engaged at all stages of the project like strategy and plan development, project execution, as well as evaluation after the implementation phase. As end-users, this not only enhances the degree of success of the project at hand, but also helps the women members to take more and more ownership in intensifying and expanding these activities. So, instead of over-emphasizing immediate output, the approach needs to be on ensuring women's participation to develop their ownership, confidence and competency.
- Women SHGs and their collectives need to develop systems and processes so as to regularize the discussions related to livelihoods in all forums. Livelihoods sub-committees should be formed at all levels to plan and oversee the progress of various related initiatives and how these are empowering women economically, as well as strengthening their identity as farmers.
- Ensuring participation of women in various capacity building programs, including technical training is an important component. Thus the design of these program components needs to be done carefully like organizing events using more audio-visual tools, etc. in their villages. So that more and more women can participate.
- A carefully designed high-impact sensitization process needs to be followed to make women realize that they need to assert themselves collectively to gain their identity as farmers. Their continuous engagement in livelihoods related discussions and actions in their SHGs and VOs. For example, would strengthen this process.
- In addition, interventions need to be designed in such a manner that the income earned would come into the hands of women, for example by making the procurement and selling points close to villages so that women can participate directly in the selling process.
- Though some livelihoods activities like small livestock rearing, NTFP collection, etc. are widely understood as women centric activity, the scope for women engagement in all or most other farming-related livelihoods is huge. Thus, initially we may focus on these activities so that they can be easily brought into the forefront and become part of whole process. Gradually, with established institutional arrangements, their roles in all other livelihoods need to be recognized and strengthened to establish their identity as farmers.

## **2. Enhanced economic prosperity for women**

One of the major objectives of MKSP is help the women members enhance their income significantly to lead a life of economic prosperity. Thus the promoted activities need to have the potential to generate significant income, without disrupting the existing livelihoods activities and resources allocation. Observations from the best practice cases show that there are hardly any specific activities that really contribute significant additional income, i.e. to the tune of Rs. 40,000-50,000



per annum. On other hand, in the cases of LKP in West Bengal, PRADAN in keonjhar, Odisha and the Harsha Trust, Koraput, Odisha, it is found that most of the assisted families are engaged around the whole farming system. Where a basket of compatible activities are taken up in an integrated manner. Thus overall returns are significant in terms of enhanced income above the desired level, besides ensuring food nutrition security to a larger extent. Each women member's family has been supported by a combination of 2-3 activities depending on their interest, capability and opportunity at the family level and her locality. Based on the above, our recommendations are as follows:

- As most of the rural poor households, including the poorest segment, are engaged in multiple agriculture and livestock-related livelihoods, our strategy is to strengthen these livelihoods in an integrated manner, at least during the initial 3-5 years.
- We should build on existing farming practices rather than initiating new species, varieties, breeds, etc, which may need more complex support systems, new capabilities, higher investment, and possibly, additional risks; thereby may potentially limit the poorer and vulnerable farmers from participating.
- Key issues or gaps in existing activities need to be mapped. The interventions need to be designed to address these gaps so that more and more women can take up these activities, and take advantage of the scale of operation leading to increased productivity and profitability from existing production systems.
- Further, it is observed that the success of a livelihoods intervention increases when the intervention approach is more bottom-up. A through consultation process needs to be carried out with the SHG collectives and other relevant stakeholders in the area, and then study area perspectives to identify the potential livelihoods prototypes (for example, identify a few complementary activities like orchards with intercropping, farm pond-based livelihoods, integrated livestock, rain-fed agriculture, etc.) within the existing farming system.
- The starting point is with one or two key activities that are more complementary and cover a larger proportion of SHG members in a cluster approach (1-2 GPS). It is expected that each supported family would start with the most appropriate livelihoods prototype and gradually adopt another one over a period of 2-3 years with necessary handholding support.
- There is a need initiate those activities that are simple to adopt and highly significant for most families first. Gradually, more activities can be taken up with added intensity. Following an approach like "simple to complex activity" and "single to multiple activities" provides ample time and opportunity to learn and develop capability among critical players like the PIA. Community Resource Persons (CRPs) and the community, to attain higher success probability and gradually growth.





### 3. Grooming of community resource persons

There is a huge need for knowledge and skill up-gradation amongst the community members around improved practices in livelihoods interventions, and the role of CRPs has been found to be extremely important to cater these needs. In all the case studies, there is an engagement with village-level CRPs, though with some degree of variation, and accordingly the efficiency of their approach also varies. The insights gained from this study can be put forward as follows;

- It is important to identify local, young SHG members belonging to the best practice adopting families in the village, as they usually are more open to experiment and learn, and are therefore found to be more effective.
- The availability of experienced CRPs/expert farmers to ensure quality demonstration and provide handholding support to the newly-selected CRPs in the initial 1-2 years period has been very crucial.
- In addition to technical skill-building, the CRPs and PRPs need to be trained around other human resources skills like active listening, communication and group facilitation to trigger participatory processes and also facilitate generation of lessons from the experiences of the farmers in the villages.
- Regular meetings and field visits of the CRPs in a cluster to share their experiences and learn from each other are found to be very rewarding. This needs to be facilitated by the cutting-edge staff engaged by the implementing agency, who also need more human resources skill to facilitate this process.
- Gender Orientation among these CRPs also plays a critical role. Irrespective of their domain, the CRPs need to be oriented and sensitized around basic gender aspects so that they consciously pursue the participation of women while providing training, or in any decision-making process.
- Identifying more and more women members from SHGs as CRPs helps women farmers feel more comfortable in interacting, learning and drawing support.
- The CRPs need to be motivated, not only as a service provider, but rather as a socially-motivated extension agent who would be known as an expert farmer to help others earn a lucrative as well as respectable income from his/her own field.
- We need to differentiate the role of a motivator, mobilizer and trainers from that of a service provider. As much as possible, initial motivation should be done by the fellow farmers, who themselves have realized the benefit of extending themselves in these roles. The trainers should be paid from the MKSP project. However, pure services like vaccination and deworming, selling of organic extracts, seed supplies, etc. should be run as enterprises and the community should pay the providers for these services, some technical domain experts in different thematic areas should be present for support while experimenting with various technical ideas, helping to train the CRPs, and acting as reference persons to address any technical challenge



emerging in the field. They should act as mentors rather than trainers to the CRPs and foster the peer learning process among them.

#### 4. **Strategy for promotion of sustainable agricultural practices**

The current agricultural practices largely adopt high chemical inputs, which has made farming more and more expensive, externally-dependent, uncertain, less rewarding as well as unsustainable. Today, more than ever, we must work with nature, instead of against it. The demand for sustainable livelihoods is set to rise in the coming days. We need new solutions for managing our natural resources to offset the rising challenges to livelihoods security from population growth and climate change. Adopting sustainable farming practices is the emerging approach from this study. The strategy that seems to be working in establishing sustainable agriculture practices in a cluster, as observed in the best practices cases, can be broadly classified below:

- **Building perspective:** As sustainable agriculture is more of an approach rather than a set of activities, all key actors like the community, implementing agency and CRPs need to develop this perspective.
- **Raising awareness among community:** Mobilise the community by encouraging discussions on issues like increased input (Quantity as well as costs). Indebtedness, falling yield, depletion and contamination of soil and water, climate change, food quality and taste, loss of sovereignty, health and nutrition, etc.
- **Small-scale demonstration:** Demonstration with a few groups of farmers initially in strategic patches would help in creating awareness around the practices. This would not only help in developing the contextual models, but also act as demonstration sites for other farmers.
- **Promote SCI (System of Crop Intensification) principles in crops:** One may choose paddy/wheat as field crops and a vegetables as crop combination for round-the-year cultivation in homesteads, from among the crops grown by the small farmers in the locality. Adoption of SCI principles enhances the productivity even after compensating the potential loss of use of lesser doses of chemical fertilisers in initial years.
- **Gradual elimination of chemical measures:** Gradual replacement of chemical practices has often found to be more acceptable to the community, rather than absolutely no chemical measures from day one. We should focus on a 3-5 year transition phase where there is a gradual reduction of chemical inputs by one-third/one-fourth each year. Practices like balanced doses of fertilisers and other practices like split-dose application of urea, etc. also automatically reduces the fertilizer dose. Similarly in pest control, we can opt for preventive measures while keeping chemical pesticides as a back-up option initially. As per IPM principles, we



need to move gradually, rather than jumping to a chemical option that can aggravate pest problems.

- **Local entrepreneurs to supply organic inputs and indigenous seeds to farmers:** Some village-level entrepreneurs, preferably the CRPs, need to be groomed to provide the required organic inputs and quality seeds to the neighbouring farmers on time. These entrepreneurs can arrange locally available raw materials from their own farms and/or from fellow farmers, and prepare the major organic extracts in a ready-to-use form. They need to be connected with seed producer farmers and seed bank models in the village (as in the PRADAN Balaghar model and seed mother model in south Odisha).

## 5. Farm mechanisation

As stated earlier, most of the agricultural activities taken up by women are quite tedious. Further due to climate changes and erratic monsoons, much of the agricultural practices have become very uncertain and ineffective when done manually. For example, summer ploughing becomes very difficult nowadays by using bullocks.

Farm mechanization can help in addressing these issues in three multiple ways. First, we can selectively introduce small implements to reduce the drudgery of women in practices like weeding, transplantation, crop cutting, etc. Such implements are weeders, markers, seed drills reapers, power sprayers, winnowers, etc. Moreover, they help the women farmers to carry out agriculture operations in timely manner and more independently. Further, mechanization helps in addressing issues aroused due to climate uncertainties e.g. the time slot available for various agriculture operations like ploughing, puddling, weeding, harvesting etc. has become very uncertain and often have reduced significantly. With the help of mechanized farm equipments now these operations can be done within very short time. Lastly, it actually makes the farming practices more effective, thus increasing productivity and reducing the cost of farming.

Most of these farm equipment's are available with the local agriculture departments with subsidy. The VOs should purchase a set of relevant farm equipment's try using loan from CIF or bank and make these available to the individual women farmers on rent. Though the ownership of these equipment's remains with the VO, the day-to-day these management should either be done by a hired service provider or by leasing these assets to an entrepreneur. In no case the day to day business should be run by a group of people as there is hardly any successful experience with this sort of arrangement.





## 6. Convergence

In the best practice sites where the implementing agencies could bring about convergence of different programs like MGNREGS in the case of PRADAN-Keonjhar, NABARD-Wadi in the case of HarshaTrus, and with PRI and the livestock department in the case of LKP; the success of the program is much better, both in terms of spread of outreach, saturation, and the level of benefit. Convergence is critical, especially around creation of livelihoods assets and establishing market linkages. So the recommendation around this frontier would be that each implementing agency should carefully conceptualize these convergence arrangements especially with the Government departments like Agriculture, Animal Resources, MGNREGS, Water Resources, etc. Linkages with banking systems are also another important area both to access timely credit and savings services. The higher-level SHG collectives need to develop partnerships with various stakeholders like Government line departments, service institutions like banks and markets, and political institutions like PRIs to strengthen their livelihoods interventions in a sustained manner. Meetings should be held initially itself, to discuss the objectives of the project before connecting it to avoid unnecessary replication. Gradually, efforts should reduce to run parallel livelihoods programs.

### Way Ahead

As explained above, a large number of promising best practices have emerged from this study, which has immense potential to be replicated across the country. However, the following two aspects need due attention to institutionalize this process;

1. The best practice documentation process needs to be carried a regular manner by the State Mission units to institutionalize this process and study the impacts. However, the scope of the study needs to be expanded beyond MKSP to other Government as well as non-Government initiatives. This would help in many ways. It would help in reflecting on various initiatives to draw lessons from and incorporate in various ongoing as well as future activities/projects.
2. Many model or best practices emerged from the study, which though found to be adding effectiveness in attaining the project objectives to a large extent, require further fine-tuning to develop them as best practice models to maximize the returns to the women farmers. This would require the implementing agencies to continue working on these initiatives for 2-3 more years by following an action reflection cycle. These best practices should also be tried out by the State Mission units in some strategic clusters to contextualize these models and subsequently replicated.





Both the above would require grooming of a pool of resource persons (may be 6-8 in number with each State Mission unit) to regularly engage around these domains. Further the knowledge cell of the respective SRLMs needs to be supported in decoding the lessons and bringing about necessary changes to the ongoing livelihoods initiatives. In the whole process, PRADAN as an NSO can support the Mission in grooming these resource persons and strengthening the knowledge building cell.

### Photo Album







Project MKSP (LKP)  
Bhutura Gram Panchayet  
Md.Bazar Block Birbhum



















"I was told Indian women don't think like that about equality. But I would like to argue that if they don't think like that they should be given a real opportunity to think like that."



Amartya Sen



"There is no hope for that family or country where there is no estimation of women, where they live in sadness. There is no chance for the welfare of the world unless the condition of the women is improved. It is not possible for a bird to fly on only one wing."

Swami Vivekananda

